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Encyclopedia of Human Ecology

Encyclopedia of Human Ecology

Volume 1: A–H

Edited by
Julia R. Miller, Richard M. Lerner,
Lawrence B. Schiamberg, and Pamela M. Anderson

A B C  C L I O

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Preface

The human ecology field brings together all the following: (1) Multiple disciplines involved in the study of the individual and groups (e.g. biology, nutrition, psychology, sociology, epidemiology, demography); (2) Multiple disciplines involved in the study of environments as the settings or contexts of individual and group life and of environments as the sources of essential resources (e.g., family science, human environment and design, geography, anthropology, environmental science, urban planning, political science, environmental health); (3) Multiple professions intended to enhance individual and family life (e.g., marriage and family therapy, clinical and counseling psychology, social work, policy studies, law, food systems, dietetics, public health, medicine and other health professions, education); (4) Multiple professions concerned with preservation, conservation design, and management of the natural and designed environment and its resources (e.g., land use planning, agriculture, soil conservation, water quality, sustainable agricultural systems, environmental justice, housing and architecture, urban ecosystems, technology transfer, environmental impact assessment, ecological economics); and (5) Other disciplines and allied professions concerned with human development, human values, sustainability of the environment, and sustainable human ecosystem interaction for future generations (e.g., philosophy, religion, art, literature, population studies).

The intensity and range of research and intervention activities included within the field of human ecology represent a challenge to scholarship. How may all the information about this field be integrated in a manner accessible, meaningful,

and useful to the next generation of the leaders of our nation and world? How may we best convey the key knowledge necessary for them to understand both the nature of their own development and the ways they may contribute positively to their own lives, to their families and communities, and to the designed and natural environments of which they will be stewards throughout their adult years?

Textbooks are not a sufficient answer, since they are most often written by representatives of one, or at most a few, of the several disciplines involved in the study of human ecology. They are thus necessarily limited in perspective.

Handbooks are not always the answer either; although they may contain chapters by scholars of a disciplinary array wider than that found in texts, each chapter is often a quite long, highly technical piece that may be of most use to other disciplinary specialists. A viable option, and the one we have elected to pursue, is an encyclopedia, one with entries written by specialists from various human ecological disciplines and professions, and designed to be accessible to young people, as well as to the key adult stakeholders in their healthy future: Parents, teachers, counselors, and leaders of youth-serving organizations.

Such an encyclopedia can represent an important and timely contribution to the field of human ecology. As a single authoritative source, it can encompass a range of concepts, topics, and issues involved in the study of human ecology. Our goal has been to have *Encyclopedia of Human Ecology* constitute such a contribution and become a seminal resource for many professions. We believe that the *Encyclopedia of Human Ecology* (EHE) represents

much of the breadth and depth of disciplinary and professional expertise involved in the contemporary study of human ecology. This contribution exists because scholars and practitioners representing a broad range of disciplines and professional fields in human ecology have written entries for the EHE. In addition, each EHE entry includes a list of representative references, citations that should aid the reader to gain more detailed information about the substance of an entry.

Through the substance and features of the EHE, we believe the volume will be of value to young people ranging in age from middle school through the beginning of college, and to their parents, teachers, and program leaders. People in each of these groups may have some knowledge of particular facets of human ecology but nevertheless may profit from increasing their acquaintance with the breadth of available information. This breadth of disciplinary and professional information spans theories and methods pertinent to the individual, the family, the community, and the designed and natural environment. In addition, sociocultural, human-built, and physical-biological environmental levels of organizations are included. In particular, issues of racial, ethnic, gender, age, cultural, life-style, and physical-handicap diversity are emphasized throughout the EHE.

Our wish is to capture the vitality and diversity of the field. We hope, then, that the EHE, with its multidisciplinary and multiprofessional scope, will do justice to the features of human ecology that make it so attractive as a field of inquiry, as well as so centrally important to society. If the EHE

is successful, it will serve as a vital resource to young people as they seek to acquire the information they need to understand and to enhance their world and the lives of the people in it.

There are numerous colleagues to whom we are indebted for helping us develop this encyclopedia. Most important, we are grateful to the authors who contributed their expertise to the encyclopedia, as well as their vision for and passion about enhancing the lives of children, families, communities, and the natural and designed ecologies within which we live. We also greatly appreciate our colleagues at Michigan State University and Tufts University. They urged us to undertake this project and gave us unflagging support and wise counsel at every stage of our work. In addition, we are deeply grateful for the professional and enthusiastic assistance throughout the development of the encyclopedia that was provided by the editorial office at the Applied Developmental Science Institute, Eliot-Pearson Department of Child Development, Tufts University, which is led by Karyn Lu as managing editor. We also thank all the editors at ABC-CLIO for their support, expert guidance, and collegial spirit.

Finally, we thank our families for their unwavering good spirit. Their love and support nurtured us throughout our work. They are our most important developmental assets, and with enormous gratitude we dedicate this encyclopedia to them.

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Human Ecology: A View of the Issues

What knowledge, from what disciplines, is needed in order to understand the interdependence of humans with their physical-biological, social-cultural, and human-built environments? What information is needed to frame human decisions and actions that will enhance the quality of human life and the quality of the environment? What professions need to be consulted in order to find means to promote desirable behaviors and healthy development, to ameliorate already existing problems, and to optimize future life paths?

Once information about the ecology of human life has been gained, how do we use it to foster responsible citizenship, the prudent stewardship of the natural and the designed environment, social justice, and the institutions of civil society? How do we inform young people about these questions, and how answers to them affect their lives and those of their families and communities? How, through the delivery of this information, may we empower young people to contribute productively to society and culture?

These questions point to the central issues in the field of human ecology, but these issues are obviously not limited to one field. In fact, contemporary scholarship has undergone a substantial expansion of the range of disciplines and professions seen as needed for addressing these questions (Lerner 2002). Reflecting an increased understanding of the global interdependency of humans and their environments, this scholarship has promoted an integration of disciplines and professions (e.g., Lerner and Miller 1993; Miller and Lerner 1994; Lerner, Miller, and Ostrom 1995). Accordingly, current emphases in both physical science and human science stress the view that com-

plex phenomena and stubborn problems of contemporary society require collaborative efforts from a human ecological perspective among several disciplines and professions (Lerner 2002). One of the basic premises of human ecology is the interactive relationship between humans and their environment. Basically, the environment is an ecosystem comprised of air, soil, water, living organisms, physical structures, and built environments. Further, as G. G. Marten emphasized in his recent book, *Human Ecology: Basic Concepts for Sustainable Development*, the central core of human ecology is the social system; the human activity that impacts ecosystems is influenced, to a great extent, by the society in which human beings live. More importantly, Marten (2001) stressed that values and knowledge influence the way people process information and act in and on the world. In human ecology, emphasis is given to the creation, use, and management of resources (both material and human) for survival, creative adaptation, human growth and development, and fostering sustainable growth that protects of the environment (Bubolz and Sontag 1993). The uniqueness of human ecology lies in its focus on viewing humans and their environments as integrated wholes, mutually influencing each other (Bronfenbrenner 1979, 2001; Bronfenbrenner and Morris 1998).

In prior decades, cutting-edge science has tended to be reductionist and mechanistic (Lerner 2002). In addition, this approach to science has differentiated hierarchically between basic and applied research: Colleagues whose professional activities were devoted to the design, delivery, and evaluation of policies and programs (whose aim was to enhance the course of human lives and/or

to enhance the environment) were seen as engaging in activities that were secondary in status and importance to endeavors pursued by laboratory scientists or theorists (Lerner et al. 1994).

However, the human ecological perspective runs counter to this reductionist viewpoint, a perspective that mistakenly splits basic science and application. The roots of the human ecological perspective lie historically in the work of home economists, primarily working within the land-grant institutions.

The American Land-Grant University and the Genesis of Human Ecology

The contemporary mission of the American land-grant university is typically stated to be teaching, research, and service (with service often used interchangeably with the terms extension or outreach). The three components of this mission and the order in which they are enunciated have an important basis in the history of our nation (Enarson 1989), and it is useful to provide a brief recapitulation of this history.

As explained by the National Association of State Universities and Land-Grant Colleges (Enarson, 1989), the American land-grant university system was created through the first land-grant university act, the Morrill Act, which was signed into federal law by President Abraham Lincoln on July 2, 1862; this act provided 17.4 million acres of land to the states in order that each might have at least one college whose purpose was “to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life.”

A second Morrill Act was signed into law by President Benjamin Harrison on August 30, 1890, directing the states to provide a “just and equitable division of the fund to be received under this act between one college for white students and one institution for colored students.” The enactment of this law was an impetus for the creation of seventeen “historically black land-grant colleges” in Southern and Border States.

The Hatch Act was approved by Congress on March 2, 1887; it mandated the creation of agricultural experiment stations “to aid in acquiring and diffusing among the people of the United States useful and practical information on subjects connected with agriculture and to promote scientific investigation and experiment respecting the prin-

ciples and applications of agricultural science” (National Association of the State Universities and Land Grant Colleges 1989, 13).

The Smith-Lever Act was signed into law by President Woodrow Wilson in 1914; this law was intended to allow land-grant institutions to extend instruction beyond the boundaries of campuses. The purpose of this extension was to “aid in the diffusing among the people of the United States useful and practical information on subjects relating to agriculture and home economics, and to encourage the applications of the same” (National Association of the State Universities and Land Grant Colleges 1989, 15). The act further specified that the cooperative extension work of land-grant institutions “shall consist of the giving of instruction and practical demonstrations in agriculture and home economics to persons not attending or resident in said colleges in the several communities, and imparting to such persons information on said subjects through field demonstrations, publications, and otherwise” (15).

The federal acts that created the combined teaching, research, and outreach mission of the land-grant system worked together to create an institution that may be described as a university for the people of a state. That is, the land-grant university’s functions of knowledge generation (research), knowledge transmission (teaching), and knowledge utilization (outreach) exist to improve the lives of the people of its state as they live in their communities. This land-grant mission was refined through the vision of scholarship articulated in the field of home economics.

In 1892, Ellen Swallow Richards, the first woman faculty member within any science program in the United States (at the Massachusetts Institute of Technology), proposed a science of human ecology focused on the home and the family, a science she labeled *home oekology* (Bubolz and Sontag 1993). This German concept focused on the interrelationship between organisms and the environment and was based on the premise that life and the environment should be viewed as inseparable parts of a whole or system (Bubolz 2002). Since this time, the vision of the land-grant university as the university for the people of its state has been operationalized within the field of home economics/human ecology as a university for the children, families, and communities of its state. Moreover, the human ecology vision of the

tripartite land-grant mission means that research, teaching, and outreach should be viewed as integrated activities. Teaching about or research conducted within the ecologically valid, that is, actual or real world settings within which children and families live their lives (i.e., within their homes and within their communities) is predicated on an understanding of the needs, values, and interests of the specific people and the particular community the land-grant institution is trying to serve. Accordingly, when knowledge generation or transmission occurs in a context that allows the community to value and see practical significance for these facets of knowledge, the application of this knowledge by the specific communities becomes more likely.

This view is derived from the land-grant, human ecology vision of the synthesis of the university's knowledge functions with the needs and values of the community. The perspective of human ecology provides both a theoretical foundation for this synthesis and a means for strengthening the rationale for a conception of basic research that focuses on the community-specified problems of the community's children and families. At the same time, the emergence of the land-grant university was not the only factor in the development of human ecology as a field.

The Emergence of the Human Ecology Field

The attention to the integration of knowledge within instruction, research, and outreach is not a new phenomenon. Historically, the belief that valid knowledge should make a difference to every aspect of human life can be traced to Plato. This idea reached an important stage in late nineteenth-century America with the work of John Dewey, a strong advocate for both integration and application of knowledge (Schiamberg 1988).

The field of home economics provided an impetus as well. As formerly noted, Ellen Swallow Richards saw the new field she was launching as based on the reciprocal influence of humans and their environments (Kilsdonk 1983). Initially, this first woman of science was greatly impressed and influenced in her thinking by the statement establishing the Massachusetts Board of Health: The preamble of the statement stated that no Board of Health can separate the physical nature of man from his moral and intellectual parts. The three qualities cannot be separated and act and react

upon one another. All three are acted upon by the forces of nature that surround us and any influence exerted to the injury of one may indirectly injure others (Clarke 1973). This statement served as the foundation upon which she built her work in environmental science. For her, it was impossible to separate the physical, moral, and intellectual aspects of human nature, and it was obvious that there were forces in the natural world that influenced the way people lived, affecting their physical, social, and perceptual environments (Clarke 1973).

In essence, Richards focused on examining the reciprocal relationships between the home and its environment. Given its origins as a multidisciplinary field of inquiry, human ecology built its body of knowledge upon a foundation of integrative thinking in order to address critical issues related to a conjoint study of individuals and families.

The relevance of this orientation for contemporary issues facing America is striking. These issues include persistent and pervasive poverty, economic development, health, environmental quality, and others confronting children and families. Universities have been challenged to view their scholarship from a perspective that is problem-focused rather than discipline-based (Boyer 1990; Lynton and Elman 1987). The above-noted problems facing the nation do not fall neatly into disciplinary categories and cannot be solved by isolated disciplines (Schiamberg 1985, 1988). Therefore, the challenge is to bring integrative scholarship to bear on these problems (Brown 1987).

From the inception of the field, professionals in home economics/human ecology have been committed to the integration of knowledge from diverse disciplines to address quality-of-life issues. Indeed, this integrated multidisciplinary perspective has been critical to the evolution of the body of knowledge in this field. Moreover, M. Suzanne Sontag and Margaret M. Bubolz (1991) recently noted that integration (of concepts, theories, education, and practice in several specializations within home economics) has surfaced as a critical need in resolution of practical problems of families. This need can be addressed because the field integrates conceptual frameworks, theoretical formulations, and methodologies used in different specializations and disciplines into new, distinct, and synthetic paradigms. Further, as Bubolz and Sontag (1991) noted, human ecology reflects a multidisciplinary and systems philosophy and methodology.

As implied above, today, perhaps more than ever before, human ecology is challenged to strengthen its integrative orientation to the complex problems facing individuals, families, and the environment. The scholarly and societal issues involving America's children and families within the context of their environments are indisputably complex. For their resolution they require collaboration between those professionals who do basic scientific research and those who design, deliver, and evaluate service. Likewise, professionals and lay people must accept the responsibility of being politically active and knowledgeable if they want to have any meaningful impact on problem-solving and decision-making efforts related to their future quality of life.

Our position is that human ecology—at least, in theory, if not always completely in practice—is a relational, multidisciplinary, and multiprofessional field of scholarship. It involves the integration of disciplines and professions in the service of enhancing both knowledge about, and services to, the diverse people, families, and communities of our nation and world. There are at least two other dimensions of integration involved in the multidisciplinary and multiprofessionalism of the field: (a) the generation and transmission of knowledge (i.e., research and teaching) are combined with the application of knowledge (service); and (b) the generation, transmission, and application of knowledge occur in concert with communities and the needs in respect to individual and family life that exist within them (Miller and Lerner 1994).

Although the field of home economics and human ecology was influenced by the reductionism and split thinking that dominated psychology and the rest of the social sciences in the mid-twentieth century, the last two decades of the century saw a return to the tradition of integration with which the field began (Overton 1998). In particular, the current focus involves a linkage of science and service in enhancing the development of individual lives, of the family, and of the community, and in promoting the kind of sustainable use of resources that will preserve the quality of the environment (Fisher and Lerner 1994). This focus constitutes, in effect, a new paradigm for the sciences and the professions involved with human behavior and the environment, a critical science model in which theory, research, and practice are seen as integral parts of a whole (Bronfenbrenner 2001).

The Contemporary Dimensions of Human Ecology

In essence, the history of the field of human ecology has produced a field marked by at least five features:

1. Changes in the philosophy of science involved in the study of human life as well the study of the environment (Overton 1998, in press). The disciplines and professions involved in the study of human ecology have moved from mechanistic or organismic frameworks that emphasize unidirectional influences to contextual or developmental systems perspectives that emphasize reciprocity and a system or pattern of relationships.
2. The development of theories that have been derived from developmental systems perspectives (Lerner 2002). In particular, the human ecological view of human behavior development, the life-span view of human development, and the developmental contextual model provide strong bases for understanding the multiple influences on human behavior in context (Lerner 1998). Indeed, these theories emphasize that the key “unit” of scientific analysis is the temporally changing *relation* between humans and their multilevel environments (Lerner 1991).
3. The development of theories that are concerned with the functioning of systems in their social-cultural, human-built, technological, and physical-biological environments and with the linkages between micro and macro system levels (Bronfenbrenner 2001; Bronfenbrenner and Morris 1998). Systems theories emphasize feedback and the lawful consequences for the total system of often unforeseen actions within component parts of the system (Thelen and Smith 1998).
4. The development of appropriate methodologies to understand and test development and behavior in context from a systemic perspective (Lerner, Dowling, and Roth in press). The idea of temporally changing person-environment relations has led to the generation of methodological strategies such as longitudinal sequential designs, change-sensitive measurement, multivariate-longitudinal statistical methods, and techniques that are both quantitative (e.g., structural equation modeling or times series

analyses) and qualitative (e.g., ethnographic analyses or focus group methods) (Baltes, Reese, and Nesselroade 1988; Nesselroade and Baltes 1974; von Eye 2002).

5. An understanding of the mutually enriching relationship between intervention research—or applied science—and basic scholarship (Fisher and Lerner, 1994). On one hand, the ideas promoted by this new paradigm stress that human behavior and development occur in relation to the changing, real-world settings of human life. On the other hand, this paradigm points out that individual, social, and political decisions and actions have long-term consequences for the environment (Bronfenbrenner 2001). As a consequence, tests of theoretically based ideas about how to alter the relation between people and contexts involve the introduction of policies and programs intended to change these relations (Lerner et al. 1994; Miller and Lerner 1994). As such, the evaluation of these policies and programs then not only provides information about their efficacy but also offers basic understanding of means to enhance the course of human life or the course of environmental change (Lerner 2002).

In the early twenty-first century, then, the above five changes have emerged to characterize the cutting edge of both scholarship and service in the multiple disciplines and multiple professions involved with research, policy, and programs directed to humans in interaction with their environments. This synthesis shapes both concepts and scholarly activities within the field of human ecology.

The Present Encyclopedia

Given the complexity of the field, an encyclopedia, as discussed in the Preface, seems an especially appropriate way to make the knowledge contained in the field of human ecology available to the broad audience to whom it is potentially useful. Likewise, this resource is of critical importance to those individuals (lay people, educators, professionals in human services fields, and political decision makers) who must become more actively involved in quality-of-life issues as our boundaries are stretched in this global society.

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A

Abortion

See Adolescent Pregnancy and Prevention; Prenatal Decision Making by Adolescents

Abuse

See Child Abuse; Domestic Violence; Elder Abuse in the Family; Sexual Abuse; Violence in Teen Dating

Accidents: Environmental Causes and Preventions

Accidents are unintentional events that cause tissue damage to an individual. They are the leading cause of death in the United States for children and adolescents ages 1–25. Every year, about 10,000 Americans under age 18 die from accidental injuries. An additional 10 million children and adolescents visit emergency rooms after accidental injuries, and countless others experience pain or withdraw from planned activities without seeking professional medical care (National Safety Council 1999).

In many ways, accidents are misnamed: Accidents are usually not purely accidental. Human behavior causes many accidents, and therefore many accidents are preventable. For this reason, scientists prefer the term “injuries” instead of “accidents.” To fully understand the ecology of accidental injuries, we must consider both the factors that lead to injury and the ways we can prevent injury. Factors that cause injury will be addressed first.

Researchers identify a number of factors that

put children and adolescents at increased risk of accidental injury. Some factors are social. For example, children whose parents do not monitor the children’s behavior, whose parents are frequently absent, intoxicated, or ill, and whose parents fail to supervise the children during dangerous activities are at increased risk of injury (e.g., Peterson et al. 1995). Also of concern is the child’s own temperament, or personality. Children who are impulsive and have poor self-control—that is, those children who are unable to control their impulses when attempting dangerous activities—tend to have more accidental injuries (e.g., Schwebel and Plumert 1999). Other factors are understood less completely at this time, but also appear to be related to increased risk of injury. These include cognitive factors such as children’s tendency to overestimate their ability to do physical tasks, emotional factors such as children’s mental illness (in particular, having oppositional or attention deficit hyperactivity disorders), and peer factors such as pressure to attempt potentially hazardous activities.

Demographic data also suggest some children and adolescents are at increased risk of injury. Boys consistently have a higher rate of injury than girls (e.g., Morrongiello 1997). Finally, environmental factors must be considered as risk factors for accidents. For example, an adolescent who has a summer job working on a farm and operating heavy machinery on a daily basis is at greater risk for arm and leg injuries than an adolescent who works in a legal office for the summer. A child who lives in an impoverished neighborhood where lead-based paint was used in older homes is at



Scene of an accident (Skjold Photographs)

greater risk of lead poisoning than a child who lives in a newly built suburban home.

In considering techniques to prevent accidents, scientists consider two broad categories of interventions: those designed to alter people's behavior and those that alter people's environments. Both are effective ways to prevent injuries. Prevention techniques that target people's behavior tend to focus on ways to change the way people act when they engage in potentially dangerous activities. One successful example of this type of intervention is the use of bicycle helmets. Epidemiological data suggests that the use of bicycle helmets sharply decreases the severity of head injuries children and adolescents experience after bicycle accidents that result in a blow to the head. Another example of a successful accident prevention campaign targeted at individual's behavior is the use of seat belts in automobiles. Countless lives have been saved as a result of interventions to increase seat belt use.

Prevention campaigns targeted toward environments are designed to change potentially dangerous situations so that the environment is safer. An example of this is the placement of mulch in playgrounds to reduce the chance of injury when a child falls off climbing toys. A second example of an environmental intervention to prevent accidents is the implementation of graduated driver's license laws. These laws, now in place in many U.S. states, require adolescents to learn to drive in a series of steps. For example, initial regulations permit driving only during the daytime while supervised by a parent or guardian. Over time, drivers are allowed to drive during nighttime hours, with other adolescents in the car, and without adult supervision. Preliminary evidence suggests that graduated driving laws are effective in reducing the number of accidents involving adolescent drivers (Foss and Evenson 1999).

Scientists and legislators agree that accidents are among the most serious public health problems facing American children and adolescents. Unlike other health problems, accidents are not caused by something like a virus or bacteria; in many cases, human decisions and human behavior lead to accidental injury. Although tragic accidents continue to occur on a daily basis, progress is being made. The rate of accidental injury among children and adolescents is slowly declining (National Safety Council 1999). As researchers con-

tinue to cooperate with government officials, manufacturers of commercial products for children and adolescents, and with the general public, the rate of accidental injury among society's youth will be reduced further.

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See also: Adolescents, Alcohol Use Among; Children of Alcoholics

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Acculturation

Given the increasing diversity in our world today, the concept of acculturation has become more and more important. In brief, acculturation is defined as the process of change and adaptation that results from continuous contact between people of different cultures (Redfield, Linton, and Herskovits 1936). The concept of acculturation is important because it helps us to understand how exposure to new, different, and diverse sociocultural environments can influence (and be influenced by) psychological changes within the person (Rogler, Cortes, and Malgady 1991). Although the term "acculturation" can be applied to all types of people—from immigrants, to minorities, to everyday people adjusting to a new environment—it is most commonly used in studies of immigrants and refugees and their children.

Currently, there are two main models of acculturation (Nguyen and von Eye 2002). One emphasizes assimilation (the bipolar approach), and the other, cultural pluralism (the bidimensional approach). In the bipolar model, acculturation is defined as an assimilative process through which mi-

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nority individuals acquire the behaviors and values of the host society (Franco 1983). It is often described in terms of high vs. low acculturation (or acculturated vs. not acculturated)—where high acculturation indicates assimilation into the host society (e.g., being Americanized) and low acculturation indicates maintenance of one's ethnic culture (e.g., remaining Mexican) (Cuellar, Harris, and Jasso 1980; Suinn, Ahuna, and Khoo 1992). In this model, one's original, ethnic culture is pitted against the host culture, and the assumption is that one can be, for example, either Mexican or American, but not both (see Figure 1).

In contrast, the bidimensional (or two-dimensional/2D) model suggests that cultural involvements are not polar opposites and that one can be involved in both the ethnic and host culture at the same time (i.e., it is not an "either-or" situation—one can be fluent in both Spanish and English, for example). Most relevant in culturally plural societies, this model suggests that acculturation can include involvements with both the host and the ethnic culture and that such involvements can and should be measured separately (Dona and Berry 1994). In contrast to the bipolar model, the 2D approach allows for several types of adaptation—e.g., bicultural, marginal, assimilated, and traditional—rather than seeing only assimilation as true adaptation (see Figure 2).

In this model, acculturation can be described in terms of its two dimensions (involvement in the host culture and involvement in ethnic culture) and in terms of four styles, or modes, of adaptation: bicultural, marginal, assimilated, and separated. Bicultural adaptation means an involvement with both the ethnic and host cultures, whereas marginal adaptation means an involvement with neither, so that one is alienated from both cultures. If one is assimilated, one is involved only with the host culture; or traditional adaptation, refers to an involvement only with the original, ethnic culture (Berry 1992). Most experts today prefer the bidimensional model, since they see the bipolar approach as conceptually problematic.

Acculturation and Adjustment

The form acculturation takes can have many consequences for the functioning of the individuals involved. Past research has revealed various impacts on adjustment—ranging from clinical symptomatology, to educational achievement, to

family harmony. Despite the research, however, concepts of the nature of the links between acculturation and adjustment can conflict. This conflict is partly due to the different models and measurements of acculturation used and partly to the different factors that can affect acculturation-adjustment links (e.g., gender, age, socioeconomic status, geographical context, and the like). In general, though, acculturation has been linked to adjustment in the following ways:

Assimilation and Adjustment

Research has linked high levels of acculturation (or assimilation) with various clinical disorders, including depression, phobia, suicide, and substance abuse/dependence (Burnham et al. 1987; Caetano 1987; Klonoff and Landrine 1999; Sorenson and Golding 1988). High levels of acculturation have also been linked with higher rates of delinquency and deviant behavior (Buriel, Calzada, and Vasquez 1982; Vega et al. 1993), higher rates of smoking and anorexia (Unger et al. 2000), and higher rates of family conflicts and school difficulties (Portes and Rumbaut 2001). In one study of Southeast Asian adolescents (Cambodian, Laotian, and Vietnamese), for example, it was found that youth who were becoming too assimilated into American culture were less successful academically (Rumbaut 1991). In another study of immigrant youth across the United States, it was found that those who had high levels of acculturation suffered poorer health outcomes and engaged in more risk behaviors (Harris 1999). Compared to less assimilated peers, these youth were more likely to be obese, to have fair or poor health, to experience learning difficulties, and to have missed school because of a health or emotional problem. They were also more likely to use controlled substances, to engage in violent and delinquent behaviors, and to have had sex and to have had it at a younger age.

A review of these findings suggests that increases in acculturation (assimilation) alienate individuals from the support of their ethnic group and give rise to self-hatred and hatred of their ethnic group. These increases can lead to damaging behaviors and beliefs that are a part of the dominant culture—to an acceptance of hurtful stereotypes and prejudices about one's ethnic group, and to the practice of discrimination toward one's ethnic group. In sum, it seems that a sense of belong-



Asian foreign language sign in the U.S. (Michael Siluk)

ing with those in one's ethnic culture helps to facilitate a sense of support, identity, and mental health, and a lack thereof leads to greater difficulties (Rogler, Cortes, and Malgady 1991).

Separation and Adjustment

In the second group of findings, low levels of acculturation (or separation) have also been linked to greater difficulties. Whether measured by length of residency, by loyalty to the culture, or by English proficiency, low levels of acculturation have been associated with various problems, including depression, withdrawal, delinquency, somatic symptoms, and substance abuse/dependence (e.g., Lim, Levenson, and Go 1999). Similarly, low levels of acculturation have also been linked to a greater number of negative life events (e.g., divorce, death, hospitalizations) and a greater dissatisfaction with life (e.g., boredom, dreariness, sadness) (Salgado de Snyder 1987). Furthermore, low levels of acculturation (as measured by ethnic involvements) have also been linked to higher distress, higher depression, and lower self-esteem (Nguyen, Messé, and Stollak 1999).

Researchers suggest that when acculturating

individuals have been uprooted from traditional interpersonal relationships, they are more likely to experience loneliness and isolation in their new environment. Such challenges, coupled with a lack of instrumental skills (e.g., knowledge of the host language, access to various resources, familiarity with cultural norms) may prevent the uprooted individual from becoming familiar, comfortable, and competent in her new world. Consequently, these predicaments may lower self-esteem and give rise to dysfunctional behavior (Rogler, Cortes, and Malgady 1991).

Biculturalism and Adjustment

Researchers who have found a link between biculturalism and adjustment have suggested that difficulties are worse at both acculturative extremes (i.e., separation and assimilation), and that healthy adjustment is achieved at an optimal balance point (i.e., at biculturalism). This balance requires integration between the ethnic culture's supportive elements and the host culture's instrumental skills. Support for this argument comes from a study of Hispanic adults (Lang et al. 1982). It found that bicultural Hispanics were better ad-

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justed in terms of life quality, depression, and psychological adjustment than were those who were either monoculturally Latino (separated) or monoculturally U.S. mainstream (assimilated).

Similarly, José Szapocznik and his collaborators found (as reported in a 1980 study) that in the Cuban families studied drug abuse was a function of monoculturality (belonging to only one culture), seen in over-acculturated youths, as they called those who had become pretty completely Americanized, and under-acculturated mothers. The youths were found to have high rates of drug abuse and impulsive and antisocial behavior, while the less acculturated mothers were found to use more sedatives and tranquilizers and to exhibit more neurotic behaviors. The researchers caution that it is not the retention of the ethnic characteristics or the assimilation into the host society that is pathological per se. Rather, it is the lack of bicultural involvement that is problematic, because it renders members of ethnic minorities inappropriately monocultural in a bicultural context. Hence, it is the exaggerated assimilation with the host society or the exaggerated maintenance of ethnic culture (separation)—one to the exclusion of the other—that is detrimental. Biculturalism appears to be optimal for adjustment because it enables individuals to function in both of their daily cultural contexts.

An Ecological Perspective on Acculturation

It is important to note, however, that the acculturation-adjustment relationships depicted here are not as simple and clear-cut as they appear. As suggested earlier, many factors can shape these relationships (e.g., socioeconomic status, or SES, ethnic group, immigration policy); two general factors are context and one's interaction within that context.

Although various factors in the context (e.g., availability of community resources, experiences of discrimination, sense of fit in the context) can have a profound impact on the adjustment of minority populations, they have often been overlooked in past research. Few studies have described, let alone measured, the potential influence of context. Most seem to study ethnic groups in isolation, as though they could be isolated from their sociocultural and historical backgrounds.

Yet some studies suggest that contextual factors are vital in shaping the acculturation and adjust-

ment of minority groups. Andres Gil and William Vega (1996), for example, studied Cuban and Nicaraguan families in Miami and found that the Nicaraguans experienced more difficulties (i.e., more language and acculturation conflicts, more perceptions of discrimination) than did their Cuban counterparts. Furthermore, they made less money than the Cubans, despite having similar levels of education. Gil and Vega attributed these findings to the different conditions in the groups' context, explaining that the Cubans fared better because they had more supportive enclaves and resources than did their Nicaraguans neighbors—who, in contrast, encountered greater barriers in their resettlement to Miami (more exploitation by police, more restrictions in obtaining job permits and legal residence, and so on).

Huong Nguyen (2000) also demonstrated the importance of context. Using a sample of Vietnamese and Mexican adolescents, Nguyen tested an ecological model of acculturation. The main premise of this model is that to fully understand the nature of acculturation-adjustment relationships, it is essential to understand the context in which such relationships evolve. The model holds that acculturation is a process that connects the individual with his context. Its levels of involvement are links to one's sense of competence and belongingness. In conjunction with the demands and resources of the context, competence and belongingness predict one's behavior. Thus it is not the culture itself, but rather the fit between the individual and the environment that facilitates or impedes adjustment.

Nguyen's findings demonstrated support for this ecological model in several ways. First, she found that the two ethnic groups differed in adjustment and cultural fit in expected ways. Compared to their Vietnamese peers, Mexican youth reported fewer experiences of discrimination and a greater sense of fit within their context (i.e., in Lansing, Michigan, where the study was conducted). They also fared better in terms of personal adjustment (as seen in depression, symptomatology, self-esteem, and life-satisfaction) and interpersonal adjustment (as seen in family and peer relationships). These findings corresponded with the community resources in Lansing. They suggested that individuals who have more ethnic resources in their context (as the Mexicans do in Lansing) would have more support, and thus, a

better sense of fit and adjustment than peers who have fewer community resources (as the Vietnamese do).

Second, Nguyen demonstrated that there were differential acculturation-adjustment patterns (for both ethnic groups), which corresponded to the demands of the context. Compared to adolescents who were less involved, those who were more involved in the U.S. culture were more adjusted on the whole, taking into account the personal domain (i.e., self-esteem, life-satisfaction, disposition to delinquency), the interpersonal domain (i.e., family, peer, and teacher relations), and the academic domain (i.e., school GPA, reading scores, and academic aspirations). In contrast, youth who were more involved in the ethnic culture reported more mixed functioning than peers who were less ethnically involved). They fared better in terms of family relationships and academic aspirations, but worse in terms of depression, symptomatology, and math and reading scores. Nguyen attributed these findings to the dominant U.S. presses and resources in the Lansing context. Given that Lansing is 84 percent White (and only 8 percent Mexican and 0.2 percent Vietnamese) (U.S. Census 1990), it is likely that adolescents who are more involved in the U.S. culture are more likely to feel a sense of fit in their environment. Their U.S. skills and involvements may be more useful in Lansing and thus more likely to facilitate adjustment. Conversely, those with high ethnic involvements may have a more difficult adjustment, because their ethnic involvements are rendered useless in a context that has little support or utility for such involvements.

Finally, Nguyen demonstrated that cultural fit (one's fit within the context) predicted better adjustment on the majority of indices measured—across personal (i.e., depression, symptomatology, self-esteem, life-satisfaction), interpersonal (i.e., family, peer, and teacher relations), and academic domains (i.e., reading scores, academic aspirations). Moreover, she demonstrated that cultural fit mediated numerous links between acculturation and adjustment. This set of findings is especially compelling; it demonstrates that it is not so much the cultural involvement that is adaptive or maladaptive per se, but rather, what the involvements mean in context—i.e., the cultural fit that they lead to—that facilitates or impedes one's functioning.

Taken together, the findings of Nguyen and Gil and Vega demonstrate the utility of an ecological perspective—i.e., of examining an individual's context (e.g., community resources) and his/her interaction within that context (e.g., cultural fit)—when studying acculturation-adjustment links. As Dina Birman and her colleagues so aptly conclude in an article soon to be published, “there is no ‘best’ acculturative style independent of context.”

Huong H. Nguyen
Alexander von Eye

See also: Adolescence in a Cultural Context; Children from Immigrant Families; Ecodevelopmental Theory; Ethnic and Racial Identity in Adolescence; Families, Southeast Asian; Family Diversity; Hispanic Immigrant Experience; Parent Education Programs for Immigrant Families

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Achievement Motivation

The study of achievement motivation is the study of students' learning beliefs and behavior in classrooms and other educational settings. Achievement motivation consists of a constellation of beliefs, attitudes, and emotions that students come to hold as a result of their educational experiences. From an ecological perspective, achievement motivation is viewed as influenced by parents, teachers, and peers, as well as the larger culture in which children grow. Educational researchers have learned that students' beliefs about learning influence both the kinds of work they choose to do in the classroom, as well as their persistence while they do their work. This information has been very helpful to teachers, as it suggests that students who have low confidence or otherwise struggle with perceptions of low ability can be helped by being oriented to different ways of thinking about learning.

Students' beliefs about the relationship between effort and ability have been the focus of much study. Bernard Weiner has found that, in their attempts to understand the causes of their successes or failures, students tend to attribute their grades to four causes: effort, ability, luck, and other external factors, such as the ease or difficulty of a test or assignment (Weiner 1985; 1994). Weiner's attribution theory proposes that students interpret these

causes along three basic dimensions: location (internal or external), stability, and controllability. Weiner has shown, for example, that most students tend to view ability as something that is internal, relatively stable, and uncontrollable. In contrast, effort tends to be viewed as something that is internal, unstable, and controllable.

Further, Weiner has demonstrated that the cause to which students attribute their performance is directly linked to how they come to feel about their abilities, and that these emotions are actually predictive of the next steps that students will take in their learning. For example, students who believe they did poorly on a test because they waited until the last minute to study will most likely feel guilty and make a concerted effort to study in advance of the next test. In contrast, students who believe that they did poorly because they are not smart enough are likely to feel ashamed and therefore will probably not try very hard to prepare for the next test. Students are much better off, then, if they can be helped to interpret failure as resulting from lack of effort rather than lack of ability, since effort is something they can improve, while ability is something they really cannot do anything about.

However, other researchers have shown that the ways in which students interpret their grades is very much influenced by the structure of learning in their classroom. John Nicholls (1989) studied students' attributions for success and failure in cooperative and competitive classrooms. He found that when students learn in cooperative as compared to competitively oriented classrooms, they are less likely to view ability as something that is limited and over which they have no control. Furthermore, they do not report feeling ashamed if they do poorly on a test or assignment—they tend to focus instead on how they can improve their grade in the future. Cooperative learning, then, tends to minimize students' concerns about their abilities, and orients them to *how*, and not *whether* they can master an assignment.

Not surprisingly, educational researchers who have studied ability grouping and tracking—the practice of selecting and placing students of similar ability in small groups or the same classrooms—have found that it too has the tendency to raise students' concerns about their abilities. The greatest benefits seem to be reaped by higher level students, who report greater enjoyment of their

learning in classrooms with enthusiastic teachers who assign challenging work (Oakes 1985). In contrast, students placed in lower groups or tracks report learning in the company of peers who are very disruptive, and from teachers who are punitive and assign easy work.

The study of students' beliefs about their abilities grew naturally out of the research on attributions for success and failure. In an earlier study Nicholls (1979) found that from preschool through the first grade, most children believe that intelligence grows with effort, and they tend to say such things as “The harder I try, the smarter I get.” By the second grade, however, many children abandon this belief for the view that effort itself is an indication of low ability. They now express such ideas as, “The harder I *have* the try, the dumber I must be.” The notion that effort can be interpreted as a sign of low ability means that, for some students, it can become a double-edged sword (Covington 1979). That is, most students readily acknowledge that they can probably do better if they try harder, but for many the mere act of trying is an admission of low ability.

The fact that some students do not interpret the need to try hard as indicative of low ability has led educational researchers to examine how students may think differently about ability itself. John Nicholls (1989) and Carol Dweck (1999) have found that, in general, students tend to think about ability or intelligence in two distinct ways. Some students think of ability as a quality that is limited and that limits what they will be able to accomplish. In experiments, these students are likely to avoid learning a new skill if there is a chance that they may make mistakes, thereby revealing their lack of ability. Instead, they will choose to work on a task they already know how to do. These students also tend to be very concerned about how well they are doing in the classroom relative to others. In contrast, other students think of ability as a quality that grows with effort. They tend to enjoy challenging assignments, even if they know they will make mistakes. Indeed, these students tend to view mistakes as a natural part of learning, and are focused more on their own progress rather than their relative standing in the classroom. These very different views about ability probably arise from the different influences that parents and culture bring to bear on their development.

Across the social sciences, researchers in edu-

10 Achievement Motivation

cation, psychology, anthropology, and sociology agree that students' beliefs about learning and achievement do not evolve in a vacuum. Many investigators have sought to understand the roles that family and culture play in the development of students' achievement-related beliefs. Scholars concur that parents have a profound influence on their children's developing achievement beliefs, both through the ways in which they talk about schooling and the actions they take in the service of their children's education (Bempechat 1998; Epstein 1987; Rogoff 1990; Sigel, McGillicuddy-DeLisi, and Goodnow 1992; Stipek and Gralinski 1991). Indeed, parents' own beliefs about learning guide their educational socialization practices, which in turn influence their children's developing beliefs. This notion has been demonstrated rather decisively in research on gender differences in mathematics achievement. Interestingly, researchers have found that mothers tend to hold very different beliefs for boys versus girls with respect to the causes of success and failure. Mothers tend to attribute boys' failure to lack of effort, but girls' failure to lack of ability (Holloway and Hess 1985). Mothers also tend to attribute boys' success to ability, but girls' success to effort. The implicit message to boys is that they are smart, and need to try harder when they fail. In contrast, the message to girls is that they are not smart, and when they do well, it is because they tried hard. Some have speculated that mothers' differential beliefs may account, in part, for the fact that more girls than boys tend to opt out of higher level mathematics and sciences courses in high school, leaving many fewer young women than men who major in mathematics-related studies in college and choose careers in mathematics, science, or engineering.

Cultural psychologists and psychological anthropologists have proposed that there exist "folk theories" of learning that are embedded in culture and serve as powerful guides for how individuals understand, or make meaning of, their learning experiences (Bruner 1996; Serpell and Hatano 1997). For example, scholars who study Japan have argued that the cultural tendency toward collectivism and interdependence lead to particular understandings of learning that emphasize self-improvement in the service of maintaining relationships with one's social groups, including family, school, and peers (Kitayama et al. 1997;

Kitayama 2000). Effort, then, has social as well as academic meaning for students (Holloway 1988). There is no shame in trying hard to overcome difficulties in learning—expending effort is both an expected and necessary aspect of self-improvement. In contrast, researchers have described American culture as one that fosters independence and encourages children to fulfill individual needs in the service of establishing and maintaining self-esteem (Kitayama et al. 1997). Students tend to view effort as something they can invest in at will, for their own, individual benefit (Holloway 1988).

These cultural differences, although very general, have been used to explain the higher mathematics achievement of Japanese and Chinese relative to American elementary and high school students. In studies comparing achievement and motivation in Japanese, Chinese (Taiwan), and American students, Harold Stevenson and his colleague found that, while all mothers and children placed more emphasis on effort than ability, American mothers and their children were much more likely than their Asian counterparts to focus on ability as a potential cause of success or failure (Stevenson and Stigler 1992). Indeed, Japanese mothers do not tend to see ability as a factor that could limit a student's performance in school (White and LeVine 1987). These findings suggest that the Japanese cultural tendency toward self-improvement may foster beliefs about ability that are helpful for learning.

Critics have recently urged researchers to move beyond the tendency to characterize an entire population of people according to one, overall cultural belief. They have argued that, within any population, there exists a rich and varied continuum of beliefs. Increasingly, researchers are seeking to understand differences *within*, and not just *between* cultural groups. Using qualitative methods of inquiry, including in-depth interviewing and ethnographic research, scholars are uncovering the different ways in which a particular cultural belief is interpreted and even contested in a given society. For example, in a series of interviews and observations with Japanese preschool directors, Susan Holloway (2000) found that there is indeed a consensus among these educators that children need to learn how to get along with the other children and adults in their lives, a goal that has been described as particularly Japanese (White and LeVine 1987). While the development

of social skills was a primary concern, Holloway found that all the preschool directors she interviewed availed themselves of the ideas of both Western and Japanese educational theorists. This illustrates the extent to which it is problematic to adhere to dichotomous characterizations of Japanese society as collectivist and American society as individualist. Further, these Japanese preschool directors used very different means to socialize children into Japanese culture, which is very rich and complex.

This example demonstrates that the major advantage stemming from the study of within-group differences is that it allows educational researchers to move beyond cultural stereotypes and toward a greater understanding of the richness that exists in the differing views that individuals hold about child development. For the study of achievement motivation, this implies that researchers need to move beyond the tendency to characterize students' beliefs at one or the other end of a continuum. In order to develop a deeper understanding of how students' achievement beliefs and behaviors develop and evolve over time, researchers need to conduct studies that embed a qualitative component within a larger quantitative investigation. Research that includes in-depth interviews, ethnography, and case studies will advance knowledge. In so doing, it will be better positioned to help teachers, who work hard every day to motivate their students and foster a love of learning.

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See also: Curiosity; Gender Roles and Society; Resiliency; Self, Self-Concept, and Self-Esteem; Self-Efficacy

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Adherence

See Treatment Adherence

Adolescence in a Cultural Context

Adolescence is the stage of life when societies prepare their children to take on adult roles and responsibilities. The way parents and other educators work on this preparation is closely related to societal values and beliefs, the type of economy the society is based upon, its social structures and organization, and how the family unit is composed and regulated. Developmental tasks, rather than being universal challenges, are cultural expressions of normative age-specific goals and standards the children have to deal with. Parental child-rearing practices are not only a manifestation of the parents' own values and traditions, but a reflection of the subsistence tasks and roles the adolescents are expected to fulfill in their society as adults (Ogbu 1981). The competencies the individual will need as an adult shape the map on which different developmental paths are delineated, whereas the physiological and biological characteristics of the individual determine the general potential that individual has for the growth of unique sociocultural behaviors. Because an important goal of child rearing is to socialize children to fulfill the cultural tasks of a particular culture, there may be variation between cultures in important domains of lifespan development. During adolescence the impact of differing child-rearing traditions is evident, for example, in association with the individuation process, the development of self-concept and identity formation, and the nature of future orientation.

The dimensions of "individualism" and "collectivism" have been used to conceptualize different cultural values and characteristics on a societal level. The modern Western societies of North America, Australia, and northwestern Europe are generally seen as more individualist, whereas countries in Asia, Africa, Latin-America and East Europe are seen as having stronger collectivist values. On an individual level these characteristics are

related among other things to the value placed on individual autonomy and assertiveness as opposed to interdependence and compliance. Differences in sex-role expectations are generally seen as following the same geographical pattern: More individualist societies are more egalitarian in sex-role expectations, whereas more traditional gender roles are usually found in collectivist cultures.

During the last two decades of the twentieth century and the beginning of the twenty-first, researchers have focused on the way cultural and ecological factors are integrated in, and affecting, parental child-rearing practices. During this process it has become increasingly apparent that developmental content and outcomes that were thought to be general are rather culture specific. This is certainly true for what used to be considered universal major developmental tasks during adolescence, such as becoming more independent from parents, initiating new and more mature relations with peers, and forming a personal and distinct self identity (Gardiner, Mutter, and Kosmitzki 1998).

The focus on individual autonomy and personal achievement as we know it from Western nations influences the meanings and dynamics of close relationships; when emphasis is put on interdependence and harmonious social interaction, the effect is different. Tension and conflict seem to be a necessary part of the former relations, in order to advance individuation and separation from parents. During Western adolescence, as children transfer intimacy and confidence from parents to peers, become more self-assertive, and challenge many of the parental values, there seems to be an intensification of this strain. Overt statements of disagreement with authority figures are expected in the same way as conflicts between adolescents and parents, and they are valued as important in the development of self-expression and autonomy (Rothbaum et al. 2000).

The strong emphasis on the need to be interrelated with significant group members within the interdependent cultures sets the stage for more harmonious interactions, in which attention is directed toward the needs and well-being of others. Cooperation is cherished, and disagreements and conflicts avoided. Maturation is seen more as a process of gaining control over inner attributes, rather than as a process of learning to express them. Since gaining independence from parents is not an important issue for adolescents of these so-

cieties, there is less intergenerational strain between adults and their young children. And in cases where there are antagonistic feelings toward parents, the young person will hesitate to express these sentiments, out of respect for parental authority and to maintain group harmony. Adolescents of collectivist cultures tend to continue spending much of their leisure time in the company of parents and family, and the relations they have with peers are not apt to conflict with those they practice with significant adults (Schlegel and Barry 1991).

In individualist cultures, close friends play an important role in the process of gaining independence from parents. Young people prepare to leave their families by spending most of their waking hours away from home; either at school or in the company of peers. Intimate relations with same-age friends provide a safe haven while adolescents are struggling to achieve confidence in their own choices and decisions.

But even if Western adolescents tend to spend more time with and confide more in their friends as they grow older, and even if there are quite a few controversies with parents over rules and regulations, the relationship with parents remains close and important. In most cases, the two network groups seem to have complementary functions in the lives of young people. Parents are trusted for advice on future events like schooling and career choices, while close friends are important sources of consultation about everyday issues like styles and social events and other recreational activities (Shaffer 2000).

There is an important gender difference in peer relations between collectivist and individualist societies that may reflect a variation in gender-role expectations between the two cultures. While girls in the Western countries tend to be more peer-oriented and have stronger ties with their friends than boys, the contrary situation is usually found in non-Western societies. This is especially true in more traditional cultures, where formal education often ends during adolescence. Girls tend to spend much of their time with their mothers and other female adults, taking part in grown-up activities that prepare them for the roles they will assume as married women. Young girls' relationships with same-age peers often take place in this situation. The intimate bonds between mothers and daughters are thus maintained, while adolescent interac-

tion is molded after the adult pattern. Boys, on the other hand, may take part in subsistence tasks with their fathers, but do not gain the same intimacy with them. Although they may participate in adult work, they are often left to themselves in company with other young boys, while the adult males are dealing with political issues or getting together for socializing purposes. Nevertheless, the bonding with the peer group will not be strong unless there are initiation ceremonies that mark a separation of the young boy from his family, so that he will no longer sleep and eat in the house of his parents. In this case the peer group will be of more importance than other social groups to the young boy (Schlegel and Barry 1991). Diverse patterns of interpersonal relations also affect the potential for social support, and it has been observed that adolescents of interdependent cultures report stronger supportive ties within their different networks than Anglo-Americans (DeRosier and Kuipersmid 1991, Triandis et al. 1985).

One of the cornerstones in the establishment of a mature identity, a major developmental task for adolescents, is the person's self-concept. Even if the process of differentiating the self from the environment starts very early in life, the social and cognitive development of adolescence contribute to a refinement of the self-concept, which becomes more psychological, abstract and coherent. There seems to be an agreement that all humans recognize themselves as physically distinct beings. But there are important variations in the content and structure of the self-concept and some of the psychological processes related to it, implying that the way people think about themselves reflect the cultural context they are part of (Kagitcibasi 1996). Differences in people's beliefs about the relationship they have with others, and specifically the degree to which they see themselves as separated from or connected with others, are associated with differences in cognition, emotions, and motivation (Markus and Kitayama 1991).

In modern Western societies people tend to see themselves as separated from others, and they think of the self as a self-contained, autonomous unit with clear boundaries, defined by the physical body. Each person comprises a unique configuration of individual desires, preferences, attributes, and abilities that remain stable across different situations. The expression of these inner qualities motivates and regulates behavior. Individuals with

an independent self tend to describe themselves with reference to their inner characteristics, and to see themselves as different from others. The independent self is typically encountered in Western societies, and has therefore been seen as an expression of underlying individualist values. In contrast to the belief that people are separated from and independent of each other is the belief that people are fundamentally connected with one another. Among those who hold this belief, the emphasis is on the fact that it is crucial for humans to be part of various interpersonal relationships and to maintain interdependence among individuals. Since it is the-self-in-relation-to-others that guides behavior, a heightened awareness of the needs and desires of others is necessary. Interdependent individuals tend to see themselves as more like others, and to think of themselves in terms of the relationship they have with various in-group members. Consequently their self-concept is less stable and changes structure according to the situation. The interdependent self is the more typical self-concept of collectivist cultures.

Obviously these differences in how people think about themselves have a substantial impact on other processes of adolescents' identity formation, both in relation to content areas like family and peers, and in relation to what strategies are preferred in dealing with identity issues (Marcia 1980).

But it is not only in the development of the self-concept that there is variation between cultures with importance to the identity formation of adolescents. Many cultures have specific rites of passages that mark the transition into adolescence. These rituals are expressions of how the young person is expected to contribute to the society. As such, they may ease the process of identity formation, making the exploration of and commitment to career, sexuality, and ideology, issues of so much importance in Western societies, less pertinent (Schlegel and Barry 1991). Thinking about and planning for the future is a universal aspect of lifespan development. This is of special importance for adolescents, not only because of the long-term consequences of the decisions made during this stage of life, but also because exploring and committing to future interests is crucial in their identity formation. In an extensive review of the literature on the development of future orientation during adolescence, Jari-Erik Nurmi (1991) illus-

trated the influence of normative developmental tasks on this process. During adolescence there seems to be a cross-cultural increase in worries about and interests in normative developmental tasks such as education, career, and starting a family.

Nurmi further elucidates how this process is embedded in the social and cultural context the adolescents participate in, as well as the importance of historical and social factors in the contents of adolescents' future orientation. Whereas there is a general tendency for girls to be more preoccupied by their future families, gender variation in educational and career concerns is clearly associated with differences in gender role expectations in each society. Concerns about such issues as parental divorce, pollution, nuclear war, entering the army, and unemployment are reported in societies and periods of times where these issues have played a significant role. Of interest here is the way the dimensions of independence and interdependence are reflected in the future orientation of adolescents. The focus on autonomy and independence in Western countries as opposed to the interdependence in collectivist cultures is expressed in relation to the issue of future family: Young people in the former group will mention their personal future family, whereas youth in the latter group tend to have the parental family as a frame of reference in their future orientation. Common goals and interests that Western adolescents are inclined to report are closely related to their own popularity, happiness, leisure activities, and achievement. Even if they seek the advice of their parents in important matters like education and career planning, they feel free to make and responsible for making autonomous decisions about their future. Their counterparts from collectivist societies are more prone to record issues related to their own and their family's health, other people's death, as well as to other people's courtship, marriage, and children. Very often the family will take care of the planning of the future for their children; in every instance the parents will be very influential in the decisions of the adolescents.

Sociocultural expectations imparted to the adolescents in terms of developmental tasks do not only affect the adolescents' orientation to the future. Dealing with these tasks may be stressful for young people, and the main problems associated with their psychological well-being are related to

issues about school, parents, boy- or girlfriends, and peers. In societies where formal education is crucial for future career, the transition from elementary to secondary school is a challenge in itself. But as graduation from high school is getting closer, the burden of schoolwork and pressure to succeed seem to cause distress for a large proportion of the students in many societies. In their description of adolescent life in traditional communities, Alice Schlegel and Herbert Barry (1991) report young girls distressed by the expectation that they should find an appropriate partner, and young boys distressed by antagonistic relations with their fathers. The *Sturm und Drang* of adolescence that has been thought to be a result of raging hormones and physiological changes may just as well be related to everyday problems concerning developmental tasks adolescents have to cope with.

Internal conflicts, wars, famines, and other catastrophes of nature are contributing to a growing gap in living standards and possibilities between third-world nations and developed countries, a gap that has increased migration at a rate unknown in history. Due to globalization, more and more individuals and families are able to cross national borders to settle down in foreign societies for shorter or longer periods of their lives. Individuals and groups of people of differing cultural and ethnic origins are interacting with each other more than ever in all parts of the world. Consequently, more and more children and adolescents are experiencing an acculturation process as part of their development from infancy to adulthood. Unfortunately, however, little information is available about the idiosyncratic aspects of immigrant children's cultural ecological context, and this context needs to be delineated in greater detail to get a better understanding of their social, emotional, and cognitive development.

What is clear is that a growing number of families from the collectivist cultures of Asia, Latin America, and Africa have settled down in the individualist societies of northwestern Europe and North America. Immigrant parents tend to continue the child-rearing practices of their culture of origin when they arrive in a new country of settlement. It has also been demonstrated that immigrant adolescents adhere to the same family values as their parents, in the same way as their domestic peers hold onto the values their caretakers advocate. However, we lack systematic empirical knowl-

edge about developmental tasks that would be more typical of a collectivist immigrant cultural context. Concerning gender roles, immigrant adolescents may face more traditional expectations about what future tasks to fulfill in the family, whereas in the schools and the society at large, they are met with more egalitarian role expectations, encouraging especially females to opt for an education that will secure them economic independence. Preparation for the future role as a mother and housewife necessitates that immigrant adolescent girls spend their leisure time with their families, whereas in the outside world they are expected to develop intimate relationships with peers and voice their personal opinions against their parents. An interdependent family environment may involve aspirations that their offspring in the future shall contribute to the economic and social support of older family members, while the larger society insist they make autonomous decisions and put their personal happiness in the first place.

How immigrant children and adolescents balance various family-inculcated collectivist values and traditions against the individualist values of the host society is not yet understood very well. Neither do we know whether and in what ways this balance affects the development of their self-concept and close relationships with in-group members during the life span as a whole, and during adolescence in particular. Traditionally, acculturation is perceived as a stressful process (Berry and Sam 1995). However, so far there are no conclusive findings indicating that the general psychological well-being and adaptation of immigrant adolescents is inferior to that of the host national youths. It seems reasonable that a positive acculturation process includes the learning of diverse cultural competencies and gaining the knowledge about where and when to apply them appropriately that is helpful in the adaptation of acculturating youth.

Regarding peer relations, immigrant and ethnic minority members seem to display the same pattern as we described for traditional societies, with less peer orientation and peer support among females than is reported by their Anglo-American counterparts. Concerning family relations, there are studies that show that young people of immigrant and ethnic minority origin report less social support from their families than Anglo-Americans (Vaux 1985). In addition, there are empirical find-

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ings implying that immigrants who are more acculturated, in the sense that they are more competent in the ways of the host society, report less family support than immigrants who are less acculturated (Shapiro et al. 1999). This indicates that there might be some social and emotional challenges to the balancing of different values during the acculturation process.

Globalization and modern technology have put the world on a spinning wheel of cultural modification and transformation. Acculturation is turning into a major developmental task not only for immigrant adolescents, but also for a worldwide generation of multicultural youth, who will have to negotiate the incongruities between parental expectations, values, and beliefs and those of the outside world. The present variation in values within national groups may increase, and the boundaries between individualist and collectivist cultures, interdependent and independent self-conceptions, may decrease. Contrasting cultural developmental tasks will be the challenges for a growing number of young people. Under such conditions one of the challenges for the societies' educators will be to decode and formulate clearly in as many ways as possible the content of the contrasting cultural developmental tasks.

Brit Oppedal

See also: Acculturation; Adolescent Identity Formation; Culture and Human Development; Erikson's Theory of Psychosocial Development; Ethnic and Racial Identity in Adolescence; Extracurricular Activity Participation; Families, Southeast Asian; Menarche; Parent Education Programs for Immigrant Families; Racial Identity Development among African American Adolescents

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Adolescent Identity Formation

Achieving a sense of identity is the major emotional and social task of adolescence and involves defining who one is, what one's values are, and which direction one will pursue in life. According to Erikson, the search for self is one of the major forces behind many commitments such as sexual orientation, personal relationships, and level of involvement in society, as well as moral, political, and religious commitments. It is the final developmental crisis before adulthood (Erikson 1950). While this momentous task of forming a concept of oneself begins in the later years of childhood, the majority of it takes place during the adolescence.

The early stages of identity formation can be seen in childhood where the child describes him/herself in terms of personality traits such as "I

am shy” or “I am funny.” The child in middle childhood is able to talk about herself in the past, present, and future and is able to establish links between these time frames. In early adolescence, the teenager is not able to connect these self-statements, and may even give opposing descriptive characteristics. Such statements as “I am shy and I am outgoing” illustrate this. These contradictions in the description of self arise from the social pressures that force adolescents to display different selves in different social situations. As the adolescent’s social world expands with the development of new social relationships, such as romantic relationships, relationship with parents, and relationships with siblings, peers, teachers, and employers, the paradoxical self-descriptions increase in frequency and can cause stress and anxiety because the adolescent finds that she is unable to explain or resolve them (Harter 1998; Harter and Monsour 1992).

According to Erikson’s theory, during this period of time known as the identity crisis, teenagers will experiment with who they are, with what they believe in, and how they wish to be perceived. As mentioned previously, this stage is typically accompanied by feelings of confusion and distress, as adolescents experiment with various sets of values and goals. Because of this confusion and distress, young people in the midst of constructing their identity may vent their frustrations on themselves and others, which may result in antisocial and even self-destructive behavior. Creating a unified sense of self arises out of adolescents’ need to bring together their identity as individuals and their identity as members of the society and culture they inhabit. Eventually, out of this period of soul-searching will arise a mature sense of self. The process of identity formation depends on how adolescents judge others, how others judge them, and how they judge the judgment process of others, as well as on their ability to evaluate these judgments in light of the culture (Cole and Cole 2001).

During middle and late adolescence, and with the development of the capacity for more abstract thought, teenagers are able to combine their various traits and concepts of self into higher-order abstract descriptors and begin to use qualifiers, such as “I am pretty intelligent” or “I am not completely outgoing” (Berk 1999). These statements reveal their awareness that psychological qualities such as intelligence or shyness can and often do change from one social situation to the next. As

teenagers move toward the kind of unity discussed by Erikson in his theory of identity development, they will revise their views of themselves to include lasting goals and values.

Researcher James Marcia elaborates upon Erikson’s ideas on identity formation and focuses on two factors that are essential for achieving a mature identity: crisis/exploration and commitment. Crisis/exploration refers to the process during which adolescents reexamine choices they and their parents have made; the process involves thinking about future opportunities in life and may include the initial stages of searching for alternatives that they find personally fulfilling. Commitment refers to adolescents pledging allegiance to the goals, values, and beliefs they have adopted for themselves. James Marcia identifies four possible patterns of crisis/exploration and commitment in coping with the task of identity formation. The four identity statuses are identity diffusion, identity foreclosure, moratorium, and identity achievement (Marcia 1966, 1999). Adolescents often shift from one status to another while forming their identity.

Identity Diffusion

The adolescents described by this status lack clear direction; they are not committed to any goals or values and are not actively involved in trying to reach them. They have never explored their ideals and goals or perhaps have tried and found the task to be too overwhelming. Teenagers who find it difficult to realize their occupation goals and life values are at risk for identity diffusion. These adolescents will experience difficulty in adjustment, and long-term diffused adolescents are the least mature in identity development. Typically, they employ concepts of fate and luck and have an “I don’t care” attitude. They also tend to follow the crowd, resulting in occasional deviant behaviors such as substance abuse and violence.

Identity Foreclosure

Identity-foreclosed individuals are committed to a set of values and goals; however, they have reached this level of commitment without having explored the alternatives to them and show no signs of having experienced a crisis. Instead, they have accepted the ready-made identity handed to them by authority figures in their lives. These authority figures are usually parents; though they may also be



Children dressed similarly (Michael Siluk)

teachers, religious leaders, or even romantic partners. Child actors and teenagers in religious cults and royal families may experience identity foreclosure. Like teenagers in the identity-diffused status, identity-foreclosed teens are ones who are likely to experience difficulty in realizing their own personal goals and values in life. Adolescents who remain foreclosed also experience difficulty in adjustment and are often inflexible, dogmatic, and intolerant. They may use their commitments in a defensive manner in response to the threat of new ideas and ways of looking at things. Some foreclosed teenagers may join cults or other extremist groups, adopting a way of life very different from their previous one if they have been alienated or have sensed rejection from the people in their lives previously depended upon for their self-esteem, validation, and affection (Frank, Pirsch, and Wright 1990; Kroger 1995).

Moratorium

In this identity status, teenagers experience an identity crisis. They have not made any definitive

commitments to a set of goals or values. Rather, they are in the process of exploring and gathering information and trying new activities. In Western culture, college triggers the exploration process for many, as they are exposed to a new lifestyle and new ideas. Teenagers who go to work after high school graduation instead of going to college most likely settle on a self-definition a bit earlier than college students. Moratorium is considered a psychologically healthy route to a strong and mature identity, whereas identity confusion and identity diffusion are seen as maladaptive. Young people who are exploring possible career goals, life choices, and their own set of values and beliefs tend to have higher self-esteem; they are more likely to engage in critical and abstract thinking and are more advanced in their moral thinking than those in the previous two identity stages. Teens in this stage also reported more consistency between their ideal self (who they want to be) and their real self (Josselson 1994). Adolescents in this stage spend a great deal of time thinking about who they are and thus may appear moody and in-

trospective. On the other hand, these teens are more likely to be secure in revealing their true selves to others.

Identity Achievement

Identity achievement is the final stage in achieving a mature sense of self, and young people who have reached this stage have experienced a period of crisis and decision making. Adolescents have explored the possible alternatives to what they believe and aspire to be in life and have formulated a clear set of goals and values that are self-chosen. Young people in this stage feel a sense of wholeness and psychological wellness, and a sense of purpose and direction. Much like adolescents who are exploring, those who have reached an achieved identity have a higher self-esteem; they are more likely to engage in critical and abstract thinking, and to have developed higher levels of moral thought. They also report a strong relationship between their ideal selves and their real selves.

Healthy identity formation is a critical part of cognitive and social development during adolescence. Because of this, many researchers have given much attention to identifying the factors that may influence identity development. Adolescent identity formation is the beginning of a lifelong process of refinement in commitment that illustrates the unique blend of personality and social context. (If the context in which one lives is altered, the possibility for personal change is evident.)

Teenagers who are part of a supportive and loving family can confidently move into a wider world of possibilities, thus enhancing identity development. Adolescents who are allowed to voice their opinions and have a good sense of both attachment to and separation from their parents develop a better sense of themselves than those who are not allowed to voice their opinions and do not have healthy levels of attachment and separation. Identity development also is dependent upon the school and community of the adolescent. Classrooms that promote high levels of abstract thinking and that permit students to take on leadership roles under the guidance of nurturing teachers and counselors foster identity development. The larger cultural and historical context of the adolescent also affects identity formation. In postmodern societies the exploration and commitment to identity domains of gender-role preference and vocational choice precede those that are religious

and political in nature. In previous generations, when politics and war were foremost aspects of the culture and disrupted daily life (e.g., during the Vietnam War), the political ideals of young adults developed sooner (Archer 1989). Cultural norms and values regarding gay and lesbian life styles as well as issues facing ethnic minorities are also considered special problems facing adolescents in society today.

There are several things that adults can do to support healthy identity development in adolescence. Warm and open communication will help to provide both emotional support to the adolescent and the freedom to explore values and goals. Open discussions at home and in school encourage higher levels of thinking and promote rational and deliberate choices of values and beliefs. Opportunities to participate in extracurricular activities and vocational training programs, to explore ethnic heritage and learn about other cultures in a respectful manner, as well as the opportunity to talk with adults and peers who have experienced uncertainties about their own identities—all will allow adolescents to explore the real world and to gain advice about how to solve their own identity-formation dilemmas.

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See also: Acculturation; Adolescence in a Cultural Context; Erikson, Erik Homburger; Erikson's Theory of Psychosocial Development; Ethnic and Racial Identity in Adolescence; Identity Statuses; Identity Styles; Pubertal Development; Racial Identity Development among African American Adolescents; Sexual Identity Development

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Adolescent Mothers

Despite a recent decline in the teenager pregnancy rate, there were still 479,067 teenagers that gave birth in the United States in 2000 (Child Trends 2001). Research indicates that expectant teenagers need more services and support than other mothers. Teenagers receiving more social support tend to do better during and after their pregnancies than teenagers with limited social support. Expectant teenagers do not exist apart from the contexts in which they function. Therefore, it is important to recognize the role that these environments (e.g., parenting programs, schools, and communities) play in the development of teenager mothers and their children. These environments potentially provide support as teenagers transition into parenthood.

To identify the key environments of expectant teenager mothers, it is important to examine where most of their time is spent. Common environments for expectant teenagers include the teenager's family home, interactions with the baby's father, the school setting, and peer interactions. Together, multiple environments such as these make up the overall ecosystem of these individuals. In addition to these common environments, the expectant teenager also interacts with a variety of systems relating to health and social

services in order to learn more about health care for the baby, as well as opportunities for financial assistance and child care. Although many of these environments are places in which the teenager already spends much of her time, it is important to understand that these systems may treat the teenager differently now that she is expecting a child. An awareness of the potential supports and barriers within each of these systems aids in understanding the teenager's pregnancy and parenthood transition.

The family environment (system) may consist of a small subsystem of immediate members (such as parents and siblings) or an extended subsystem including grandparents, cousins, aunts, and uncles—depending on the way the teenager defines her family system. Often, families are the core source of support for teenagers. Parents typically provide guidance, love, and financial support for their children as they transition to adulthood. In fact, research studies have found that pregnant teenagers who receive a great deal of support from their parents are less likely to be depressed and more likely to think that things are going well in their lives (Stevenson, Maton, and Teti 1999). Expectant teenagers may require more support from their families than other teenagers. For instance, families may need to provide special emotional support for the teenager. Teenagers may also need additional financial assistance to cover new expenses associated with raising a child.

In a recent focus group, we found that sometimes what seems like support from the family may actually be perceived as a stressor by the teenage mother. Although some teenagers reported that their parents would play a supportive role in child rearing, others were concerned that their parents' efforts to care for the new baby might undermine the teenager's effort to parent her own child. Nevertheless, support from the teenager's parent(s) can also enable the teenager mother to go to school or work while providing the baby with another loving relationship. Although some grandparents successfully assist with parenting, others may need help negotiating roles with their teenage daughters. Allowing teenagers to maintain some level of parental authority and responsibility may foster a healthier parent-child relationship over the long term.

The father of the baby is also likely to be an important part of the expectant teenager's ecosystem.

The father's involvement has been associated with the mother's overall psychological and emotional well-being, but his level of involvement often depends upon the quality of the relationship and the financial contribution he can make (Scott-Jones 2001). This correlation was confirmed by our observation that teenagers who believed that the fathers would consistently visit the baby and also contribute financially and emotionally seemed to have a more positive demeanor when discussing the father's role. However, as is often the case for adolescents, the romantic relationship may not endure, and the teenager may feel abandoned at a time when support is especially needed.

The friendship system often goes through many changes as the expectant teenager becomes physically and emotionally different from her peer group. In our recent ecological study of teenagers participating in a parenting program, teenagers reported that they had had to grow up quickly because of the pregnancy (Sanders et al. 2002). A shift in priorities and newfound maturity may cause them to break ties with their previous friends. Time demands with work and school, in addition to fatigue because of the pregnancy, set these teenagers apart from their friends, who may still be part of the teenage social scene. Still, friends may serve an important function as expectant teenagers prepare for a new family member while trying to maintain support and acceptance from peers.

The school system can offer the expectant teenager educational experiences that may lead to work or continuing education, allowing the teenager to make a better life for herself and her child. Some schools provide programs for pregnant teenagers that inform them about pregnancy, labor, and parenting. Information about prenatal development, nutrition, and effective parenting can be instrumental in their preparation for childbirth and parenthood. Several teenagers in our study reported that their experience of pregnancy actually motivated them to finish high school (Sanders et al. 2002). The teenagers pointed out that they would have to be responsible for another person in addition to themselves, and they wanted to be able to support their new child financially. Outside of the classroom, the school's culture (e.g., classmates' or administrator's attitudes) toward pregnant teenagers is also important. Teenagers who feel that they are being teased or treated un-

fairly because they are pregnant may drop out of school instead of graduating. Concerns about making up work and child care may also hinder a student's ability to work through the new demands of being a parent and attending school. Requirements for an immediate return to school may create a barrier to school completion if the teenager has a difficult delivery and needs an extended leave of absence. Those schools that foster positive student-teacher connections and child-care opportunities increase the likelihood of high school completion and academic success among these teenagers.

Receiving help for medical and unexpected child costs can be of great use to a teenage mother. Additional health and social services from agencies such as government-sponsored health and human service agencies can be an enormous support for the teenager. Unfortunately, these services can also create barriers for a teenager due to various requirements and restrictions issued by these systems. For example, a teenager mother may need extra money for her child to buy diapers and other needs, but if she lives with a parent, it may be more difficult to qualify for financial assistance.

Characteristics of the teenagers also influence how they cope with pregnancy and parenthood, and how they relate to parents, teachers, and other important people in their social networks. Personality, psychological well-being (e.g., self-esteem, depression), intellectual ability, and cognitive maturity are among the individual characteristics that may affect how well the teenagers handle the transition to parenthood. For example, research has shown that an aggressive personality is a risk factor for early pregnancy and an unresponsive parenting style once the child is born (Luster and Brophy-Herb 2000). Personality characteristics, such as being friendly and sociable, may also influence the teenagers' ability to elicit social support from others.

The teenager's developmental history (i.e., the experiences she had prior to pregnancy) can also affect how she manages the transition to parenthood. Teenagers who have grown up in difficult family circumstances (e.g., violence, abuse, neglect) are likely to face more challenges and have fewer personal resources than teenagers who have experienced more favorable family circumstances. Adolescents who have received good parenting during their formative years can draw upon that

experience as they care for their own infants. The teenager's history in school may also influence whether or not she returns to school and how long she stays in school if she does return following the birth of the baby. Trying to juggle school and parenting is difficult even for adolescents who enjoy school and have a history of school success. Expectant teenagers who have had few positive experiences in school may not persevere when school work is difficult, even though they realize that high school completion is important for getting ahead.

It is essential to remember that the environments in which these teenagers interact overlap and intersect with one another. The outcomes for teenagers and their children may depend on factors in multiple settings. For example, a teenager may receive academic support from her school to continue her education; however, she may not have adequate child care available at home or at school, making it nearly impossible to attend school. Similarly, the teenager may have a good relationship with her boyfriend and a supportive family; however, once the pregnancy is disclosed, the parents may discourage their daughter from continuing the relationship with her boyfriend. This can lead to strained relationships among the parents, daughter, and boyfriend and low levels of father involvement once the baby is born. An ecological perspective also recognizes that there are marked individual differences among expectant teenagers, and their unique characteristics influence where they spend their time and how those contexts are experienced. Two expectant teenagers facing similar levels of adversity might respond quite differently. Some teenagers show extraordinary determination in dealing with the often daunting challenges of early parenthood. One must explore the interplay between personal characteristics and contextual factors to explain individual differences in the long-term outcomes of expectant teenagers.

An ecological perspective offers a lens that is sensitive to the role that multiple environments (contexts) play in the positive transition of these teenagers into parenthood. The recognition that multiple contexts influence the well-being of the teenager and her child is important for designing effective intervention programs and identifying gaps in service (e.g., affordable, high-quality child care). The ecological perspective can also influence the thinking of policy makers who want to strategically

invest public resources in ways that benefit teenager mothers, their children, and society at large.

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See also: Adolescent Pregnancy and Prevention; Prenatal Decision Making by Adolescents; Sexual Abstinence
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Adolescent Personal Fable

The adolescent personal fable, the belief that a youth may have that he is somehow immune to the bad things that happen to others, is an important individual ecological factor to consider when looking at the many factors that influence adolescent behavior. An example of this fable occurs when adolescents are cognitively aware of the negative consequences of a behavior but do not believe those consequences are relevant for them. It may also be noted where the youth thinks that no one understands how he feels when, in fact, many others share those same feelings. The opposite may also apply when an adolescent thinks that what is important to him is also important to others when it may not be. An ecological perspective looks at the many factors that influence adolescent behav-

ior. In addition to the many external factors, this type of adolescent egocentrism is an important concept to understand when working with adolescents, who may think that they are invulnerable to risks and that no one could possibly understand how they feel.

Youth may believe in an imaginary audience, a belief that “derives from a confusion between what is important to the young person and what he believes is important to others” (Elkind 1979, 217). Teens may be very self-conscious about their appearance, thinking everyone is noticing what they are wearing or how they look. “Thus, the adolescent falsely assumes that others are equally preoccupied with his or her behavior or appearance” (Harter 1990, 224). These feelings of being special and unique may occur in younger children, but they appear to be much more common in adolescents. It is helpful to remember how self-conscious youth can be about a physical trait that an adult might notice but not feel is of any real concern; the teen may see it as a major crisis. The external environment has a strong influence over adolescents, but this internal factor, shared by so many youth, is also important.

Adolescents may feel self-conscious in all that they do. They may also possess feelings of invulnerability that can affect any area. Teens may think they can drink at a party and still drive safely. They may engage in sexual activity and believe that there is no chance they could contract a sexually transmitted disease or get pregnant. They may break rules, assuming that they will not be caught. “The personal fable accounts, in part at least, for a variety of perplexing and troubling behaviors exhibited by the young teenager. It helps account for what appears to be self-destructive behavior but in fact results from a belief that the young person is special and shielded from harm” (Elkind 1979, 97). The adolescent personal fable may continue, in some form, into adulthood as well. “It is a story that we tell ourselves but that isn’t true” (Elkind 1984, 36). This may account for illogical actions in adults as well, as with someone who has had too much to drink still thinking she can drive safely. Yet, even though it may still be present to some extent in adults, most youth will revise this fable, achieving a more realistic way of viewing life and the consequences of their actions as they mature. So, although this type of behavior may occur at various ages, it is most common and prevalent in adolescents.

At the same time that the adolescent personal fable can account for seemingly illogical and dangerous behavior on the part of adolescents, the benefit is that youth aren’t immobilized by fear of the bad things that could happen due to the everyday dangers of life. Driving under the influence of alcohol is very dangerous, but even when one is driving while fully alert serious accidents can still occur. The sense of invulnerability that the personal adolescent fable may give youth could be seen as a benefit for them as they gain independence and find their place in society.

It is not clear exactly when the adolescent use of the personal fable begins or ends, and it likely varies considerably from youth to youth. As a general guide it “*probably* emerges in early adolescence, but not always, and *probably* declines by late adolescence, although the factors that govern probable appearance, onset, and decline have yet to be specified” (Lapsley 1990, 194). Simply realizing that it is usually present, to varying degrees, can be helpful when working with youth. While also considering the many environmental factors influencing youth, understanding this aspect of adolescent development may lead to steps that could be taken to help overcome, or at least, take into account, this personal fable.

Since most adolescents harbor feelings of invulnerability, to at least some degree, providing information about the negative consequences of high-risk behaviors alone does little to convince them of their vulnerability. This method does little more than challenge the youth’s reality, even if it is a false reality in which they will not suffer negative consequences for any behavior. At the microsystem level, combining the information youth need to know with activities may help them gain a more realistic view of the risks involved with a given activity. Role-playing is one activity that may allow youth to see potential consequences. This type of skills-based programming can help youth develop the means to better deal with situations that might arise, where they could be tempted to engage in high-risk behavior.

The use of peer educators is another way for adolescents to see that others share many of the same thoughts that they believed were unique to them. Peer educators may be able to take the ideas and concepts adults feel are important in teaching youth about preventing high-risk behaviors and adapt them so that their peers can better relate the

information to their own lives. They “provide normative information rather than merely providing facts” (Price et al. 1993, 45). With peer educators, youth can see that not all their peers are drinking, using drugs, or having sex and that it is all right, even better, not to engage in these behaviors. Since the peer group is an important microsystem for adolescents, the youth involved in peer education also serve as positive role models to other youth. This is a win-win situation, in which the peer educators benefit from the positive feelings of helping out fellow teens and having their peers look up to them, while those who are educated are led to consider healthier choices for their activities. Even when the peer educators present the same information, it is often better received than if an adult provided it.

Another method for trying to convince adolescents of their vulnerability is to use simulations. With advances in computer technology, youth can experience virtual reality simulations of high-risk behaviors. Instead of simply reading or hearing about the possible consequences, teenagers can vicariously experience them. For example, in a program to promote sexual abstinence teens can make choices about their behavior on a virtual Friday night date (Calvin College 2001, <http://www.calvin.edu>). If they choose to go to a party and drink with their dates, the program provides feedback about the effects of alcohol on personal judgment. Teens can continue to make choices, including a choice to start kissing, make out, or even work up to “going all the way.” Youth that do “go all the way” are randomized to get pregnant, get one of eight sexually transmitted diseases, or luck out (with further information on the number of teens each year who do contract sexually transmitted diseases and the number of adolescent pregnancies). For increased realism, youth randomized to get a sexually transmitted disease will be given information on what symptoms they might have and whether treatment is available, as well as any possible long-term consequences from the infection. Preliminary pre- and post-tests assessing adolescents’ attitudes and beliefs about sexual activity and their intentions regarding what would be best for them personally indicate a slight positive change after using the program. With a simulation that may take the youth only five to ten minutes to complete, any positive change is encouraging. Further study is indicated, however, to fully assess the

potential for this type of simulation to help encourage more responsible behavior in adolescents.

Another simulation geared to prevent drug use and focusing on the beginning use of marijuana has similar features (Calvin College 2001, <http://www.calvin.edu/>). The youth decides whether or not to try marijuana offered by a classmate and continues to make choices, receiving feedback throughout the scenario. Teens who choose to try marijuana can read about the effects marijuana would have on them. If youth choose not to smoke again later in the scenario they are given positive feedback for abstaining. If teens keep choosing to accept marijuana when offered it in each part of the scenario, the feedback reflects the ongoing problems that can develop with continued use.

As technology continues to advance, these simulations may move from cartoonlike drawings to increasingly complex animations. The simulations might also reflect the gender and ethnicity of the teen who is doing the simulation. This can be accomplished with simple programming features built into pre-simulation surveys and by using additional artwork so that youth can see a closer representation of themselves during the simulation.

Some early versions of interactive computer games demonstrated positive attitude and behavior changes (Starn and Paperny 1990). Preliminary anecdotal evidence also exists that shows the effectiveness of more recent programs, and there is hope that today’s multimedia youth will be interested in and positively impacted by such programs. Using a virtual reality type of program may be one of the best ways to safely let youth explore the possibilities and choices they may encounter in real life. By providing realistic consequences, it may also be one of the few ways to help them realize that they are not invulnerable to potential negative consequences of their behavior.

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See also: Adolescents, Alcohol Use Among; Adolescent Pregnancy and Prevention; Developmental Transitions across the Life Span; Self, Self-Concept, and Self-Esteem; Sexual Abstinence

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Adolescent Pregnancy and Prevention

Over one million adolescent girls get pregnant every year, with over half of those young women giving birth (Ventura et al. 2000). The issue of adolescent pregnancy prevention has been a focus in both academic research and popular culture for several decades now. As time has progressed, the goal for research has grown from simply trying to prevent teens from becoming pregnant, and now includes understanding the motivations for pregnancy, the intergenerational pattern of young childbearing, and the consequences of an adolescent birth for both mother and child. Despite increased breadth in the field, one theme remains constant: Adolescent pregnancy is a complex issue, with no single cause or consequence.

Research addressing the causes of adolescent pregnancy focuses on four main areas: (1) individual/person factors (biology, hormones), (2) family/parenting, (3) societal factors, such as poverty, and (4) educational factors. Although each of these areas will be covered separately, it is important to remember that they may occur together, and interact, in the broader context of the adolescent's life.

Research on biological processes indicates that advanced hormonal development (in the form of

early menarche) is related to early pregnancy in girls (Miller, Benson, and Galbraith 2001). Girls who mature earlier are likely to engage in sexual activity at an earlier age than their later maturing counterparts. This increased sexual activity leads to an increased risk for adolescent pregnancy. Research has also shown a positive relationship between a mother's age of menarche and her daughter's age of menarche, suggesting that one reason children of adolescent mothers are more likely to have children as adolescents is because both are likely to mature early and thus engage in early intercourse. Likewise, there is similar evidence relating to young men's hormonal development: The earlier they mature, the earlier they initiate intercourse.

The relationship between adolescent pregnancy and reduced educational achievement in adolescents has been well established. Adolescents who get pregnant or father children tend to have lower grades, more problems in school, and lower educational aspirations, and they are more likely to repeat a grade or need remedial education—or both (Scaramella et al. 1998; Corcoran 1999). In addition, adolescents who get pregnant have, on average, lower I.Q. scores than others. Several scholars have argued that early sexual behavior is just one set of problem behaviors that adolescents engage in that lead to early pregnancy. Others, including taking drugs, engaging in criminal activity, and low school achievement, have been hypothesized to combine to influence early pregnancy. In addition, some scholars believe that school-aged pregnancy is a response to reduced goals and aspirations related to limited educational success (Kalil and Kunz 1999). In fact, there is research in support of all of these possible influences. Early sexual activity is associated with drug and alcohol use and behavior problems in school. Additionally, girls who get pregnant and stay in school are less likely to have a repeat teenage pregnancy, suggesting those with higher educational aspirations are likely to move on a more productive path (Manlove, Mariner, and Papillo 2000). Although this research reflects perspectives on the influence of education on adolescent pregnancy, it is important to recognize that the precise causal paths are not yet clear. A girl may be engaging in problem behaviors because she is doing poorly in school and has low aspirations, which may be linked to her desire to have children early. Alternatively, she may be doing poorly in school because of the other

problem behaviors she participates in, and those behaviors may lead to the pregnancy.

In addition to educational achievement, societal factors such as poverty play a prominent role in teen pregnancy. Girls from low-income families are significantly more likely to have children at an early age and to have repeated adolescent births (Miller et al. 2001). As with the education arguments, there are two beliefs as to why this link may occur. First, researchers have argued that families in poverty are less likely to have the resources to adequately monitor their children and more likely to live in environments where multiple delinquent activities take place. A newer and more provocative argument is that, given their options in life, early pregnancy may be a viable life path for many low-income young women. When she is young and dependent, a woman may have more family support to have a child than if she waited until she were out of the house. She is also less employable as a teenager than she would be in the more "normal" childbearing ages. As with the education arguments, these two explanations are not necessarily mutually exclusive.

Considerable research has been directed at explanations of adolescent pregnancy that are related to family functioning and parenting. Research on communication levels between parents and children has shown that parents who are more open with their children tend to have children who engage in sexual activity at later ages and thus are less likely to become adolescent parents. Likewise, parents who engage in appropriate levels of discipline are less likely to have children who get pregnant at early ages (Miller et al. 2001). Research on discipline is inconclusive, however; it is not entirely clear what an appropriate level is. What is clear is that neither a lack of discipline nor excessive discipline is appropriate. Instead, a moderate amount of discipline is generally thought to produce the best results. Additionally, children who have been abused, either physically or sexually, and neglected have a greater likelihood of early parenting (Miller et al. 2001). The general belief is that children of poor parenting environments are seeking to fill needs in early relationships and sexual behavior that they were unable to fill at home.

A subset of the parenting research concerns the impact of parenting values on adolescent's sexual decision-making process. This arena of research has received considerable attention in the

context of intergenerational adolescent pregnancy (i.e., when successive generations of a family bear children at an early age) and in studying the link between early pregnancy and single-parent families. It has been argued that mothers serve as role models for their children's sexual development and behaviors (Fox 1981). Therefore, when mothers are not married or when they bear children at an early age, they are setting an example of precocious sexual behavior and disregard for marriage that their children will follow. The belief is that the adolescents will feel that since it was acceptable for their mothers to have sex early and to bear children out of wedlock, then it is acceptable for them to do so as well. This research suggests that simply by being single or young, parents will be inadequate role models for their children's future sexual relationships. Although research exists that substantiates the theory that being a single parent or a teen parent by itself does not offer any disadvantage (since it is the context in which most single and young parents raise their children that is important), some evidence has been found that indicates that mothers who have a greater number of pregnancies or a greater number of partners, or both, are more likely to have children who give birth at an early age (Whitbeck, Simons, and Kao 1994).

Most prevention efforts fall into one of two categories: school-based interventions and family-based interventions. School-based interventions tend to come in the form of classroom presentations and usually focus on maintaining abstinence (Franklin and Corcoran 2000). These programs mainly seek to educate young women about the dangers of early sexual behavior, both in terms of pregnancy and sexually transmitted diseases. They also focus on debunking the myth that most young people are having sex, which is the most cited reason adolescents give for their first intercourse. In reality slightly less than half of high school juniors and seniors have had sex, and many of those have only had sex once. Despite good intentions, these programs have had little impact on adolescents' behaviors, although they have been shown to affect adolescents' knowledge about sex and sexually transmitted diseases. Two reasons given for this discrepancy are that these programs do not have contact with students on a long-term, substantive basis, and that despite the knowledge gained adolescents have trouble, for many reasons,



Teenagers outside a Planned Parenthood office (Skjold Photographs)

translating this knowledge gained into a change in behavior.

The second set of programs seeking to prevent adolescent pregnancy are family-based programs, which tend to be long-term and intensive, seeking to not only educate but also to intervene in the life process of families (Eckenrode, Izzo, and Campa-Muller in press). Often these programs are done with low-income, new parents, since an increasing amount of research suggests that the early years are formative for later development. Programs that intervene with parents in order to impact children's outcomes are called two-generation family support interventions. These programs seek to impact multiple areas of family life that have been shown to affect children's outcomes, including enhanced parent-child relationships and increased economic self-sufficiency. Often these programs are delivered in the home and provide a valuable resource for young families. A subset of family intervention programs are programs that seek to intervene with mothers who have already had a teenage birth in order to prevent multiple adolescent births and to bolster the life chances of the young family. These programs tend to employ the same methods as two-generation programs and often have the same long-term goals.

Adolescent pregnancy and prevention have been studied intensively for several decades, and adolescent pregnancy remains one of the most important issues facing our youth. Research has uncovered many important links between education, family functioning, genetics, and the environment that are related to the likelihood of an adolescent getting pregnant. Each of these areas speaks to the complexity and breadth of reasons that may lead a young person down this path, and to the scope of interventions that must be used if we are to reduce the number of pregnancies faced by adolescents today.

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See also: Adolescent Mothers; Adolescent Personal Fable; Menarche; Prenatal Decision Making by Adolescents; Sexual Abstinence

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Adolescent Well-Being in Rural Environments

See Rural Environments, Adolescent Well-Being In

Adolescents, Alcohol Use Among

Alcohol use is prevalent among people beyond childhood and shows an intriguing association with ecological factors, such as family environment and aspects of the peer group. Typically, consumption increases rapidly across adolescence, shows a peak in the early twenties and declines gradually thereafter, that is, once the major developmental tasks of emerging adulthood are resolved. Whereas young children disapprove of drinking, from adolescence on alcohol consumption is most often seen as signifying one's growing social maturity.



Children drinking (Michael Siluk)

Consumption Prevalence and Age Trends

In an analysis of 11- to 15-year-old adolescents of several countries of the European Community, 25 percent claimed to have had their first drink before the age of 11. First experiences with alcohol often occur in the family context, such as taking sips of adults' drinks (Mayer et al. 1998). Heavier drinking often happens in the peer context in large groups of underage persons (Mayer et al. 1998). In a study on the timing of first alcoholic intoxication, Louise Masse and Richard Tremblay (1997) reported a median age of first intoxication of 15 years in males.

According to representative surveys, the lifetime occurrence of alcohol use among twelfth graders is in the order of 80 percent or higher. In contrast, episodic heavy drinking (five drinks or more in a row) occurs in about 30 percent (O'Malley, Johnston, and Bachman 1999). Concerning frequency, a third of the 14- to 24-year-olds in a large German community sample reported drinking less than once per week, a third up to twice a week, and only the remaining third reported consuming alcohol more often, including daily (Holly and Wittchen 1998). The increase in frequency and quantity peaks in the early twenties, followed by a similarly sharp decline, particularly for frequency.

In general, gender differences in consumption are small among moderate drinkers.

Influences on Alcohol Use

Adolescence is characterized by growing attempts to find a particular place in life, which involves dealing with new social expectations and personal aspirations. The increasing interest at this time in novel and risky activities, and the unsupervised environments associated with them, probably also has neurobiological underpinnings (Spear 2000).

A deeper understanding of the age trends, associations with biographical transitions, and immediate consequences of alcohol consumption can be achieved by distinguishing two sets of developmental antecedents, originally derived from research on delinquency (Moffitt 1993): The large majority of adolescents show an increase of alcohol use that peaks in late adolescence and declines thereafter. In this group, alcohol use is a means for solving developmental tasks of adolescence, such as showing adultlike behavior and building peer relationships. After taking over adult roles (marriage, parenthood, first transition into work), high frequency and intensity of alcohol consumption tend to disappear. In contrast, a small group maintains

high levels of consumption beyond the normative transitions to adulthood. This behavior is rooted in long-lasting problems of adaptation, starting in early childhood and encompassing neurological problems, attention deficit, and impulsivity.

An early onset of drinking and higher levels of alcohol consumption are both associated with ecological factors: High levels of parental alcohol use, parental acceptance of drinking, and low closeness of the parent-child bond have been identified as risk factors for adolescents' alcohol use (Brook et al. 1990). Similarly, higher involvement with peers who use alcohol predicted the transition from abstinence to alcohol use in the one-year follow up (Fletcher, Darling, and Steinberg 1995).

Whereas countries like the United States, Canada, and the United Kingdom share relatively moderate consumption, some Mediterranean and Eastern European countries rank much higher. In longer perspective, consumption in industrialized countries increased dramatically after World War II, reaching unprecedented peaks in the 1970s and 1980s, followed by stable or slightly declining figures thereafter (Silbereisen, Robins, and Rutter 1995).

Consequences of Alcohol Use

Moderate consumption among those on the adolescent-limited trajectory corresponds prospectively to higher status and better cohesion within one's peer group, and is associated with a higher likelihood of romantic involvement. Moreover, adolescents seem to select leisure settings that offer opportunities for friendship contacts and that provide alcohol in the right quantity and environment, such as discotheques, quite deliberately, thus suggesting a constructive function of alcohol use in healthy psychosocial development (Silbereisen, Noack, and von Eye 1992).

Due to the overall moderate and/or time-limited alcohol consumption among adolescents, most of the negative consequences are immediate. According to Patrick Miller and Moira Plant (1996), between 5 percent and 30 percent of young people in midadolescence report problems associated with alcohol use in areas of social functioning, problems such as personal adversities (reduced school performance), difficulties in social relationships (tensions with friends), sexual problems (unwanted sexual encounters), and delinquency. More serious consequences are very rare: An estimate of the dependence potential of alcohol

is a 6 percent share of those in a normal sample (ages 14 to 24) diagnosed with substance use disorder (Substance Abuse and Mental Health Services Administration 1996). Alcohol use is not a gateway drug, but it is certainly true that most users and abusers of other psychoactive substances begin with (and often maintain) the use of alcohol, and that earlier and heavier use is associated with later drinking problems (Kandel, Yamaguchi, and Chen 1992), but the causal mechanism is unknown.

Prevention

Given the multiple influences on alcohol use, multimodal interventions are needed to prevent an early onset of drinking and high levels of alcohol use. Concerning environmental factors, reducing contexts that facilitate the habituation of drinking is supportive, such as cutting down on the episodic availability of large quantities of alcohol in tempting locales. More specific measures try to minimize the harm by enforcing controls on the drinking settings, by, for example, establishing licensing hours, or by training bar tenders to refuse serving alcohol to drivers (Plant, Single, and Stockwell 1997).

Concerning prevention at the individual level, targeting adolescents at school is the rule. Given the role of alcohol use in response to normative developmental difficulties, most school-based programs address general life skills as well as substance-specific elements aiming at reducing risky behaviors and protecting young people from engaging in such risks of use and abuse. These typically offer factual information about alcohol-specific physiological and psychological states, the formation of negative attitudes, and practical training in how to resist unwanted offerings of alcohol by peers (Tobler and Stratton 1997).

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See also: Adolescent Personal Fable; Community Youth Development; Parenting Style; Violence in Teen Dating; Youth Development

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Adolescents: Real-World Research Techniques

In order to understand both the content and context of lives, new research techniques have been developed that capture momentary experience as it occurs. Such techniques provide a method for studying the activities, thoughts, and emotions of normal individuals as they interact with their natural environments (home, family, school, workplace, and so on). One technique that has been frequently used in the study of adolescents is called the experience sampling method (ESM). The unique advantage of the ESM is its ability to capture daily life as it is directly perceived in each moment, thus affording researchers an unsurpassed opportunity to examine the links between context and content. The method achieves this degree of immediacy by asking individuals to provide written responses to both open-ended and closed questions at several random points throughout each day of a normal week. The questions can be fully tailored to the interests and goals of the researcher, but often include queries focused on physical context (location, time of day), social context (number and description of others sharing the moment), activities, thoughts, feelings, concentration, and motivation (Hektner and Csikszentmihalyi in press).

The ESM delivers two advantages that combine and improve on what could otherwise be obtained with separate methods. First, it captures real life in much the same way that direct observations would, but by using the participant as the observer the method is able to gather data that an outside observer would miss. Second, the ESM gets at the person's internal thoughts and feelings much as rating scales on questionnaires would, but by collecting these ratings multiple times the method is able to depict the variety of a person's experience more accurately than a one-time questionnaire. Because the participant records experience the moment it occurs, the method avoids the potential distortions associated with the use of daily or

weekly retrospective diaries. Of course, the method is not without its limitations. One major drawback is its intrusiveness in participants' lives; not all research participants who are recruited for an ESM study will be willing to comply with its demands of responding several times a day. Another consideration is the high cost of implementation. Nevertheless, the burden for participants and costs to researchers are well worth it, given the richness of the data obtained through the ESM.

In most ESM studies, each participant is given an electronic signaling device, such as a pager or wristwatch. Several times a day over the course of a week, the device signals the participant by beeping or vibrating. Upon detecting the signal, the participant can shut the signal off and then complete a brief self-report form. Blank forms are typically bound together in a booklet, which participants carry with them, along with the signaling device, as they carry out their daily activities. The self-report form asks participants to note their location, activities, and thoughts, and to indicate on rating scales the other internal dimensions of their experience. Participants also describe their social context by noting whom they are with at the moment. Scales measuring internal dimensions of experience typically focus on the participant's quality of experience at the particular moment he was signaled. Questions focus on motivation (e.g., "Was there something else you would rather be doing?"), emotion, and mental concentration. As an alternative to using a signaling device and pencil and paper, new studies are being conducted that use palmtop computers to both signal participants and record their data.

Using the ESM, researchers have been able to determine how much time the average teenager spends at school (32 percent), at home (41 percent), and in public (27 percent), as well as how much of that time is shared with friends (29 percent), classmates (23 percent), family (19 percent), or no one else (27 percent) (Csikszentmihalyi and Larson 1984, 59–71). The time a teenager spends exclusively with one or both parents averages only about five hours a week. Over the past twenty years, the proportion of time high school students spend in school but outside of class—about a third of their school time—has remained remarkably consistent (Csikszentmihalyi and Schneider 2000, 142). These ESM investigations have also gone beyond cataloguing which activities people

engage in, where, and with whom, to focus on the psychological states individuals experience in each context. Some of the findings to emerge in this area are that adolescents feel the highest levels of intrinsic motivation when they are in public parks or at friends' homes and the lowest levels when they are in class or at a job. They are happiest when with friends, are emotionally flat on average when with their parents, and are least happy when alone.

One person-in-context system that has been widely studied with the ESM is the adolescent in the school. ESM researchers have documented that high school students spend over one-third of their class time listening to the teacher lecture or to audio-visual presentations, but that they are actually thinking about the subject matter only 54 percent of the time during these activities. Students have the lowest levels of happiness and motivation in history classes, which are heavily dependent on lectures, and the highest levels in computer science and vocational education classes such as drafting. The latter are usually elective classes that require much individual work at solving problems. Indeed, choice, control, and student engagement in an individual or group project were the elements of a class period most likely to arouse both enjoyment and concentration (Csikszentmihalyi and Larson 1984; Csikszentmihalyi and Schneider 2000).

Other ESM studies have examined the daily interaction patterns of families to shed light on the processes that underlie adaptive versus maladaptive functioning. By having two parents and an adolescent complete ESM self-reports simultaneously, Larson and Richards (1994) were able to show that family members do not always experience the same perceptions, even when they are together. Other ESM researchers have concluded that the best family context for facilitating adolescent development provides strong emotional support, challenging opportunities, and high expectations.

Researchers will often combine the ESM with other methods to gather a wider array of information. In a recent study of adolescents, a follow-up session after the week of ESM included a one-on-one tape-recorded interview in which the interviewer asked for elaboration on particularly interesting moments (self-reports) in order to stimulate a conversation about specific issues (Csikszentmihalyi and Schneider 2000). Another version of the ESM has been called ecological mo-

mentary assessment (EMA), a technique most often used in behavioral medicine. Studies using EMA have focused on adolescents and adults who are struggling to end or control their dependence on alcohol, tobacco, or other drugs. Other EMA studies have been conducted to better understand how people cope with eating disorders, depression, migraines, chronic pain, arthritis, and panic disorders (Shiffman 2000).

Recently, non-ESM research techniques have been developed that incorporate the advantages of capturing experience from the participant's point of view while also allowing the researcher to focus more narrowly on a particular problem. For example, families or adolescent peer groups can be asked to talk about a particular topic or problem, and the interaction can be recorded on video- or audiotape. Then the tape is played back to the participants; at several points the tape is stopped, and participants are asked to describe and/or rate their inner feelings and thoughts at that point in the interaction. This technique has been used to study family communication styles and their relationship to how interested family members are in the conversation (Rathunde 1997).

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Adoption

Adoption is the process by which a person, usually a child, is legally made a part of a family. In most cases the adopting family does not include birth parents, except in instances where one parent is a birth parent and the spouse or partner adopts the child, or children. Adoption may be viewed either as a way to provide family life and homes for children who are orphaned or abandoned, or as a way to provide children to couples who might otherwise be childless. Throughout much of history, the latter position has been more prevalent, as it continues to be in the United States today.

Legislation regarding adoption varies by state, but almost entirely reflects the position of a minor child as property, thereby placing the needs of the adult participants of the process above those of the child. Examples of the conflict between the rights and needs of the child and the desires and benefits to the adults can be seen in the prevalence of closed adoption records, the reversal of adoption decisions after a child has been placed with a family for months or even years and a birth parent subsequently challenges the adoption, and other legal decisions that result in multiple placements for even very young children, as the adults involved struggle to achieve custody. Because there is so much variation in adoption law between states, any attempt to study specific cases or work with families requires substantial study of how the courts and the policy makers in the relevant states treat the issue.

When the child up for adoption was often the result of a pregnancy outside of marriage, protecting the identity of the birth mother or birth parents was of great concern. In the United States, this was the case up until late in the twentieth century. An illegitimate child was most often a scandal that families wanted to avoid, so homes for unwed mothers provided lodging, secrecy, and an elaborate mechanism for transferring the babies immediately after birth to either a waiting adoptive family or to some other facility, so that the birth mother had little or no contact with the infant.

Many mothers never saw their children, and the prevailing wisdom at the time was that the birth mother would forget the experience fairly quickly and get on with her life. The child was viewed as having no memory of the experience at all, and therefore not affected by the transfer. When women relinquished their children for adoption under these circumstances, they rarely had any hope of ever discovering what had happened to their children; the children themselves had little hope, and the adoptive families were often not aware there could be any reason for such a discovery.

During the past decade, in particular, changes in awareness of the adoption process from the perspective of all three parties have changed the way those concerned are considered in terms of their particular needs, feelings, and reactions to adoption at any point in its trajectory. Increasing numbers of reunions between birth parents and adopted children, made possible by Internet search resources, have inspired social and psychological research efforts to provide a better understanding of adoption and its impact on the familial, social, legal, and, increasingly, economic system of the United States today.

The child can no longer be viewed as a blank slate upon entry into the world. A baby is born with the ability to experience many senses, to recognize the birth mother's face and voice, and to feel loss at the separation from her, even if there is an immediate replacement in the form of a new primary caretaker. The newborn infant has memory and experiences the loss of the birth mother as abandonment and loss in just the same way John Bowlby's work has shown children react to separation. The feeling of abandonment and loss is no less real and painful because it is preverbal; in some ways, it may be more difficult to resolve because the source is not available to conscious memory. When those feelings manifest themselves in very young children as symptoms of grief, they should be treated sympathetically as they are feelings of grief which the child may need assistance in coping with. When the feelings manifest later as curiosity, whether casual or intense, about the birth family, they should not be seen as a rejection or lack of respect for the adopting family, but rather as a natural manifestation resulting from this early separation. In *Primal Wound*, Nancy Verrier, writing from her extensive research on the subject, indicates that adopting parents may see it

as a sign of rejection when the infant fails to attach immediately and completely with them. It is rather a defense mechanism the child uses to ward off yet another catastrophic loss. Understanding this is critical to the adoptive parents, as well as to professionals who may be attempting intervention early in the adoption process or even many years later.

For the majority of birth mothers, the surrendering of a child is far more emotionally devastating than previously understood by the general public. Many feel intense attachment to their infants, regardless of what they expected prior to birth. The decision to surrender a child for adoption may be made on very rational terms, but the pain and grief still must be resolved. During the many decades in which out-of-wedlock pregnancies were hidden, birth mothers had no outlet for dealing with that grief. Their own families were sometimes unaware of the event, and even when they were aware, they often discouraged any discussion of the child or of the birth mother's grief. Again, the large numbers of birth parents who have been reunited with their adult children have led to an increase in the venues through which the feelings of both parents and children can be heard. Web sites dedicated to reunion assistance, to searching out adoptees, to searching out birth parents, and to many different aspects of adoption exist in the hundreds and are now providing a means for opinions and feelings to be expressed, often after decades of suppression.

Although loss is most profound for the infant and the birth parent(s), the adopting parents frequently contend with a sense of disappointment and loss because of their inability to give birth. Regardless of how much they love and enjoy their adopted children, many parents still would have wanted to experience pregnancy and birth. Just as the birth of one child does not fill the void left by a child who has died, the adoption of a child does not fill the void left by the inability to give birth. For families not knowledgeable about the impact of the separation experience on the child, adjusting to the adopted child and forming an attachment to it may be difficult, regardless of their love or their diligence in providing a good family experience. They may not understand the many manifestations of this experience, which may range from the child's apparent rejection of them to intense separation anxiety, and thus will be thwarted in their attempts to deal with these problems ef-

fectively. Some adoptive parents feel threatened when their children inquire about their birth families and express the desire to make contact. Many adoptive mothers have confessed to having anxiety from the very first that the birth parents would somehow take back the child. Even many years after this taking back might actually be a possibility, the emotional association of the birth parent with the potential loss of the child remains a potent force for many.

Although the specifics of adoption laws differ among states, with very few exceptions adoption records are closed. In only a handful of states can adopted adults obtain copies of their original birth certificates, with the most recent to open the records being Oregon in 1998, as a result of a statewide referendum. Some other states allow access under certain conditions, which may involve the age of the adoptee, the existence of siblings, or extraordinary conditions. In states having no such access, opening sealed legal documents can be accomplished only with the mutual consent of all parties involved or with court intervention. Adopted adults, even if in advanced years or needing critical medical information, are not able to access information about their identity. Legislative change has been slow, and often there is intense lobbying to prevent changes in laws that would make access to these records more reasonable. In several states where legislative action has not occurred, mutual consent registries have been initiated to allow contact between adopted persons and members of their birth families.

Perhaps in reaction to the decades of secrecy surrounding adoption and the forced mutual ignorance of all involved, many adoptive parents are now engaging in open adoptions, wherein they maintain contact with the birth mother. Contact may be as limited as an exchange of information through a third party or as extensive as maintaining physical contact with the birth family. Anecdotal information regarding open adoptions is generally positive, although balancing the needs and interests of three parties is not always easy. The major benefit is seen as being conferred on the adopted child, but often other members of the triad also report success in maintaining a new kind of extended family for their adopted and relinquished children.

In the United States, there has been a substantial decline in the numbers of infants relinquished

at birth for adoption, and the number is currently less than 2 percent of babies born (Evan B. Donaldson 2001). Although there are many more couples and individuals seeking to adopt healthy infants than there are such infants available, there are still many infants with problems who need placement, and there are many older children with and without problems who are available for adoption. The decline in relinquished healthy infants has led to an increase in international adoptions, and those have more than doubled in the past decade. In addition to increased financial stakes, international adoptions carry unique concerns regarding obtaining family medical histories, obtaining any family history for the child's benefit, and the issue of maintaining aspects of the child's cultural background. A greater number of children in international adoptions have been institutionalized prior to adoption, and those children often come with increased emotional problems associated with their separation from the birth parent and subsequent placement in an institution, often for many months.

Lack of consistent regulation among states and among countries increases the risks associated with attempting adoption except through agencies. Because arranging adoption is not highly regulated in many states, there is a growing incidence of adoptions being arranged for financial gain by persons with inadequate knowledge of the many emotional and social ramifications of the process and with no real concern for the well-being of those families involved.

Anita Miller Stamper

See also: Child Custody; Remarriage

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Adulthood, History of

The idea of adulthood is now simply taken for granted as an obvious phase of the life course reflecting postadolescent maturity. However, an examination of the history of this idea suggests that adulthood as it is now known in Western countries is culturally unique. This is shown by the fact that in most languages, the idea of adulthood is apparently not important enough for a word to have emerged to express it. Even among the European languages, only English has a specific word designating a distinct stage of the life cycle set aside for adulthood (Côté 2000).

The word “adult” first appeared in English, according to the Oxford English Dictionary (OED), in 1531. The term “adulthood” did not appear until 1870. Moreover, the term “adult” followed a similar etymological path as other terms that emerged to represent the life course. It is derived from the Latin *adolescent*, which is the present participle of *adolescere* (to grow up, mature). *Adolescere* is the inceptive verb of *adolere* (to make grow), while *adultus* (grown) is the past participle. The term “adolescent” was brought into English usage in the 1400s, a half century earlier than the word “adult” (Côté 2000).

Without a language to describe the various stages, people did not make the age distinctions that Anglophones, and increasingly others, do now. The massive social, economic, and technological transformations that have taken place over the past several hundred years have altered the institutional structures of modern societies and, as these institutions have changed, so have people’s lives: People started living longer, became healthier, and were less likely to raise children, especially large numbers of them. This led to the formation of age groupings that grew internally homogeneous and externally distinct from one another. Increasingly, people of different ages became differentiated from each other in terms of social roles and responsibilities, as well as in terms of expectations about the appropriateness of certain cognitive and emotional attributes (Mintz 1993).

The relatively recent appearance of a word to describe adulthood suggests that people needed something to depict the new societal conditions they faced, especially increasing uncertainty and the need to make life-altering choices. In traditional societies, people had little choice in how their lives played out. Instead, regardless of their

age, people were bound by duties and obligations to fulfill family and community roles that were assigned to them according to their place in society. Young and old alike were expected to work for the common welfare of their family and community, regardless of their own preferences and needs. However, rapid societal changes gave rise to increased uncertainty and the need to know more about the world in order to make choices, thereby giving new meaning to the notion of “maturity” and widening the gap between those with little experience and knowledge (children) and those with more experience and knowledge (adults). This process was hastened by the decline of absolute religious authority and the rise of secular authority (e.g., governments, academic and professional experts). Increasingly, people became responsible for their own destinies in terms of choosing which duties and obligations to accept as part of their adult lifestyle (Merser 1987).

Today, as a result of the longer period necessary to find one’s place in the adult world based on one’s own preferences, most people do not feel they are “adults” until they are well into their twenties or even thirties. Jeffrey Arnett (2001) has examined these self-perceptions in a series of studies, finding in response to the question “do you feel you have reached adulthood,” that among Americans aged 18 to 25, about 40 percent respond “yes,” 5 percent “no,” and about two-thirds answer “in some respects yes, in some respects no.” For 26- to 35-year-olds, only about two-thirds say “yes.” We need to look to 36- to 60-year-olds to find as many as 90 percent saying they feel have reached adulthood.

Arnett concludes that the transition to adulthood is now more psychological than sociological, as traditional social markers (employment, marriage, family) have lost their meaning for most people. Instead, the important markers involve psychological criteria: accepting responsibility for the consequences of one’s actions, deciding on beliefs and values independently of parents and other influences, and establishing relationships with parents as an equal adult.

By the twentieth century, adulthood became the longest and least studied portion of the life course. The twenty-first century will likely see considerable research efforts devoted to helping people understand and cope with the lifelong demands of living in a world of great uncertainty and choice.

James E. Côté

See also: Adolescence in a Cultural Context; Developmental Transitions across the Life Span; Young Adulthood
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African American Families

An analysis of mainstream ecological theoretical frameworks reveals that African American families and children can be fully understood only in relation to the interaction of their social class, culture, ethnicity, and race (Garcia Coll et al. 1997). The variety of family settings, family interaction patterns, and socioeconomic environments has resulted in diverse family arrangements. The interactions of these factors have resulted in many different types of families, with a great diversity of family experiences. At the same time, there are many family similarities of African, Brazilian, West Indian, and African American families (Herskovitz 1938).

Although African American families are too varied to fit the prevailing monolithic view of Black families that is too often presented in the lay and research literature, many do have a past history of enslavement in common. In that respect, the historical past of many African American families is substantially different from all of the other immigrant groups that have come to the United States. American history books have, however, gone to great lengths to eliminate the stories of enslavement and dislocation of various groups of color across the centuries.

The reality is that families were brought into the country against their will as enslaved individuals, and that direct efforts were made to eradicate the African culture, efforts that have given African Americans an unreal image of their past and, therefore, their futures. This situation has resulted in an overlay of continuing racism by Whites and resentment by African Americans that is not clearly understood by those who are non-Black.

The American enslavement experience brought loss of control, violent uprooting, and great pain. These brutal experiences have shaped the ideological forces that lead to modern day families, with their strengths and weaknesses (Wilkinson 1997).

At the same time, the African heritage of African American families has resulted in many of the strengths that have helped families to cope with adversity (Dodson 1997; Sudarkasa 1993, 1997). Among the cultural legacies that originated in Africa, family members felt the importance of maintaining communal family traditions, traditions that resulted in more matriarchal family systems. The importance of coresidential extended families and their support systems has been cited as one of the major survival systems (Billingsley and Hill 1968). Other legacies include oral traditions, spirituality, rhythmic-movements expression, and communalism (Boykin 1997).

A major survival factor for families of color is the support of relatives and friends, who form an extended, intergenerational group of persons. They often provide help in the areas of child care, household tasks, finance, eating and sleeping arrangements for young children, and advice and mutual support (McAdoo 1997). This kind of mutual dependence has been known to limit the geographic mobility of family members. Inherent in the exchange is reciprocity, which requires the resources of a family unit to be available for others in the extended family. This can cause tension at times, but the uncertainties of the future keep members involved in these exchanges.

Assimilation into American society has long been considered the norm for many ethnic groups, but persons of color have not been allowed to move out of their caste-like status. In African American communities, the extended family is both an adaptive coping response to the environment (Stack 1974) and a continuation of West African cultures (Martinez 1999; Sudarkasa 1988). Most families live in individual residential units that are involved in patterns of mutual support, frequent visits, and help exchanges (Boyd-Franklin 1989). These patterns are found at almost all socioeconomic levels.

Demographic Relocations of African American Families

There have been many changes in the demographic patterns of African Americans in the United States, but for the most part the patterns are highly re-



African American parents with their children (Elizabeth Crews)

gional. In the 2000 census, Blacks were strongly represented in the South, as well as in selected urban areas of the Northeast and Midwest (Fey 2001).

At one time the majority of African Americans were found in the South in the former areas of enslavement. These areas became known as the Bible Belt, or Black Belt, so called because Blacks and their religious institutions were concentrated there (Pipes 1997). The South became increasingly racially hostile to Blacks with the decline of cotton cultivation and of farming in general. During the 1890s over 90 percent of Blacks were on farms in the South. By the 1990s they had scattered into urban centers in the South, the North, and the West (Billingsley 1992).

Many Blacks moved north to seek a better life and to take advantage of the industrialization in the Northern states. The massive Northern Migration had enormous impact. While in the South, Blacks had lived in large extended families composed of kin and fictive kin (Stack 1974; McAdoo 1992). The move to urban centers fragmented the extended families and made effective social support more difficult to maintain.

The many decades of South-to-North migration changed with the decline and movement offshore of the smokestack industries of the northern states. The Midwest and Northeast regions, especially Chicago, Detroit, and New York, witnessed the largest shift in Black population. Over a quarter-million persons were lost during the period from 1985 to 1890 (Frey 1994).

As Blacks left the North, there were significant increases in Black migration to Los Angeles and San Francisco–Oakland, as well as to southern New Orleans and Shreveport. Families were drawn to areas where job opportunities were expanding, in California, in Texas, and in the Sun Belt in general.

The 1990 Census showed that the migration from the north has continued, but that now it is predominantly a return migration. Instead of California, the state of choice was Georgia. According to William Frey (1994) the four states with the largest increase in Black population (after Georgia) were Maryland, Florida, Virginia, and North Carolina. All of these states were in the growing South Atlantic region. The specific areas with the greatest attraction were the Old-South

metropolitan communities that are the biggest centers of the New South, such as Atlanta, Norfolk, and Raleigh-Durham. The movements are strongly influenced by the existence of new jobs. But even more important, some scholars believe, is the lure of extended family, of the fictive kin and family kinship networks that still exist in these regions.

These larger trends certainly have meaning, but it is important to look more closely as well. And in fact the lack of validity of any monolithic view of the African American family is reinforced when the movements of the past thirty years are examined in more detail. Not all Blacks went to the same states and metropolitan areas (McAdoo 1997). Different segments of the Black populations, especially the rich and the poor, went in separate directions as the two groups became ever more separated and more economically polarized. When the record of Black movements in the Census was disaggregated, so that families with one or two college-educated parents and impoverished families could be considered separately, there were differences in the places where they moved (Frey 1994).

College-educated professionals sought jobs and rising incomes in university towns and in growing manufacturing communities. College graduates were more likely to be drawn to larger cosmopolitan areas, both inside the South (Washington, D.C., Dallas-Ft. Worth, Miami, and Baltimore) and outside the South (Los Angeles, San Francisco-Oakland, and Philadelphia), as well as to recreational centers such as Orlando, Florida (Frey 1994). Middle-class, college-educated Blacks were responding to the economic pulls of certain areas.

Some scholars believe that the evidence shows that impoverished Blacks went wherever lower-paying or blue-collar jobs dominated and where the cost of living was lower. On the other hand, it is true that many poor Blacks were influenced by the pull of their historic roots in their return to their southern origins. They were attracted to smaller southern metropolitan areas (Norfolk, Tallahassee, Richmond, and Greensboro). Often, the extended kinship networks were located in small, non-metropolitan areas, for instance, in North Carolina, which attracted large members of "return" poverty migrants more so than other South Atlantic states (Frey 1994).

Current Demography Trends of African Americans

This country is quickly moving toward a population shift in which African Americans will become an even larger proportion of the population. They have increased by 16 percent between 1990 and 2000, a greater rate of increase than that of the total U.S. population. On the other hand, Hispanics will outnumber them in 2024. The U.S. Black population in 1999 was 34.9 million (13 percent), up from 33.9 million in 1996 (U.S. Bureau of the Census 2000).

In 1999, there were 16.3 million Black males and 18.6 million Black females, creating an imbalance in the sex ratio of men to women that causes great difficulty in maintaining two-parent households. Unsurprisingly, the structure of African American families that include children under age 19 in 1999 differs drastically from others. About 31 percent of Black parents in such families are married and live with their spouses, but 43.6 percent have never married. Only 38.7 percent of Black children under 19 live with both parents; 56.9 percent live with their mothers only. Few fathers live in the same homes as their children. The percentage of African American children who lived with their fathers only (3.9 percent) is similar to the percentage of Whites living with their fathers only (3.4 percent) (U.S. Bureau of the Census 2000).

This major difference between Black fathers and fathers in other groups at the same income level did not exist in 1970; in fact, Black families did not differ significantly from mainstream families until after 1970. Up until that time the majority of families had two parents. Some scholars argue that modifications occurred as the result of a series of recessions in the 1970s, which became depressions within the Black community (Hill 2002). It is also worth noting that similar changes occurred within mainstream families in the late 1980s and accelerated in the 1990s.

Blacks run the gamut from poor to wealthy. Most are not affluent, but nearly one-third (28 percent) reported total incomes of \$50,000 or more (U.S. Bureau of the Census 2000). Annual per capita income in 1999 was \$12,957 for Blacks and \$19,759 for Whites. Poverty is the position of too many. The income of 2.1 million Black families (26 percent) was below the poverty level. That means 42 percent of Black children under age 18, versus 11 percent for Whites, live below the poverty line.

Over the last few years about 41 percent of Black families received food stamps, 31 percent received AFDC/General Assistance, and 10 percent received Social Security benefits. In 1996, the unemployment rate for Blacks was 11.6 percent, compared to 4.6 percent for Whites. Some child support is received by 14.4 percent of the children, usually from the father (Children's Defense Fund 1997; U.S. Bureau of the Census 2000).

The parents of 28.2 percent of Black children under age 18 own a home; 55 percent live in a central city. Overall, homeownership reached 46.3 percent during the first quarter of 1999. At least one parent worked in 64.9 percent of the homes; 80.7 percent had earnings in 1995; and 84.7 percent were covered by health insurance. This latter figure is higher than for other groups of color. In 1999, 84.5 percent of Blacks had finished high school, 32.1 percent had attended college, and 13.7 percent had a college degree (U.S. Bureau of the Census 2000).

In sum, people of color have many challenges in general. African American families continue to suffer from subtle and overt discrimination, in the form of housing discrimination, lowered educational expectations, and biased hiring practices. In addition, families must strive to cope with the stereotypical perceptions of African Americans that are widely held and the racial profiling that is currently widely used against family members.

Harriette Pipes McAdoo

See also: Children of Incarcerated Parents; Grandparents Rearing Grandchildren; Old Age, Social Relationships in; Racial Identity Development among African American Adolescents; Racism and Its Impact on Health

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Advising High School Students

See High School, Advising Students in

Aging and Technology

One common attribute of societies considered modern is the high degree to which they use technology. This statement pertains not only to the domain of industrial manufacturing and the organization of work, the reliance on information, and the rationalization of services and interactions between producers and consumers, but also to the private everyday world in which each member of society lives. The way people lead their daily lives and take part in society is facilitated or complicated by residential infrastructure, public and private means of transportation, communications technologies, rehabilitation aids, and the increasing automation of services, depending on the design, ease of handling, proliferation, and accessibility of all these things. There are few domains of modern life that would be what they are without technology. Communication, mobility, playing sports, keeping house, enjoying leisure time—all these are no longer conceivable in modern industrialized societies without technological support.

Technology can be a supportive tool for persons of all ages, but it is particularly important with respect to old age, for two reasons. First, the phenomena of widespread experience of old age and the concomitant graying of societies are themselves due in large part to technological developments. Medical advances, more balanced work schedules, improved working conditions, healthier diets, and higher standards of hygiene and housing, all made possible by new technologies, have contributed much, at least in the West, with its industrialized societies and welfare systems, to the sharp increases in life expectancies since the beginning of the twentieth century. Second, although technical aids have always been utilized where the strength and their skill of unaided human beings did not suffice to deal with environmental demands, the particular weakness of the human condition in old and very old age makes greater demands on the assistance of technology. In the case of the failing strength and loss of bodily functions closely related to old age, technology can have enormous impact in terms of compensating for limitations and enhancing the aging individual's ability to lead as independent and active a life as possible.

Since the beginning of the 1990s, a new scientific discipline called gerontechnology (e.g. Charness et al. 2001) has been established to address the broad scope of issues related to technology and aging. Among the major features of this scientific approach is its focus on all day-to-day life domains of older people, not exclusively on illness and chronic conditions, as was the case with more traditional rehabilitation and assistive technology approaches.

Technology and Everyday Life in Old Age: Where Does It Matter?

In the *domestic environment*, the application of technology reduces physical hardship and thus makes dealing with tiresome everyday tasks easier. Assistance with everyday tasks for persons with failing strength is provided above all by the appropriate household technology. An increasing number of products are being developed with a focus on optimal user-friendliness and barrier-free design. Although these products are interesting to users from all age groups, they are particularly significant to older people with sensory or motor limitations, due to the high degree of operational comfort and safety they offer (Czaja 1997). The enormous potential of new technologies developed recently, such as “intelligent,” or “smart,” homes, could also prove particularly useful in this regard. Homes of this kind afford nearly unlimited possibilities of assisting older people by the integration of systems and the process of automation. They also pose new ethical dilemmas. For example, surveillance systems that can provide useful information about the physical and mental well-being of the elderly by tracking their everyday behavioral patterns may at the same time involve infringement on the individual's right to privacy.

The *mobility* of elderly people is supported by various transportation technologies, such as private cars, and buses and trains from the regional mass transport authorities. The private car plays an ever greater role in maintaining mobility; the proportion of older car drivers will clearly rise in the future, and the need for a private car, especially among older adults whose physical strength is waning, will not be supplanted by public transportation—at least not until mass transit systems begin to approach the flexibility and convenience of driving one's own car (Mollenkopf et al. 1999). Thanks to new intelligent systems, it will become

even easier to traverse both small and great distances quickly and efficiently (Schaie and Pietrucha 2000), changing the very definition of what is “near” or “far.” For dealing with various limitations to mobility, which range from the vague insecurity some elders feel when walking to total immobility, a multitude of appropriate technical aids, such as different types of rollers, stair lifts, elevators, and wheelchairs for every type of function losses, have been developed, which can improve or at least facilitate mobility inside and outside one’s place of residence.

The connection between aging and technology is perhaps most evident with regards to the increase in *communication*. Traditional technical communications equipment such as the telephone or the cell phone ensures that a connection to the important people in one’s life can be established at all times, over long distances and despite limited physical mobility. New information and communication technology (ICT), including devices and systems such as interactive modes of video communication and e-mail, internet access, multimedia, and information services, which are just beginning to show their potential, can help to strengthen the social contacts one already has, create new ones without having to overcome spatial barriers, and protect in particular elders who live alone from severe isolation, even when their senses and mobility are impaired. Safety-alarm systems give the assurance that help can be obtained quickly in an emergency, and in case of special impairments, speech computers and electronic reading aids serve to compensate for seeing and hearing handicaps (Charness 2001).

With regards to *health, prevention, and care*, a great variety of assistive devices have been developed to address the impairments faced by handicapped persons and frail elders. Medical technologies and auxiliary devices such as special bathroom technology, nursing beds, and lifters help provide care for those with health impairments (Bühler and Knops 1999). Providing assistive technology and environmental modifications can improve functional performance in older persons with physical and sensory impairment, slow down the rate of decline, and reduce the costs of institution-based health care (Mann et al. 1999). Medical screening and routine check-ups can increasingly become automatic, allowing the medical practitioner to make an early diagnosis with-

out a personal consultation. But despite the general assumption that older people benefit from whatever type of assistive device is made available to them, and despite the obvious changes that the availability and use of technology can bring to their everyday lives, surprisingly little systematic research has been done on the effectiveness and impact of those technologies (McWilliam et al. 2000).

Prerequisites and Problems of Technology Use In Old Age

Even in the early twenty-first century, older persons’ access to domestic appliances and modern information and communication technologies (ICT) still depends strongly on aspects of *social structure* as well as on *individual attitudes* and *lifelong habits*. This has been confirmed, for example, through a study conducted in Germany, with a sample of 1,417 persons aged 55 years or older. Among sociostructural variables, age was most important (negative impact), followed by household composition, income, and parenthood. Negative attitudes toward technology, domain-specific as well as general ones, were significant (negative) predictors, too: for example, persons who have always preferred to minimize the use of household technologies or ICT during their life course, or those who think that it is not worth buying new products anymore are more likely to be sparsely equipped in old age than those who express more positive attitudes. In the domain of ICT, a high level of education and experience with technology (“I always had a lot to do with technology in my life”) turned out to be significant positive predictors. Surprisingly, gender has no impact on the use of this type of appliance, although it is a strong predictor with respect to household technology.

Another hindrance to the provision with appropriate technical aids is that older people often have *no information* on the availability of many types of assistive devices or on the necessary procedures to take advantage of their rights. However, information about how to acquire such devices is the most important prerequisite for the use of technical aids, especially if one’s own funds do not suffice for the purchase of the device one needs. Whether or not elders are able to obtain appropriate technical aids depends heavily on the knowledge and interest of the people who, private or professionally, are concerned with the well-being of the elderly.



Retirees using computers and the Internet (Michael Siluk)

Furthermore, and despite attempts of developers and manufacturers of technical devices and systems to make products as user-friendly as possible, including universal design guidelines (Coleman 1998), all too frequently technological devices or particular features are not adequate for the needs and abilities of older people. Yet more than 50 percent of the constraints encountered in daily living tasks are considered to be remediable by a combination of redesign and the provision of some training in the task (Rogers et al. 1998, 121). Such problems of *accessibility* emerge especially when habitual behaviors have to be changed or when a device requires courses of action that are totally new for the elderly, as is the case with the layered user interfaces of new electronic communication aids. When handling such software-style interfaces, older men and women who grew up with the electro-mechanical interaction style of consumer devices experience more difficulties than the “software generation” (born in the sixties or later) (Docampo Rama, de Ridder, and Bouma 2001). As this example illustrates, the shortcomings and deficits inherent to certain technologies can be falsely interpreted as caused by an aging problem and may lead to feelings of deficiency and a fear of failure among the elderly. On the other hand, functional effectiveness is not everything. Technological constructions are socioculturally shaped artifacts, and thus access to technical devices is made difficult not only by the fact that they often are too complicated and difficult to use, but also because they may be associated with aspects that are societally undesirable and thus not well accepted.

Acceptance of technology is, in addition to individual necessities and financial resources, a crucial precondition for the acquisition and use of appliances. This is particularly salient with respect to assistive devices, which may be perceived as a clear indication of old age and frailty. Many older people feel technical aids to be a stigma. Unlike people who have had to adjust to a handicap all their lives or younger people who have suffered an injury in an accident and are happy to be able to replace certain bodily functions through technology, older people may see a technical aid as an unmistakable reference to their increasing weaknesses and failing strength. This attitude may change, however, with the implementation of modern electronic devices that are connected with the image of modernity and efficiency. The fear of stigmatization apart,

older adults are neither enemies of technology nor uncritical users of technological innovations. Instead, research has revealed that four types: the positive advocates of technology, the rationally adapting, the skeptical and ambivalent, and those who are critical and reserved (Wahl and Mollenkopf, in press). The most positively accepting respondents constitute the largest group (28.5 percent). Within the four types there are no significant gender differences. Among the positive advocates, the percentage of the younger old (e.g., 55 to 70 years), is significantly higher than the share of the older (e.g. 70 to 85) and old (e.g. 85 and older), the critical consist mainly of men and women aged 65 and older. Persons of higher education can be found significantly more often among the positive advocates of technology, and persons of lower education most often are rationally adapting.

Finally, substantial *training* is necessary to optimize the use of devices. To merely provide a technical aid does not suffice; elderly people need encouragement and time to become familiar with the device. The rapid pace and proliferation of technological development, in particular in the ICT domain, requires various new skills and abilities. The elderly of tomorrow will have had tremendous exposure to computer applications, even if they have not been formally educated in their proper use. In all likelihood, this will lead to a growing openness and increasing competencies with respect to using technological advances. However, not all older people will be able to or get the chance to take advantage of such experiences. As a result, elderly nonusers run the risk of being labeled technologically illiterate and may be excluded from important social domains. Thus, in the future, it will be crucial not only to improve the design of systems and devices, but to identify necessary accompanying measures in order to avoid a digital divide (Schauer and Radermacher 2001).

Conclusions and Outlook

Technology has become an essential part of the environments of aging men and women. With regard to the preservation of independence, mobility, and social participation, as well as supporting people in need of care, technical aids offer a multitude of positive opportunities. New electronic products and systems promise an even greater potential for compensating for age-related impairments.

However, the design of technologies that might

contribute to enhancing autonomy, social participation, and care, leaves much to be desired. For this reason, the developers and suppliers of technology need to take the interests, needs, and possibilities of older people into greater consideration. Moreover, to ensure that elderly people will use the positive opportunities of technical aids, it is necessary that these devices also fulfill the criteria of social functionality. Attention to these criteria would allow people of all ages to resort to technical aids at the proper time and without fear of discrimination.

Beyond the issue of direct everyday relevance, society in general—and the aging population in particular—is confronted by far more encompassing changes that coincide with processes of technology's proliferation. Just as new social inequalities can come about through different sociostructural conditions, so also they can result from technological surges, which are experienced by different age generations in different phases and situations of life and hence are appropriated in different ways. In the future, the demarcation between the haves and the have-nots, that is, those who have technological means at their disposal, and those who do not or cannot use the latest technology, will probably continue to exist. Thus, technology may well create even larger rifts between the rich and the poor, the young and the old, unless society addresses this problem appropriately.

Heidrun Mollenkopf

See also: Housing and Older Adults; Intergenerational Programs in Communities; Living Arrangements for Elders; Older Adults: Preparation for Future Care; Outdoor Mobility in Old Age; Teaching Older Adults to Use New Technologies

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Air Quality

Air quality is the measure of contamination of the atmosphere by any toxic or radioactive gases, particulate matter, or biological substance, particularly as a result of human activity. Airborne pollutants have been known for centuries to have an impact on human health, with health effects ranging from exacerbation of asthma and other respiratory symptoms to cancer, neurological, reproductive, and developmental effects, and increased mortality. Air quality is affected by atmospheric conditions as well as by concentrations of pollutants in air. The sources of air pollutants include both natural and man-made activities. Natural activities that increase pollution levels in the air include the deposition of particulate matter from windstorms, volcanic activity, and biological sources of bacterial spores and viruses. Man-made activities that contribute to air pollution and affect air quality include three major types: mobile sources (e.g., automobiles, trucks, airplanes), stationary sources (e.g., power plants, oil refineries, mining, agriculture, heating of buildings, factories), and indoor sources (e.g., environmental tobacco smoke, biological sources including pollen and dust mites, combustion emissions from cooking and indoor heating, and radon). This discussion will focus on man-made sources of air pollutants.

Air pollutants are generally classified as either gaseous pollutants or particulate pollutants. Gaseous pollutants include substances that are gases at normal temperature and pressure, and vapors of substances that are liquid or solid at normal temperature and pressure. Included among these substances are carbon monoxide, hydrocarbons, hydrogen sulfide, and ozone. Particulate pollutants are classified as dusts, mists, fumes, smokes, or sprays (see Table 1). In the United States, the particulate pollutants generally monitored include lead and general particulates without specified chemistry.

Effects of Air Pollutants on the Human Body

Injury to humans from the intake and deposition of pollutants in the lungs depends on the physical and chemical properties of air pollutants, as well as the activity in which the individual is engaged. Highly water-soluble gases such as sulfur dioxide can be removed in the upper respiratory tract, while less soluble gases such as nitrogen dioxide and ozone can penetrate deeper into the lungs and into the alveoli.

The major factors influencing particulate deposition are aerodynamic size and the anatomy of the space through which they are moving (Moeller 1997). Large particles tend to impact in the airways where flow rate is high and passageways change direction frequently. Smaller particles can penetrate farther into the lungs, into the bronchiolar and alveolar spaces, and deposit in the lungs through diffusion and settling.

The human body is designed with a number of mechanisms to protect the respiratory system from damage. The nose serves as a purifier for particles of 5 μ m (millimicron) and larger. Particles that reach the upper respiratory tract can be removed through the action of cilia. Particulate matter that is deposited in lower airways can be engulfed and destroyed by cells called macrophages. The cilia then move the macrophages and other contaminants up to the pharynx, where they are expectorated or swallowed.

Despite the protective mechanisms the body has to protect the lungs, many substances will deposit in the lungs and may cause constant or recurrent irritation to the lungs or lead to long-term illness. In addition, substances can be transported through the bloodstream to other parts of the body, where they may cause damage to various organs, including the spleen, kidneys, and liver. In the United States it is estimated that each year 50,000 to 60,000 individuals die from excess exposure to particulate matter less than 10 μ m (millimicron) (Moeller 1997).

Monitoring of Air Pollutants in the United States

In the United States, air quality is primarily measured by evaluation of six substances referred to as criteria pollutants, for which national ambient air quality standards (NAAQS) have been established. The six pollutants include carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), lead (Pb), particulate matter (PM₁₀), and sulfur dioxide (SO₂). The U.S. Environmental Protection Agency (EPA) tracks air quality trends of the criteria pollutants by using actual measurements of pollutant concentrations in the ambient (outside) air at monitor sites across the country. Table 2 lists the criteria pollutants and standard levels, the populations that are especially sensitive to these pollutants, and health effects that may result from overexposure.

Table 1. Particulate Air Pollutants

Dust	Solid particles that are entrained by process gases directly from the material being handled or processed, such as coal, ash, or cement; that are the direct offspring of a parent material undergoing a mechanical operation (e.g., sawdust from woodwork- ing); that are entrained materials used in a mechanical operation (e.g., sand from sandblasting).
Fume	A solid particle, frequently a metallic oxide formed by the condensation of vapors by sublimation, distillation, calcination, or chemical reaction processes (e.g., zinc and lead oxide resulting from the condensation and oxidation of metal volatilized in a high-temperature process).
Dust	Solid particles that are entrained by process gases directly from the material being handled or processed, such as coal, ash, or cement; that are the direct offspring of a parent material undergoing a mechanical operation (e.g., sawdust from woodwork- ing); that are entrained materials used in a mechanical operation (e.g., sand from sandblasting).
Fume	A solid particle, frequently a metallic oxide formed by the condensation of vapors by sublimation, distillation, calcination, or chemical reaction processes (e.g., zinc and lead oxide resulting from the condensation and oxidation of metal volatilized in a high-temperature process).
Mist	A liquid particle formed by the condensation of a vapor (e.g., sulfuric acid mist formed from sulfur trioxide in combination with water).
Smoke	Solid particles formed as a result of incomplete combustion of carbonaceous materials. Commonly referred to as smoke particles, these have a diameter of 0.05 to 1 µm.
Spray	A liquid particle formed by atomization of a parent liquid.

Adapted from Vesilind et al. 1990.

Table 2. Air Pollutants, Sensitive Populations, and Air Quality Standards[#]

Pollutant	Sensitive Populations	Health Effects from Overexposure	Sample Collection Time	Primary NAAQS
CO	Individuals with coronary artery disease	Myocardial ischemia (including angina) during exercise	1 hour	35 ppm
			8 hours	9 ppm
NO ₂	Children, asthmatics	Respiratory symptoms decrements in lung function, increased airway reactivity	1 year	0.053 ppm**
Ozone	Exercising individuals, especially children; individuals with asthma	Respiratory symptoms aggravation of asthma, lung function decrements, chest pain, cough	1 hour	0.12 ppm
			8 hours	0.08 ppm
Lead	Fetuses and young children	Impairment of neural development	3 months	1.5 g/m ³
PM ₁₀ *	Elderly, individuals with cardiopulmonary disease, children	Increased mortality, aggravation of respiratory symptoms including asthma, decrements in lung function	24 hours	150 g/m ³
PM _{2.5} *			1 year	50 g/m ³
			24 hour	65 g/m ³
			1 year	15 g/m ³
SO ₂	Asthmatic children and adults, elderly, and individuals with cardiovascular disease	Breathing difficulties, wheezing, chest tightness	24 hours	0.14 ppm
			1 year	0.03 ppm

[#]Adapted from Shalauta and Burke 1997 and Utell et al 1994.

*Particulate matter less than 10 m in diameter, and less than 2.5 m in diameter

**Arithmetic mean



Smog in Los Angeles (Michael Siluk)

Carbon monoxide (CO) is a colorless and odorless gas that can be poisonous at high levels and is formed when carbon in fuel is not burned completely. About 60 percent of CO emissions in the United States are from motor vehicle exhaust.

Nitrogen dioxide (NO₂) is a reddish brown gas that is highly reactive and is formed in the ambient air through oxidation of nitric oxide (NO). Major sources of NO₂ emissions include automobile and power plant combustion. Gas stoves and home heaters contribute to NO₂ levels in indoor environments.

Ozone (O₃) is formed by the reaction of nitrogen oxides and volatile organic compounds (VOCs) in the air in the presence of heat and sunlight. Ground-level ozone forms readily in the atmosphere, especially during hot summer weather.

Lead (Pb) is a bluish gray toxic heavy metal. In the past, the major source of lead in the environment was from automobile exhaust. Today, major sources of lead include lead and copper smelters, iron and steel production facilities, and battery recycling plants.

Particulate matter (PM) is a general term for a mixture of solid particles and liquid droplets found in the air. Particles included in the PM standards include dust (sulfates and nitrates), soot, smoke, oxides of carbon, aluminum, iron, and silicon.

Sulfur dioxide (SO₂) is a gas formed when coal and oil containing sulfur are burned and during metal smelting and other industrial processes. Coal-fired power plants are the largest source of ambient SO₂. Sulfur dioxide is the compound that was involved in the severe smog conditions that arose in Donora, Pennsylvania, in 1948 and the subsequent “London Fog” smog incident of 1952. In combination with the local meteorological conditions, the high levels of sulfur dioxide resulted in severe illnesses and many deaths in both locations.

To evaluate daily air quality based on the criteria pollutants, the Pollutant Standards Index (PSI) was established under the Clean Air Act. All metropolitan areas in the United States with populations of at least 200,000 individuals are required to report daily PSI figures. The PSI scale ranges from

0 to 500, with lower scores indicating better air quality. PSI scores above 100 indicate that one or more of the criteria pollutants have reached an unhealthy level on that particular day.

PSI scale ranges:

0–50	good air quality
51–100	moderate air quality
101–199	unhealthful air quality
200–299	very unhealthful air quality
300 and above	hazardous air quality

Under the PSI system, the major criteria pollutants of concern are CO, O₃, PM₁₀, and SO₂. Lead does not have a short-term NAAQS or federal episode criteria level and significant harm level and is therefore not included in the PSI; NO₂ is generally excluded from the PSI because it does not have a short-term standard.

In addition to the criteria air pollutants, toxic air pollutants (also known as hazardous air pollutants or HAPs) contribute to pollutant levels in the ambient and indoor air. Toxic air pollutants include those substances known or suspected to cause cancer or other serious health effects, such as reproductive or birth effects, or adverse environmental effects. Among the chemicals that are reported are hazardous air pollutants, including benzene, a substance found in gasoline; methylene chloride, a solvent and paint stripper; asbestos, a substance historically used as a flame retardant; and perchlorethylene, which is emitted from some dry cleaning facilities. Other HAPs include toluene, dioxin, cadmium, mercury, chromium, and lead compounds.

In the United States, information on air toxic substances, or toxics, is available from two primary sources: the National-Scale Air Toxics Assessment (NATA) and the Toxics Release Inventory (TRI). NATA provides emissions and health risk information on 33 air toxics that pose the greatest risk to public health in the largest number of urban areas. Under the Emergency Planning and Community Right-to-Know Act (EPCRA), the EPA requires businesses to report releases and transfers of approximately 650 toxic chemicals to the Toxics Release Inventory (TRI). TRI is a database that tracks information from manufacturing facilities on off-site transport and reported releases of the listed toxic compounds. The database tracks reported releases to air,

water, and land.

Hazardous air pollutants in the ambient environment primarily originate from man-made sources such as automobiles, factories, refineries, and power plants. In the indoor environment, air toxics are released from building materials and cleaning solvents. In addition to the natural sources, volcanic eruptions and forest fires can release toxic substances to the air.

Among the hazardous air pollutants that have recently received widespread attention are ozone-depleting chemicals, including chlorofluorocarbons. These compounds, primarily used as refrigerants, solvents, and foam-blowing agents, interact with ozone in the stratosphere and destroy the ozone molecules, creating “holes” in the ozone layer that allow dangerous ultraviolet radiation from the sun to reach the earth’s surface. In order to protect the critical ozone layer, the production of ozone-depleting chemicals has been banned in the United States and by many other developed nations.

Indoor Air Pollution

Because Americans spend an estimated 90 percent of their time indoors, efforts to understand the quality of indoor air have become increasingly important. Air pollutants in homes and buildings arise from many sources, including the combustion involved in gas stoves, wood-burning fireplaces, and environmental tobacco smoke; building materials, such as asbestos-containing insulation; and household cleaning products. The buildup of toxins in the indoor environment has largely resulted from efforts to increase energy efficiency, which have resulted in airtight environments where little fresh air is available to dilute pollutants.

Indoor air pollutants have been implicated in a number of common symptoms, including headache, fatigue, dizziness, nausea, and skin sensitivities. More serious problems that may be exacerbated by indoor air quality include asthma, chronic obstructive pulmonary disease, and cancers. It is believed that tobacco smoke and allergens in the indoor environment are major contributing factors to the recent rise in asthma among children in the United States.

Greenhouse Effect and Global Warming

Energy from the sun drives the earth’s weather and climate, and heats the earth’s surface; in turn, the

earth radiates energy back into space. Chemical compounds in the atmosphere, including carbon dioxide, methane, and chlorofluorocarbons, trap some of the outgoing energy, retaining heat on the earth's surface in somewhat the same way as the glass panels of a greenhouse. Without this natural greenhouse effect, temperatures would be much lower than they are now, and life as known today would not be possible. Greenhouse gases have helped to maintain the earth's average temperature at 60°F. However, when the atmospheric concentration of greenhouse gases increases, a variety of deleterious effects occur.

Over the last century, increased industrialization has resulted in a nearly 30-percent increase in atmospheric concentrations of carbon dioxide, while methane concentrations have more than doubled, and nitrous oxide concentrations have risen by about 15 percent. It is generally believed that the combustion of fossil fuels and other human activities are the major contributors to the increased concentration of carbon dioxide, and that these increases will lead to increased temperatures near the earth's surface.

As seawaters warm and expand and glaciers melt with increased temperatures, the greenhouse effect is expected to raise sea levels. These higher sea levels could result in devastating floods to low-lying communities, such as those on the Atlantic and Gulf Coasts of the United States, as well as the Netherlands and Bangladesh. Other parts of the world could be affected by changes in rainfall patterns, resulting in desertification of fertile farmlands.

Scientists also predict that effects on wildlife may be even more devastating, from changing growth patterns of various species to destruction of natural habitats and ecosystems that house the animals. In addition, it is expected that human diseases, such as malaria, dengue fever, filariasis, schistosomiasis, and yellow fever among others, will increase, due to the spread of insects that transmit these diseases. Thus, though the substances that cause the greenhouse effect are not all in themselves pollutants, bringing them under control may be one of the most important tasks of those scientists and regulators who are concerned with air quality.

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See also: Asthma; Healthy Indoor Air; Indoor Air Pollution
Mold and Health; Radon



Adult with art therapist (Laura Dwight)

Alcohol Use among Adolescents

See Adolescents, Alcohol Use Among

Alzheimer's Disease

See Mental Illness in Old Age

Art Therapy

Art therapy is the purposeful and therapeutic use of art making and the art product to promote healing and well-being of individuals and fami-

lies. Through the creative processes of art making, and reflection on the process and the finished product, awareness of self and others is increased and communicated, and skills for coping with symptoms, stress, and trauma are enhanced. Art therapy has been found to communicate inner issues, provide release of stress, and promote coping with symptoms.

Art therapy is interdisciplinary; it addresses the psychological, physiological, psychosocial, and developmental needs of individuals and families.

Trained art therapists are commonly knowledgeable in art making and media, as well as in relevant psychological theories, especially in the areas of social interactions, communication, and cognitive development. Art therapy research and training may also include knowledge of brain structure and its development and functioning, as affected by making and viewing art and images. Still other human service professionals may use art therapy approaches as tools for assessment, treatment, and or research.

Art therapy addresses the needs and development of children, adult individuals, and families; it clearly falls within the domain of human ecology. At the microsystem level, art therapy might be used to explore psychological issues of the individual and their impact on interactions with her varying roles and settings. Art therapy has been found to be quite effective with children, as the art-making process and product are able to communicate issues the child is not developmentally able to verbalize.

At the mesosystem level, art therapy helps to illustrate the process of interactions between the individual and his varying microsystems. For example, art therapists working with families may instruct the family to make art together. By observing the process of the art making and by reflecting on the product with the family, the art therapist is able to gain insight into the roles of the various family members and the functioning of the family as a system.

The theoretical foundation of the art therapist would be placed at the exosystem level of human ecology. How art is used with the client, what issues or needs are addressed, which resolutions are encouraged—all are based on how art therapy is defined by the practitioner and the setting. Thus art therapists within the school setting focus, as might be expected, on the cognitive development of the individual, for the purpose of promoting academic success. In a rehabilitation setting, art may be used to promote motor functioning and well-being.

At the macrosystem level, the use of art therapy is based on the culture of the client as well as the societal culture. Art media resources and art expressions may be determined by the societal view of art and art making. For example, graffiti are generally viewed as delinquent behavior. However, art therapists might say that graffiti are an expres-

sion of urban youth's feelings or an attempt to establish a domain. Finally, at the chronosystem level, the use of art therapy is based on the chronological age and developmental stage of the individual, while also addressing the influences of socio-historical events. For example, after natural catastrophes (e.g., Hurricane Hugo) or traumas caused by human beings (e.g., the bombing in Oklahoma City, the September 11 terrorist attacks, civil wars) art therapy is used to facilitate survivors' expression of feelings, increase their coping abilities, and promote psychological healing.

Chantel Laran Lumpkin

See also: Bronfenbrenner, Urie; Creativity and the Arts in Child and Adolescent Development; Music

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Asthma

Asthma is a chronic inflammatory lung disease characterized by temporary airway obstruction, and it has been increasing consistently over the last three decades. While it cannot be cured, asthma can be controlled through medication, lifestyle adjustments, and environmental measures. According to the National Heart, Lung and Blood Institute (NHLBI) of the National Institutes of Health (NIH), "Asthma ranks among the most common chronic diseases in the United States, affecting an estimated 14.9 million persons . . . and causing . . . about 500,000 hospitalizations and 5,500 deaths in a single year" (National Institutes of Health 1999, 1). The prevalence of asthma rose some 75 percent over the period 1980 to 1994. Asthma is more common among children than among adults, and is more common among African Americans than among Whites (NIH 1999). Asthma is the most common cause of school absences from chronic disease, impacting children's school performance as well as parents' performance on the job, through missed work days (American Academy 1999, 2). This disease is prevalent in urban areas (Hegner 2000, 5), and



Asthma is the most common cause of school absences from chronic disease. (Laura Dwight)

some ethnic groups are especially predisposed to asthma. The prevalence in Puerto Rico, for example, is 15.9 percent compared to an overall U.S. rate of 10.5 percent (Reese 2001, 682). Although asthma is not contagious, it does tend to run in families.

Asthma is a disease in which the lungs are especially sensitive to one or more “triggers,” which provoke a series of reactions that narrow the smaller airways (bronchioles), making it difficult to breathe. A wide variety of triggers have been identified. These triggers are different for different people. Many triggers are allergens, but some triggers are not. When an asthma episode (attack) is triggered, mast cells in the lungs release histamine. Histamine in turn causes inflammation and swelling in the airway tissues, contraction of the smooth muscles surrounding these airways (bronchospasm), and increased secretion of mucus. All of these reactions contribute to narrowing of the airways, making breathing laborious. Key symptoms of asthma include coughing, shortness of breath or rapid breathing, chest tightness, and wheezing. If asthma is not properly treated, repeated episodes eventually cause morphologic changes in lung tissue (remodeling) that is probably not reversible.

The cause of asthma remains unknown, although there is general agreement that a combination of environmental and genetic factors is involved. Recent efforts by an expert panel reviewing a large body of literature concluded that evidence supports “a casual relationship between exposure to house dust mite allergen and the development of asthma in susceptible children.” Environmental tobacco smoke was identified as another likely cause for the development of asthma in young children, although the case for the identification was less strongly supported than that for dust mites (Committee on the Assessment of Asthma and Indoor Air, Institute of Medicine 2000, ES6). Interestingly, recent research studies suggest that exposure to some infectious agents in very early childhood (via exposure to older siblings or other children in day care facilities) may actually protect against the development of asthma, possibly by enhancing development of the immune system (Ball et al. 2000).

Dust mites, which can be described as microscopic spiders, are the most common cause of asthma attacks. About one-third of asthma patients

are susceptible to dust mite allergen, which is contained in the mite fecal pellet. Dust mites require moisture and a food source to live, and although they are found in dust and upholstered furniture, they thrive especially well in mattresses and bedding. Here, body moisture and sloughed-off flakes of skin provide the ideal environment. Best control measures include encasing the mattress and pillow in plastic covers, and using hot water to launder bedding. Other prominent asthma triggers include cockroach allergen, tobacco (and other) smoke, animal protein (dog, cat, and rodent allergens), pollen, and molds. Some of these allergens can persist in the home long after the source has been removed. General control measures include frequent cleaning (using high performance vacuums), damp mopping, and other dust control measures. Hard-surface flooring is preferable to carpet; pets, if present, should be kept out of sleeping areas. In nonallergenic asthma, some common triggers include exercise, upper respiratory viral infections, cold air, stress, and strong emotions (especially when expressed in laughing and crying).

Typical asthma signs, such as wheezing, may be caused by other ailments, and are not always prominent in asthmatics, so the diagnosis of asthma is sometimes problematic. The gold standard for asthma diagnosis is based on the measurement of breathing parameters (spirometry), but this testing is difficult to do with children, particularly in those younger than 4 years of age. On balance, it is believed that underdiagnosis of asthma is a frequent problem. In patients with asthma, their breathing status at any given time is readily self-measured with a simple mechanical device known as a peak flow meter. Based on a “personal best” measurement, the physician can designate flow zones as “under control” (green), “caution” (yellow) or “stop”—get help from a doctor (red). These designations are incorporated in an asthma action plan, which should be provided for every asthma patient.

Two general categories of medication are used to treat asthma. Long-term controller medications act to reduce inflammation and the severity of attacks. Such medications include Cromolyn Sodium, corticosteroids (oral and inhaled), leukotriene modifiers, and long-acting beta-2 agonists. Quick relief, or rescue, medications are taken to fight an acute episode (and beforehand to prevent exercise-induced asthma) and include short-acting beta-2 ag-

onists, oral corticosteroids (short-term) and Ipratropium bromide. If rescue medications are needed on a daily basis, long-term medications may need to be reevaluated. It is important to understand that different people respond differently to different medications, so treatments and dosages must be tailored to the individual patient. Patient-doctor feedback is essential in developing the optimum regimen for each patient. Patients must also realize that they must take controller medications as prescribed even when they are feeling well. It is also important to understand that the steroids used for asthma are different than those abused by some athletes. Side effects are fewer, and dosages delivered directly to the lungs are much smaller than whole-body dosages. Concerns about these medications should be discussed with the doctor.

Asthma is a chronic disease that can be severe, even resulting in death. Nevertheless, it is a disease that can be controlled. The widely enunciated goals of asthma treatment are that nearly all asthma patients should maintain normal activity levels, have no missed school- or workdays, and have normal or near-normal breathing. Barriers to these goals include patient education (and compliance) and physician education. It is reported that many primary care physicians do not fully follow the guidelines of the NHLBI for the diagnosis and treatment of asthma (Hegner, 2000). Patients who do not attain the above goals after three to six months of treatment should get a second opinion about their treatment.

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See also: Air Quality; Healthy Indoor Air; Indoor Air Pollution; Mold and Health; Treatment Adherence

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Attachment

The term "attachment" refers to the loving bond that unites two or more people across time and space. Attachments form beginning in infancy, and contribute to the survival of the human species by binding infants, who are dependent on the care of an adult, and their caregivers together. An infant's development of an attachment to a parent or close caregiver is considered a hallmark of social and emotional development in the first year of life. As infants develop, attachment relationships that are positive and secure afford them trust in themselves and others, and confidence to explore and learn, knowing that the protection and nurturance of an attachment figure is available if needed. Sigmund Freud made the assertion that the infant-mother relationship was "the prototype of all later love-relations" (1963). This statement highlights the importance of the initial attachments a baby develops, often to his mother, and to the significance of these early bonds. Since most infants now are cared for by several close caregivers, they develop multiple attachments to the important people in their lives, who include fathers, grandparents, and child-care providers.

Attachment theory (Bowlby 1982) became one of the major organizing frameworks of social and emotional development in the latter part of the twentieth century (see Cassidy and Shaver 1999). Key questions regarding the place of attachments in human development include (a) *developmental questions*, as to how, when, and to whom attachments form; (b) *individual difference questions*, as



Children develop early attachments to the important people in their lives. (Elizabeth Crews)

to whether all attachments look the same; (c) *environmental context questions*, as to the ways aspects of the social environment affect attachments; (d) *developmental impact questions*, as to the ways early attachments affect later development; and (e) *questions of cultural specificity*, as to whether attachments are universal or culturally specific.

Except in highly unusual conditions (for example, severe neglect or abuse), virtually all infants develop close emotional ties to those who care for them. It is part of the human biological makeup to form attachments; they are critical to the protection, nurturance, and development of human beings. Understanding attachments is central to understanding how someone responds when under stress, or in need, since attachment behavior is observed under these conditions. Having a secure attachment to a caregiver reduces a young child's fear, distress, or anxiety in challenging situations and enables the child to explore with confidence and to manage negative emotions. This security also strengthens the child's sense of competence and effectiveness, both in obtaining assistance from others, and when appropriate, in handling problems herself.

Attachment Formation and Individual Differences

Attachment relationships begin to develop early in infancy, and become consolidated between six and twelve months of age. They can, however, form later in childhood, or even in adulthood. Not all attachments look the same. Some attachments are called secure, while others are called anxious, avoidant, or insecure (Ainsworth et al. 1978). A secure attachment is marked by confident exploration and ready soothing of distress when the child is upset; this kind of attachment is the case for the majority of infants. Less frequently, infants develop attachments to caregivers that reflect uncertainty or lack of trust in the responsiveness of the caregiver. Infants with insecure attachments are not so easily soothed by the caregiver, and their exploratory play may be overly independent or anxiously dependent.

One of the central questions in the study of parent-child relationships has been whether differences in parenting behavior affect the attachments that children form. Research studies have demonstrated that the key component in attach-

ment security is the sensitivity of the caregiver's behavior toward the infant. In Western cultures, sensitivity is defined by how accessible and emotionally available the caregiver is to understanding the needs of the child, the promptness and timing of the responses, especially when the child is in distress, and the level of acceptance of the child.

While once it was thought that infants developed close attachments only to their mothers, we now know that attachments are formed to many caregivers, including mothers and fathers, child-care providers, preschool teachers, and sometimes also grandparents and other adults. Infants' attachments with these caregivers may be secure or insecure, based on their experience with each person, largely independently of the security of their relationships with the other people who care for them.

Environmental Context

Sensitive care, and its opposite, are influenced by many features of a caregiver's life experience, such as social stress and support, and the caregiver's childhood history, including his own attachment relationships. Sensitivity may be undermined by things that make the caregiver psychologically unavailable, such as depression or other forms of mental illness. In such cases, other circumstances prevent a caregiver from having the emotional and psychological availability to be highly responsive and developmentally appropriate in his behavior toward the child, particularly when the child is distressed. In families where the caregiver has experienced insecure attachments in his own childhood, and the current circumstances make it more difficult to care for an infant sensitively (for example, marital conflict, economic stressors, unstable living situation), infants are more likely to develop insecure or anxious attachments than under conditions that promote caregiver sensitivity.

Developmental Aspects

Although some used to think of attachment as something that infants would grow out of, those in the field now think of attachment as playing a role during the whole life span. Humans develop and maintain attachments throughout the life cycle, from infancy to old age. Attachments form in close relationships when people can or need to rely on others in times of stress. Attachment relationships look different at various points in development,

since, for example, the abilities and needs of 7-year-olds or 14-year-olds are different from those of infants. Whereas an infant typically needs close physical proximity or contact with her attachment figure to gain security when she is distressed, an older child may only need to know that her attachment figure is nearby; for others, just thinking about the attachment figure may bring relief.

As infants develop, they begin to form representations, or mental images, of their attachment figures, themselves, and the world. Attachment theorists call these mental images “internal working models.” It is thought that as children grow older, these mental representations help to shape aspects of their cognition and behavior, since they provide a filter, or backdrop, for understanding what happens in the child’s world and act as catalysts for behavior. For example, a child with a secure attachment may develop an internal working model of the world as generally enjoyable, a world in which, when trouble arises, attachment figures and others will lend aid. He may also develop an internal working model of himself as effective and competent, which contributes to positive interaction.

Attachment relationships are not static. They change and grow in concert with the developing child and the changing social contexts in which the child lives. Since parents and other attachment figures and the kind of caregiving they provide can also change over time, security of attachments can change in the early years when changes occur in the caregiver’s sensitivity. Attachments can become more secure, for example, if the contexts for children’s care become more responsive and sensitive. Although changes in attachments are possible throughout development, it is thought that attachments in infancy and early childhood hold a special role; they set the stage, laying the foundation for later development by providing the initial internal working models that children use to guide their interpretations of events and their own behavior.

Consequences for Development

Developmental psychologists and others have been interested in the question of whether and how experiences in attachment relationships in infancy and early childhood affect the development of personality and later competence. The question is complicated, involving aspects of brain develop-

ment and the social environment (Shonkoff and Phillips 2000). There is no doubt that human beings continue to develop across the life span, and that there is the potential for change (for better or worse) after early childhood. One of the reasons that early secure attachments are important is that they set in motion a positive relationship with a caregiver that contributes to the development of mutual trust and responsiveness between adult and child. This relationship provides a secure base for confident exploration in infancy and early childhood and supports the development of moral thought, emotional understanding, positive sense of self, and motivation to learn and achieve.

Attachment relationships are important also because of the way they influence young children’s understandings of themselves and other people. Children with secure attachments may have more genuinely balanced and positive views of themselves, and a more sophisticated understanding of emotions than children without secure attachments. Differences in expectation about relationships and about one’s own effectiveness in them leads children and adults to engage the world in different ways.

Researchers have conducted longitudinal studies that report that children with secure attachments to parents (most of the research having been done with mothers) develop more positive, supportive close relationships beyond the family, with teachers, friends, camp counselors, and so on. This may be because they have a more positive orientation to relationships, and greater confidence and interpersonal social skill. These studies also conclude that the sensitivity of current caregivers later in life also have an impact, not simply the nature of early attachments. Attachments seem most closely linked with other aspects of social and emotional development rather than with cognitive, or intellectual development. Especially when the sensitivity that initially led to a secure attachment is maintained into childhood, secure attachments support a positive orientation toward others, effective emotional regulation, moral awareness, and self-understanding, all crucial aspects of healthy psychological development.

Universal or Culture-Specific

Since the theory of attachment was originally developed and tested in Western cultures, some theorists have questioned whether attachments de-

scribed in this way are truly a feature of the human species (and demonstrate universality), or whether they are specific to cultural contexts. There is evidence of both universal and culturally specific aspects of attachment theory. While it is part of the human makeup to form attachments, the particular ways in which attachments are manifest in behavior vary somewhat according to culture and context. The behaviors that describe a secure attachment in rural Kenya, for example, may not be the same behaviors that describe secure attachments in urban Tokyo.

Conclusions

Understanding the development of attachment relationships and their potential consequences for children's lives was a major thrust of theorists interested in social and emotional development during the latter half of the twentieth century. The important knowledge gained is now being applied to policies and programs in early childhood development. For example, federally funded programs, such as Early Head Start, and other early childhood programs may embrace a relationships-based developmental orientation to curriculum that promotes the formation of secure attachments between children and their parents and other caregivers.

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See also: Child Care: Issues for Infants and Children; Freud, Sigmund; Head Start; Maternal Deprivation; National Association for the Education of Young Children; Parent-Child Synchrony; Public Policy and Early Childhood

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Attention-Deficit/Hyperactivity Disorder (ADHD)

Attention Deficit Hyperactivity Disorder (ADHD) is a condition characterized by ongoing patterns of inattention or hyperactivity/impulsivity, or both, that occur in two or more domains of an individual's life and prohibit the person from functioning at developmentally appropriate levels. There are diagnostic criteria that must be met for ADHD, and the disorder is broken into three subtypes: ADHD, Combined Type; ADHD, Predominantly Inattentive; and ADHD, Predominantly Hyperactive-Impulsive Type (American Psychiatric Association, 2000). Estimates of the disorder are high, and there are varying theories as to the etiology of ADHD. Given the symptoms, the disorder has broad implications for the affected individual and her family, as well as for those working with her. Treatment options vary, and encompass the multiple domains in which the person lives, works, and studies.

Prevalence

In the early twenty-first century, ADHD is one of the most common reasons for referral to psychologists, mental health clinics, and guidance centers (Mash and Terdal 1997). It is estimated that between 3 and 7 percent of school-age children have ADHD. The disorder occurs more often in males than in females, particularly in samples of children referred to outpatient mental health clinics. Estimates of the male-to-female ratio of those affected by ADHD range from two-to-one (2:1) to nine-to-one (9:1), with higher male-to-female prevalence rates found in clinic settings. There is currently little data about the prevalence rates of ADHD in adolescents and adults (American Psychiatric Association 2000).

Making the Diagnosis

ADHD is marked by persistent patterns of inattention and hyperactivity-impulsivity (American Psychiatric Association 2000). To be diagnosed with ADHD, children must show signs of the disorder prior to 7 years of age, and the symptoms must have impaired the child's functional abilities. In addition, symptoms must be present in at least two different arenas of the child's life (for example, school and home). The symptoms associated with ADHD may not be accounted for as a result of another disorder or illness, and must be prevalent



Hyperactive child (Laura Dwight)

enough to interfere with the child's normal activities (socializing with peers, academic work, and so on). Often, symptoms will vary across settings and be worst in situations requiring the child's sustained attention. Many children and adolescents are diagnosed with ADHD, Combined Type, implying that they have difficulty with both inattention and hyperactive-impulsive behavior. However, it is possible that a child may be predominantly inattentive or predominantly hyperactive-impulsive, thereby warranting the diagnosis of either ADHD, Predominantly Inattentive; or ADHD, Predominantly Hyperactive-Impulsive Type. In any case, children must demonstrate symptoms for a minimum of six months prior to the diagnosis (American Psychiatric Association, 2000).

Attention-Deficit Disorder, Predominantly Inattentive Type

Children with ADHD, Predominantly Inattentive, have difficulty persisting in tasks that require sustained attention. Because of this difficulty, the child often dislikes these types of activities and develops means by which to avoid them. The child is prone to making careless mistakes in schoolwork or activities, often as a result of not checking the accuracy of his work. Schoolwork for these children is often messy and lacks attention to detail.

The child with ADHD, Predominantly Inattentive, has difficulty with organizational tasks and, as a result, may often lose items, forget activities, or fail to complete work (i.e., schoolwork, chores, and the like). Often the child with ADHD, Predominantly Inattentive Type, may appear not to hear or listen to instructions. She can be easily distracted by extraneous stimuli that would not noticeably affect another same-age child. Because the child with ADHD, Predominantly Inattentive Type, is easily distracted, she may also move often from one activity to another. These children are often reported to be more off-task than their peers and to engage in more daydreaming types of behavior (Barkley, DuPaul, and McMurray 1990).

The Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR) lists the diagnostic criteria for ADHD, Predominantly Inattentive. To be diagnosed with this form of the disorder, the child must demonstrate at least six of the inattentive characteristics, while not demonstrating at least six of the characteristics on the hyperactivity-impulsive scale. Again, the symptoms must impair

the child's functioning, be present for at least six months, occur in two or more settings, and not be the result of another disorder or illness (American Psychiatric Association 2000).

Attention-Deficit/Hyperactivity Disorder, Predominantly Hyperactive-Impulsive Type

The behavior of children with ADHD, Predominantly Hyperactive-Impulsive Type, is characterized by high levels of motor activity, fidgety behavior, and squirming when required to sit in a chair. These children have trouble staying seated in the classroom and are often found exploring, running, and climbing when they should be doing schoolwork. As children, they appear to be always on the go, and many talk continuously. They also have difficulty following the rules of games, which can inhibit peer interactions.

If impulsive behavior is demonstrated, it is marked by an inability to inhibit behavior in an age-appropriate manner. Typical behaviors of children with impulsivity difficulties include interrupting others who are speaking, shouting out answers before being called on, and trouble waiting for one's turn (American Psychiatric Association 2000).

Like ADHD, Predominantly Inattentive Type, the ADHD, Predominantly Hyperactive-Impulsive Type, must be present for a minimum of six months prior to diagnosis, cannot result from another illness, must occur in two or more settings, and must impair the child's ability to function at developmentally appropriate levels. For diagnosis, the child must have at least six of the hyperactive-impulsive characteristics defined by the DSM-IV-TR, but may not have as many corresponding inattentive symptoms.

Attention-Deficit Disorder, Combined Type

Children diagnosed with ADHD, Combined Type, meet the criteria for ADHD, Predominantly Inattentive Type; and ADHD, Predominantly Hyperactive-Impulsive Type. Both inattentiveness and hyperactivity-impulsivity mark the behavior of these children.

Etiology

Genetics are believed to play an important role in the development of Attention-Deficit/Hyperactivity Disorder. Children with ADHD are more likely than their non-ADHD peers to have a first-degree biological relative who also had ADHD (Sherman,

Iacono, and McGue 1997). Genetic research also implies that alterations in genes may result in altered psychological functioning. For example, Taylor (1999) identified links between impulsivity and the genetic variations of the D4 and DRD4 dopamine receptor genes. Dopamine is suspected of being linked to impulsivity specifically through dopamine D4 receptor polymorphisms (Sherman, Iacono, and McGue 1997). Alterations in genes coding for the D1, D2, D3, and D4 dopamine receptors are correlated with impulse-control disorders (Hollander and Rosen, 2000). Thus, although further research needs to be conducted, there are reasons to believe that genetics may predispose a person to the development of ADHD.

Neuropsychologists studying ADHD are interested in the specific areas of the brain that may be affected in children with this disorder. They believe that structural abnormalities in the brain may lead to the behaviors manifested in children with ADHD. The types of tasks on which children with ADHD have difficulty are often referred to as executive functions. Examples of common executive-function difficulties in the ADHD population include difficulty monitoring his own performance, trouble maintaining vigilance, poor motor persistence, and a decreased ability to inhibit automatic responses (Korkman, Kirk, and Kemp 1998). The brain's frontal cortex, and in particular the prefrontal lobes, are believed to be responsible for executive functions. Magnetic resonance imaging procedures (MRIs) have found that individuals with ADHD have smaller brain sizes, brains that are less dense (Castellanos et al. 1994), and decreased cerebral blood flow and activity (Mash and Terdal 1997).

Other less developed theories of the etiology of ADHD suggest that diet may play a role in ADHD. Some researchers claim that additives may produce allergic reactions in some children, or that too much sugar consumption results in ADHD. These dietary theories are largely speculative, however, and are not substantiated by empirical research (Mash and Terdal 1997). In addition, there are conflicting reports about high levels of lead exposure and their link to ADHD.

Assessment of Attention-Deficit/Hyperactivity Disorder

In order to determine whether or not a child has ADHD, professional assessments must be con-

ducted. Typically, these assessments are conducted by physicians, psychiatrists, or licensed psychologists. Because the diagnosis depends on symptoms in at least two settings, multiple methods are often used in the assessment of the child with ADHD.

The most common assessment measures are self-report measures that can be completed by parents, teachers, or the child herself. Self-report measures are usually paper and pencil tasks that ask the reporter to assess the child's behavior. Scores are computed and used to determine if the child, in a given setting, meets the criteria for ADHD. Psychologists often use tests of attention span relative to the child's performance in other cognitive tasks.

Often interviews are also conducted to obtain more qualitative information about the child's behavior, functioning level, and the level of impairment. Parents are often interviewed, and, depending on the child's capacity, he may also be interviewed. Observations and measures of peer interactions are also used to assess children with ADHD. It is best to use multiple assessment methods, and to have multiple reporters, when attempting to confirm or deny an ADHD diagnosis.

Ecological Impact

Depending on the child's age and developmental level, she may experience other features that coincide with ADHD. Other frequently occurring features and disorders include mood disturbances, poor self-esteem, low frustration thresholds, emotional outbursts, dysphoria, and rejection by peers. These children are also at increased risk for substance abuse, emotion-regulating difficulties, and learning disabilities (American Psychiatric Association 2000).

Poor interpersonal interactions, resentment, and antagonism often characterize these children's relationships with their parents and siblings. Parents with a child with ADHD often report high levels of parental stress. They often become frustrated with the child with ADHD, though successful interventions can ameliorate the negative emotions and interactions (American Psychiatric Association 2000).

Similarly, a child with ADHD can present challenges to classroom teachers, who must try to manage the child's behavior within a larger classroom context. Children with ADHD tend to per-

form less well in group situations. They demonstrate improved attention and behavior in positively reinforcing environments where there is close supervision, especially in one-on-one settings. Novel situations also benefit the ADHD child (American Psychiatric Association 2000).

Treatment

Childhood ADHD affects the individual child, her parents and siblings, peers, teachers, and other people with whom the child interacts. Multiple assessment methods are needed to assess the child's functioning in various domains of her life. This multimodal assessment method should produce recommendations and treatment techniques that improve the child's functioning overall, as well as in the particular arenas in which she struggles (Mash and Terdal 1997).

Stimulant medications are one form of treatment for ADHD. Medication is most applicable for children four years of age and older with moderate to severe forms of ADHD. Ritalin is one stimulant medication that has proven beneficial for some children with ADHD. Among the reported effects of stimulant medications are improved attention, decreased levels of impulsive behavior, less distractibility, and more on-task behavior. Approximately 75 percent of children over the age of five improve when taking stimulant medications (American Psychiatric Association 2000).

Stimulant medications are most successful when combined with other forms of treatment or intervention (Estrada and Pinsof 1995). Although it does not affect core symptoms, parent training is another form of intervention for families who have a child with ADHD. Parent training teaches parents more effective ways to interact with their child, and can help families develop and implement behavior-management programs. For families with an adolescent with ADHD, parent-adolescent interventions have proven helpful in improving communication and relationships (Mash and Terdal 1997).

Teachers and school psychologists also work to design classroom management programs that assist the child with ADHD. Among the classroom techniques that are helpful for this population of students are behavior-management programs, token reinforcements, positive reinforcements for

on-task behavior, and behavior contracts (Mash and Terdal 1997).

Lastly, self-control training programs have demonstrated an ability to help ADHD children improve their capacity to inhibit inappropriate behavior. These programs teach the children to describe and understand the problems they face, generate solutions, evaluate each potential solution, decide on one course of action, and then evaluate the results of their decision (Kendall and Praswell 1985).

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See also: Externalizing Disorders

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B

Bandura, Albert

Albert Bandura was born on December 4, 1925, in Mundare, a small hamlet in northern Alberta, Canada. He was the only son in the family, with five older sisters. His elementary and high school years were spent at the only school in town, which was woefully short both on resources and teachers. The school contained eight classrooms for grades 1–12, and two teachers handled the entire high school curriculum. “Students had to take charge of their own education,” Bandura recalled. “Very often we developed a better grasp of the subjects than the overworked teachers” (Stokes 1986a, 2). Although far off the usual path to academe, the school spawned an atypical class of graduates, most of whom went on to attend universities throughout the world. “The content of most textbooks is perishable,” observed Bandura, “but the tools of self-directedness serve one well over time” (Stokes 1986a, 2).

After high school graduation, Bandura took a summer job working in the Yukon, filling holes to protect the Alaska Highway against its continual sinking into the muskeg. There the young Bandura found himself surrounded by a motley crew of characters, most of whom were, in some manner or other, avoiding something—the authorities, creditors, alimony, the draft board, or probation officers. It was under these circumstances that Bandura began to develop his appreciation for the psychopathology of everyday life.

After that summer, Bandura began undergraduate studies at the University of British Columbia. His choice of psychology as a major and subse-

quent career came about by chance. The undeclared undergraduate commuted to the university in a carpool of engineering and premed students whose academic day began early in the morning. He noticed that an introductory psychology course would fill his schedule at an early time slot, so he took it. Bandura became fascinated by psychology and decided to major in it. In 1949, he graduated with the Bolocan Award in psychology.

When it came time to select a graduate school, Bandura asked his undergraduate adviser, “Where are the stone tablets of psychology?” Informed that the tablets were to be found at the University of Iowa, he departed for Iowa City, with his adviser’s parting counsel that the psychology department at Iowa was a distinguished but tough place. Indeed, Bandura found it an intellectually lively and challenging department. It was also a place at which fundamental problems in learning were vigorously investigated, competing theories were stringently tested, and the annual excursions to meeting of the Midwestern Psychological Association resembled missionary ventures. It was also a supportive department. As a Canadian, Bandura did not qualify for financial support. With the help of adviser Art Benton, Bandura supported himself with makeshift carpentry jobs (Bandura 1991).

One day during graduate school Bandura was playing golf with a friend when they found themselves playing behind an attractive twosome of women golfers. After a few months of courtship, Bandura married Virginia (Ginny) Varns, one of the golfers who was then on the teaching staff of the College of Nursing. Bandura received his M.A.

degree in 1951 and his Ph.D. in 1952 under the direction of Arthur Benton. He went on to a postdoctoral internship at the Wichita Guidance Center, while Ginny supervised the Obstetrics Hospital there. Ginny and Albert Bandura became parents to two daughters, Carol and Mary.

Bandura joined the faculty of the Department of Psychology at Stanford University in 1953, where he remained to pursue his career. From the start Bandura was delighted to join a first-rate university composed of gifted students and distinguished colleagues. Stanford also provided a supportive environment for professors eager to go where their curiosity and ingenuity might lead them. When Bandura arrived on campus, the renowned psychologist Robert Sears was chair of the department. Influenced by Sears's work on familial antecedents of social behavior and identificatory learning, Bandura's initial research centered on the role of social modeling in human motivation, thought, and action. In collaboration with Richard Walters, his first doctoral student, Bandura began to engage in field studies of social learning and aggression. Their joint efforts illustrated the critical role of modeling in human behavior and led to a program of research into the determinants and mechanisms of observational learning (part of which is known in the history of psychology as the Bobo Doll studies.). The program also led to Bandura's first book, *Adolescent Aggression* (1959), and to a subsequent book, *Aggression: A Social Learning Analysis* (1973).

Having gained a better sense of how people learn by observation, Bandura extended this work to abstract modeling of rule-governed behavior and to disinhibition through vicarious experience. Again with Richard Walters, in 1963 Bandura published his second book, *Social Learning and Personality Development*. In 1964, he became a full professor at Stanford, went on to chair the psychology department, and was elected Fellow of the American Psychological Association (APA). In 1974, Stanford awarded him an endowed chair and he became David Starr Jordan Professor of Social Science in Psychology. In 1977, Bandura published the ambitious *Social Learning Theory*, a book that dramatically altered the direction psychology was to take in the 1980s. The growth of interest in social learning and psychological modeling that took place during the last decade of the twentieth century owes much to Bandura's theoretical analyses of this phenomenon.

Bandura found Stanford to be a remarkable place for collaborative research, and during his tenure there, he collaborated in and developed joint projects with internationally known scholars such as Jack Barchas and Barr Taylor in psychiatry, Robert DeBusk in cardiology, and Halsted Holman in internal medicine. One of these projects studied the way people's perceptions of their own ability to control what they view as threats to themselves influence the release of neurotransmitters and stress-related hormones into the bloodstream. A major finding that resulted from these studies was that people can regulate their level of physiological activation through their belief in their own capabilities to do so, or their *self-efficacy* beliefs.

In the course of investigating the processes by which modeling alleviates phobic disorders in snake phobics, Bandura again found that changes in behavior and fear arousal were mediated largely through the self-beliefs of the phobic individuals, the beliefs they had in their own capabilities to alleviate their phobia. Bandura then launched a major program of research examining the influential role of self-referent thought in psychological functioning. Although he continued to explore and write on theoretical problems relating to myriad topics—including observational learning, self-regulation, aggression, psychotherapeutic change, and moral disengagement—from the late 1970s a major share of his attention was devoted to exploring the role that self-efficacy beliefs play in human functioning.

By the mid-1980s Bandura had developed a social cognitive theory of human functioning that accords a central role to cognitive, vicarious, self-regulatory and self-reflective processes in human adaptation and change. This *social cognitive theory* is rooted in a perspective known as agentic, one that views people as self-organizing, proactive, self-reflecting, and self-regulating, not just as reactive organisms shaped by environmental forces or driven by inner impulses. In Bandura's social cognitive theory, human functioning is seen as the product of a dynamic interplay among personal, behavioral, and environmental influences. In this model of triadic reciprocal causation, people are producers as well as products of their environment. His 1986 book, *Social Foundations of Thought and Action: A Social Cognitive Theory*, provided the conceptual framework and analyzed the large body of knowledge bearing on this theory.

Emphasizing that human lives are not lived in isolation—that people work together on shared beliefs about their capabilities and common aspirations to better their lives—Bandura expanded the conception of human agency to include collective agency. This conceptual extension makes the theory applicable to human adaptation and change in societies with a collectivist orientation as well as those with an individualist orientation. In his 1997 book, *Self-Efficacy: The Exercise of Control*, Bandura set forth the tenets of his theory of self-efficacy and its applications to fields as diverse as life-course development, education, health, psychopathology, athletics, business, and international affairs.

Bandura's contributions to psychology have been recognized in the many honors and awards he has received. He was elected to the presidency of the APA in 1974 and that of the Western Psychological Association in 1981, and he was appointed honorary president of the Canadian Psychological Association. Some of the awards he has received include the Distinguished Scientific Contributions Award of the APA, the Distinguished Scientist Award from Division 12 of the APA, the William James Award of the American Psychological Society for outstanding achievements in psychological science, the Distinguished Contribution Award from the International Society for Research in Aggression, a Guggenheim Fellowship, and the Distinguished Scientist Award of the Society of Behavioral Medicine. He has been elected to the American Academy of Arts and Sciences and to the Institute of Medicine of the National Academy of Sciences. He is the recipient of honorary degrees from universities that include the University of Rome, the University of Salamanca in Spain, Indiana University, the University of New Brunswick, Leiden University, and the Free University of Berlin. In August of 1999, he received the Thorndike Award for Distinguished Contributions of Psychology to Education from the APA.

Bandura has served psychology in numerous capacities and expended great energy to ensure that psychological knowledge is appropriately applied. A regular commuter to Washington, D.C., he has served on numerous advisory boards, research panels, federal agencies, and congressional committees. He has also served on committees and commissions of various psychological associations and on the editorial boards of some twenty

journals, often for extended tours of duty. To date he has authored seven books and edited two others—these have been translated into numerous languages, including Spanish, Italian, Portuguese, Polish, German, Russian, Japanese, and Korean—and he has authored over 230 articles and book chapters.

As the new century dawned, Bandura broadened the scope of his thinking to expound a social cognitive theory capable of encompassing the critical issues and problems of the new millennium. He has spoken and written on topics as diverse as escaping homelessness, how environmental sustainability can be aided by sociocognitive deceleration of population growth, and how self-efficacy can be cultivated for personal and organizational effectiveness. He has proposed a social cognitive view of mass communication, explained the self-regulatory mechanisms governing transgressive behavior, and shown how perceived social inefficacy help lead to childhood depression and substance abuse. Exploring the moral disengagement in the perpetration of inhumanities in a recent article, Bandura outlined the psychosocial tactics by which individuals and societies selectively disengage moral self-sanctions from inhumane conduct and called for “a civilized life,” in which humane standards are buttressed “by safeguards built into social systems that uphold compassionate behavior and renounce cruelty” (2000, 193).

Ultimately, Bandura holds the view that securing happiness transcends academic pursuits. The Banduras are fond of hiking in the majestic Sierras and the coastal ridges and headlands of California. “To place petty concerns into their cosmic perspective,” observed the professor, “nothing beats a few days communing with the muses on top of a mountain” (Pajares 2001). He favors Vogelsang Pass in the high Sierras. Each fall the Bandura family turns for pleasure to another of his passions, the San Francisco Opera. Volumes of guides to Bay Area restaurants grace his bookshelves alongside professional books. He rarely passes up an opportunity to sample the noble grape in the bucolic vineyards of the Napa and Sonoma valleys. It goes without saying, of course, that no joy can surpass that of playing with his grandchildren, identical twins Andy and Tim.

Frank Pajares

See also: Moral Development; Self-Efficacy; Social Cognitive Theory

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Behavior Settings

Factors in the environment are some of the most important things that influence a person's development. The person and the environment together form an overall system, an ecology, that controls and directs behavior. In this sense the environment is as important as the person in determining what the person will or will not do. Information about the environment can be very useful both in assessing a person's behavior and in generating strategies to help people change their behavior.

In current thought, the environment is often seen as divided into naturally occurring chunks called behavior settings. People live, behave, and

work in these behavior settings throughout their lives. Knowledge of behavior settings can be used to better understand a person's environment as well as to make improvements in that environment. Roger Barker was given a special scientific prize by the American Psychological Association for his discovery of these settings.

A behavior setting has two sets of characteristics or properties: Both are necessary in order for a behavior setting to be said to exist. (1) Each setting has its own (a) time, (b) place, and (c) object props (the things and the people in the environment). (2) Each setting also has its own attached standing pattern of behavior (these are the "rules and roles" of the setting, that is, the rules by which the setting operates, and the various roles people play while in the setting). For example, Mrs. Smith's English class (the behavior setting) met today from 1:03 P.M. until 1:47 P.M. (time) in room 63 (place) and contained desks, chairs, books, tablets, pencils, blackboards, and a plant, as well as Mrs. Smith and twenty-three students (the object props). The rules and roles of the setting (the attached standing pattern of behavior) were that Mrs. Smith collected homework assigned yesterday, the class discussed the homework, then read a new chapter and discussed it. Mrs. Smith then assigned homework for tomorrow. During these activities Mrs. Smith was in charge, but the students were significant participants. Mrs. Smith was expected to be knowledgeable, fair, and reasonable, and the students were expected to respond well and in an orderly manner.

In another example, Sunday morning worship service met from 11:04 A.M. until 12:06 P.M., in the church sanctuary, and there were pews, hymnals, a pulpit, a choir loft, an organ, and various decorations, as well as the minister, organist, music director, and the congregation. The rules and roles were such that that the music director led the congregation in singing, the choir sang a special number, the minister gave a sermon, and everyone prayed.

In a third example, the behavior setting of basketball game met Friday from 7:03 P.M. until 9:13 P.M. in the high school gymnasium, and there was a marked court, balls, baskets, uniforms, refreshments, and band instruments, as well as players, coaches, referees, musicians, and spectators. The rules and roles of this setting called for players to move the ball up and down the court according to a set of rules, while the referees monitored compliance with these rules, the coaches gave instruc-

tions to the players, and the spectators shouted encouragement, got refreshments, and listened to the band play.

The important thing about these units of the environment called behavior settings is that they are very powerful and exert strong influences on the behavior of people in them. In fact, for most people, most of the time, behavior settings are more influential on their behavior than their own personalities or other individual factors. This *does not* mean that things like personality fail to play a role in behavior; it means that the environment (as it acts in these behavior settings) is also a very powerful influence on behavior. Jacob Kounin and Paul Gump (1960) showed that if you look at people's behavior across settings you see a remarkable similarity among the behaviors of most of the people in each setting (e.g., worship service or Kroger grocery store), and you see substantial differences in the behavior of one person from setting to setting (e.g., from worship service to basketball game) despite the fact that each person has the same personality in both settings. Again, this does not mean that personality is inactive; it just means that the environment also plays a strong role in directing behavior. This is good news for people interested in organizing environments that will help people do things better and easier.

Settings are not permanent. They come into being, live for as long as they are useful to the people inhabiting them, and then go out of existence. They are often begun by some person or group, but most are not begun by the persons who inhabit them at any given time.

Settings have a number of internal controls built into them. For example, if a thing or a person is not following the rules, they may be corrected (e.g., the broken freezer case in the grocery store may be repaired, the loud students may be asked to quiet down). This process is called deviation countering. If the repair or correction does not work, the thing or person causing the disturbance may be removed from the setting (a process called vetoing). Both of these processes help keep the setting moving along well so that it will satisfy the needs of the persons who inhabit it.

Behavior settings are very sensitive to the developmental level of their inhabitants. Parents and teachers organize settings that are appropriate for children who do not yet have the skills to function fully on their own. A large computer company or-

ganizes settings requiring a good bit of independence and productivity on the part of women and men who work there. A nursing home organizes settings where elders can get help with various tasks of daily living. The internal control processes of each setting (deviation countering and vetoing) keep it going as long as it meets the needs of its inhabitants at some basic level. When a setting begins to meet those needs poorly (children are not learning, computers are not being made, elders are getting sick) the setting may be in danger, or, if the problems become too great, go out of existence. In that case, people enter other settings that do meet their needs better. But, in any case, a person is in *some* setting from birth to death.

Behavior settings are the environmental units where development takes place. As Phil Schoggen said, settings provide the opportunities and obligations for everyday human behavior (1989, 74). Barker and his coworkers found that, in a small town they studied called "Midwest," children were permitted to participate in more settings as they get older, that is, it paid to grow up in Midwest. If a child learned the rules and roles, she was permitted to do more things. Behavior settings are the ways in which cultures organize life for their members.

Roger Barker and Paul Gump also found that some settings seem to encourage people better than others (1964, 196). These settings had somewhat fewer people to carry out the tasks in them. They were "underinhabited," that is, there were not quite enough people to get all the jobs done. In these settings people worked harder, felt more commitment to the setting, got to do a greater variety of jobs, and held leadership positions more often. Each of these characteristics contribute to both a feeling of importance in the setting and to increased cognitive development. Smaller schools had more of these types of settings than larger schools, but it was not the size of the school as such that was important, it was the level of underinhabiting in most of its settings. Even large schools can create underinhabited settings where people feel more needed and perform better.

Behavior settings are very powerful tools for optimizing the development of people who inhabit them. The challenge is to create settings that work well. An examination of the principles of behavior settings can help people create behavior settings that work better, or fix ones that have problems. Allan Wicker (1987) and M. M. Scott (1980, 1990)

have written in more detail about how behavior settings work.

M. M. Scott

See also: Place Attachment across the Life Span

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Bereavement

The topic of bereavement is clearly part of human ecology; the death of a loved one constitutes one of the most challenging experiences that human beings encounter in our lives as individuals, and in the context of our families and communities. Within an ecological perspective, it becomes clear that a bereaved person's experience can only be understood by taking into consideration the unique set of personal, social, and environmental factors that surround the loss.

Different terms are used in reference to this experience. The term "bereavement" is related to the Latin word *rumpere* (to break, to carry or tear away), and refers to the objective status of a person who has suffered the loss of someone significant. "Grief" is derived from Latin *gravare* (to weigh down), and refers to the emotional experience of the psychological, behavioral, social, and physical reactions to one's loss. The word "mourning" is related to the Latin word *memor* (mindful). It refers to actions expressive of grief that are shaped by social and cultural practices and expectations associated with loss. Exploring the original meanings of these terms, Jeter commented that, like "the ancients, people today surviving the death of a

family member do feel robbed, weighted down, and are mindful of the past, knowing that life will never be the same" (1983 219). But how do individuals cope with such an experience? To address this question, it is helpful to examine the models and approaches that seem most influential in the current understanding of bereavement and grief.

Traditional Views

Freud's paper "Mourning and Melancholia" was the first major contribution to the field of bereavement. According to Freud, the psychological function of grief is to become detached from the loved one. The idea underlying this notion is that people have a limited amount of emotional energy at their disposal. Consequently, only by freeing up bound energy will the person be able to reinvest in new relationships and activities. Freud believed that the mourner has to work through the grief by carefully reviewing thoughts and memories of the deceased, a theory known as the grief work hypothesis. Freud maintained that although the process of working through causes intense distress, it is necessary in order to achieve detachment from the loved one.

The second theory that has been highly influential was advanced by John Bowlby. In his attachment model of grief, Bowlby (1980) integrated ideas from psychoanalysis and the literature on human development. Fundamental to his view is the similarity between the mourning behavior of adults and children's reaction to early separation from the mother. He considers grief to be a form of separation distress that triggers attachment behavior such as angry protest, crying, and searching for the lost person. The aim of these behaviors is maintenance of the attachment or reunion, rather than withdrawal. However, in the case of a permanent loss the biological function of assuring proximity with attachment figures becomes dysfunctional. Consequently, the bereaved person struggles between the opposing impulses of activated attachment behavior and the need to survive without the loved one. Bowlby believed that in order to deal with these opposing forces, the mourner must go through four stages of grief: initial numbness, disbelief, or shock; yearning or searching for the lost person, accompanied by anger and protest; despair and disorganization as the bereaved gives up the search, accompanied by feelings of depression and lethargy; and reorgani-



Family members at a gravesite (Michael Siluk)

zation or recovery as the loss is accepted, and an active life is resumed. Emphasizing the survival value of attachment behavior, Bowlby was the first to give a plausible explanation for responses such as searching for the lost person or anger in grief.

A number of other theorists have proposed that bereaved individuals go through certain stages in coming to terms with the loss. One such theory that has received a great deal of attention is Elisabeth Kubler-Ross's model, laid out in her well-known work, *On Death and Dying* (1969), which addresses people's reaction to their own impending death. Kubler-Ross claims that individuals go through stages of denial, anger, bargaining, depression, and ultimately acceptance. It was her model that popularized stage theories of bereavement. For the past several years, stage models like Kubler-Ross's have been taught in medical, nursing, and social work schools. These models also have appeared in articles in newspapers and magazines written for bereaved persons and their families.

As a result, stage models have strongly influenced the common understanding of grief in Western society. There is evidence that health care professionals tend to use the stages as a yardstick to assess the appropriateness of a person's grieving. A negative consequence of this tendency, however, is that people who do not follow the expected stages may be labeled as responding deviantly or pathologically. For example, a person who does not reach a state of resolution after a certain time may be accused of "wallowing in grief." In addition, legitimate feelings such as being angry because one's spouse died after receiving a wrong medication may be discounted as "just a stage." Such a rigid application of stage models has the potential of causing harm to bereaved persons. Therefore, many researchers have cautioned against taking any stage theory too literally. Because of the widespread use and acceptance of stage models, Camille Wortman and Roxanne Silver (1989) systematically examined all empirical studies that appeared to provide relevant data on the topic of coping with loss. What they found was that the available evidence did not support and in some cases even contradicted the stage approach. In contrast to the notion of an orderly path of universal stages, the reviewed evidence showed that the reaction to loss varies considerably from person to person, and that few people pass through stages in the expected fashion. The main weakness of the

stage models seems to be that they cannot account for the immense variability in grief response, and that they do not take into consideration outside influences that may shape the course of the grieving process.

Current Understanding of Grief

Most researchers in the late twentieth and early twenty-first centuries emphasize that grief should be considered a series of flexible phases instead of a set of discrete stages (see for example Rando 1993). Other authors have suggested that grief be seen as transition (Silverman 2000). This concept implies that the bereaved are not expected to return to the previous level of functioning, but rather to accommodate to life's changes. What kind of accommodations this transitional process requires depends most of all on who was lost. It is important to recognize that each individual may experience a unique set of losses. For example, a widow may have lost an intimate friend, a child-rearing partner, a protector, and a sexual partner. Bereaved parents may experience their child's death as the loss of a central part of themselves, and of all their wishes, hopes, and expectations for the child's future. Bereaved siblings may have lost a close person to confide in, and may also feel neglected because their parents are so absorbed by their own grief.

Furthermore, the circumstances that surround the death are likely to influence what the bereaved will initially have to deal with. For instance, people who experienced a sudden, traumatic loss such as the death of a spouse or child in a drunk driving accident must endure the shattering of their basic assumptions about safety in the world in addition to the loss itself. Following a sudden death, there may also be a struggle to comprehend what has happened. On the other hand, families that experience a death following a long illness may have to deal with memories of dreadful suffering, with exhaustion after an extensive period of caretaking, and with both a void and feelings of relief after that task is taken away.

Factors Mediating the Grief Response

In the past decade, many studies have focused on determining how factors such as the mode of death or the nature of the relationship to the deceased influence the grieving process. This research was motivated by the idea that if risk factors for a problematic course of the grieving

process were found, one would be able to determine that an individual with a certain set of circumstances will respond in a certain way. Factors that have been shown to most reliably be associated with adaptation to a major loss include suddenness of the loss, prior mental health problems, concomitant stressors such as ill health, and lack of social support (see Cook and Oltjenbruns 1998 for a more comprehensive review). However, there have been many inconsistencies across studies regarding the most important risk factors for problematic course of the grieving process.

It has been suggested that this inconclusiveness may be due to the interaction of different contextual factors. For example, a sudden death has often been shown to result in more problems for a bereaved individual than an anticipated death. However, the perception of suddenness appears to be related to the age of the deceased, in the sense that even the sudden death of an older person tends not to be as unexpected as the death of a younger person because it constitutes more of an on-time life event. Thus, to understand the role of risk or protective factors, it is important to look at the overall combination of contextual variables and at the ways in which they interact. While providing some valuable information, the attempt to identify risk factors also introduced a mechanical view of bereavement that seemed to take the focus away from what appears the core question at hand: What does a loss mean to bereaved individuals and their lives, and how is the loss dealt with in the context of the demands of each person's daily life?

Loss- and Restoration-Oriented Coping

Keeping in mind that a newly bereaved individual faces a life without the loved one, it becomes obvious that grief itself is only a part of what may be involved in coping with loss. One of the problems with grief models is that they suffer from an over-focus on grief, while aspects of restructuring life and the self to meet the demands of life's changes tend to be neglected. This seems due to the central role that Freud, and later other authors, gave to the concept of grief work. Margaret Stroebe and Henk Schut, following up on the idea that coping with loss requires more than confronting one's grief, suggested that grief work involves active efforts to structure memories and thoughts and to regain mastery over one's life. In this spirit, they advanced a dual-track model that involves two modes of

coping: loss-oriented and restoration-oriented coping (Stroebe and Schut 1999). Loss-oriented coping involves an effort to confront feelings of grief and loss, while restoration-oriented coping is an attempt to appease pain in some way, or distance oneself from one's grief in order to focus on the demands of daily life. This second approach may enable a person to deal with grief in smaller doses and at the same time create some space and save energy to attend to aspects of restructuring life. The idea is that usually both modes are needed and used at some point in the grieving process, and that a certain oscillation (and balance) between them is most likely to constitute an adaptive coping style.

Paradigm Shift: From Breaking Bonds to Continuing Bonds

Most of Western culture encourages rituals and traditions, such as regularly visiting the cemetery or observing anniversaries of people's deaths that keep the dead as a part of daily life. At the same time, the concepts of accepting a loss, putting it behind, and releasing the dead so that one can go on living are very prevalent. The theoretical basis of the second approach is Freud's notion that the major task to be accomplished in the grieving process is relinquishing the tie to the deceased in order to be able to reinvest in new relationships. However, in contrast to the notion of the necessity of breaking down the attachment, numerous studies offer evidence that a continuing attachment to the deceased is normal. Types of connections identified in different studies include talking to the deceased, incorporation of virtues of the deceased into one's own character, using the deceased as a role model, and turning to the deceased for guidance regarding a particular problem. Evidence suggests that in the majority of cases, such continuing bonds are perceived as comforting (see Klass, Silverman, and Nickman 1999, for a review). Thus over the past decade there has been a paradigm shift from the traditional view that insists on the necessity of disengagement, toward a position that postulates the need for a continuing connection.

Grief in the Family Context

Although it seems obvious that the family context plays an important role in the grieving process, research to date has primarily focused on investigating the individual (Shapiro 1994). This may par-

tially be due to the fact that including whole families in a study is more expensive, consuming more time and personnel. However, clinical experience and research evidence from the few available studies suggest that certain family dimensions play an important role in the functioning of bereaved families. Among these dimensions are family cohesion, mutual support, flexibility in role adjustment, parenting, empathy, communication, coping styles, as well as meanings and interpretations attached to families' experience. While the available evidence is not entirely consistent, there is some consensus in what most authors consider to be adaptive or maladaptive. Features that tend to be looked at as problematic are low cohesion, rigidity in role structure, blocked communication, an avoidant coping style, as well as lack of empathy, mutual support, and parenting skills.

Outlook

Taken together, the ways in which researchers think about bereavement seem to have changed in a number of crucial regards that reflect basic tenets of the ecological approach: A shift can be observed from the idea of a universal pattern of stages toward a recognition of immense variability and the importance of contextual influences; from the assumption of a necessity to break all ties to the deceased to a continuing bond orientation; and from a model that is marked by a unitary focus on grief toward a comprehensive approach that includes the challenges of dealing with daily life after the loss. This new way of thinking also acknowledges the need to take breaks from confronting one's grief. This last point seems to have particular relevance for bereaved families, because family members not only have to endure their own, but also each others' pain. In addition, the family life and routine need to be maintained. However, there is still much to be learned and understood about the ways in which individuals and families cope with a major loss, and those who suffer from a major loss need and deserve an open-minded attitude toward their plight.

Kathrin Börner

See also: Death: A Family Perspective; End-of-Life Decision Making; Freud, Sigmund

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Biodiversity and the Use of Natural Resources

The terms biodiversity, biological diversity, and ecological diversity refer to the diversity of organisms that occur in a specific area. Biodiversity sustains human beings and other organisms as a source of food, medicine, shelter, or by providing raw material for clothes, paper, and so many other materials that support human life. The decreasing of the biodiversity on Earth means that all organisms are negatively affected through the extinction of some species and scarcity of natural resources.

Biologists and ecologists have different forms of describing biological diversity, such as through the number of species in an area, or through an array of ecological indices that take into consideration the number of individuals from each species in an area. These indices are found in the ecological literature under the names of their creators, as for example the Simpson index and Shannon and Wiener index, among others. There are graphical forms of showing the biodiversity in an area, such as through the species-area curves. For information on the dynamics of biodiversity, see Michael Rosenzweig's 1995 book. The Convention of Biological Diversity, a treaty signed by more than 150 nations on June 1992 at the United Nations Conference on Environment and Development, held in Rio de Janeiro, Brazil, defines biodiversity as "the variability among living organisms from all sources including, *inter alia*, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems" (Gaston and Spicer 1998, 2).

There are some areas in the world that have higher biodiversity than other areas. These areas are often located in tropical countries, and they show a high level of endemic species, or of organisms with restricted occurrence in these sites. Tropical coral reefs and rain forests are examples of high-biodiversity areas. Rain forests are seen as centers of biodiversity, containing more than half the species of the entire world, but covering only 7 percent of the Earth's land surface (Wilson 1988, 8). These areas are considered *hot spots*, having high priority for conservation and often including local inhabitants who depend upon the use of natural resources. Hot spots have a high biodiversity and high chances of habitat loss along with risk of species extinction.

The Atlantic Forest in Brazil and the Amazonian Forest in South America are examples of hot spots. These tropical rain forests have inhabitants who manage their lives using local natural resources. Resources such as palms and trees are used to build houses and canoes (Figure 1). Other plants are used for food, medicine, and seasoning. Manioc, or cassava (*Manihot esculenta* Crantz—Euphorbiaceae), is the basic crop in the Atlantic Forest remnants and in the Amazon. Game and fish are the animal protein on which the local inhabitants depend for consumption.

Inhabitants of the Atlantic Forest and of the Amazon include Native Indians and rural people. *Caiçaras* in the southern part of the Atlantic Forest coast and *caboclos* in the Amazon are rural people who descend from the original inhabitants and from early Portuguese colonizers. Descriptions of those populations, of their environment, and of their use of natural resources are detailed in Alpina Begossi's 1998 article. *Caiçaras* and *caboclos* use a high diversity of plants collected in the environment or cultivated in swidden plots (*roças*). For example, 99 species of plants were mentioned for medicinal uses by 73 *caboclos* at the Negro River; 151 species were mentioned by 96 *caboclos* at the Araguaia river, and 185 species were mentioned as used in the medicine by 253 *caiçaras* who live on the mainland coast of the Atlantic Forest. The cultivation of cassava includes local management increasing cassava diversity: 88 varieties of *Manihot esculenta* were found among 33 families at the Negro river and 52 varieties were found among 33 families in the southern Atlantic coast in Brazil. Detailed data are provided by Begossi and her colleagues. (2000, 183, 189).

Fish and game are caught and consumed by *caiçaras* and *caboclos* in both Atlantic Forest and Amazon. Fish, in particular, is an important part of the diet of those populations. For example, at Búzios Island, Atlantic Forest coast, 68 percent of the animal protein from 1,241 meals comes from fish species; at the Negro River, information on 52 meals showed that 75 percent were fish (Begossi et al. 2000, 185). An example of the high diversity of fish and its uses in the Amazon is given by Renato Silvano and his colleagues (2001) for the Juruá River, located in the state of Acre, in Brazil.

Food taboos also occur with relation to fish and game among the *caiçaras* of the Atlantic Forest and the *caboclos* of the Amazon. These prohibitions may refer to a certain time of the year, or to a certain feature of the person, among other reasons. In Brazilian rain forests, food taboos are observed for many fish species and for other animals, as well. Ill persons or menstruating or puerperal women avoid eating these fish species, locally called *reimoso*. Many of these food taboos include carnivorous fish. For example, the fish locally called *surubim* (*Pseudoplatystoma fasciatum*), a piscivorous fish, is a very strong taboo among Amazonian *caboclos* of the rivers Araguaia, Negro, Juruá, and Tocantins. Other animals, including fish, avoided

as food because of taboos are animals used in local medicine. The lizard called *teiú* (*Tupinambis buzianos*, found also as *T. teguixin*) is strongly avoided as food by caiçaras of Búzios Island (Atlantic Forest coast), but its fat is used to cure snakebites, among other medicinal uses.

In order to obtain the natural resources they use, caiçaras of the Atlantic Forest and caboclos of the Amazon use a variety of gears. In the Atlantic Forest coast, a variety of hooks and nylon nets are used for fishing. In the Amazon, besides these techniques, there are harpoons and other gears, such as the *zagaia* (Figure 2) commonly used for fishing.

How can these hot spots be conserved? The high demand for conservation of these areas has stimulated the finding of new forms of management, taking into consideration the populations that have always lived in these areas. Comanagement, or the management of the local populations in association with governmental and nongovernmental agencies, has been an alternative. The importance of local rules or of customary laws that exist among local resource users, such as caiçaras of the Atlantic Forest and caboclos of the Amazon, has to be considered for comanagement to succeed. Local rules vary and may range from simple taboos to complex systems of setting boundaries in resource areas, such as fishing territories. Extractive reserves in Brazil are examples of such comanagement. The first legalized extractive reserve in Brazil is the Upper Juruá Extractive Reserve, legalized in 1990. In sum, effective maintenance of biodiversity would seem, then, to depend on an understanding of the whole context, human as well as natural, and an enlistment of the cooperation of those who are currently using the natural resources that need to be preserved.

Alpina Begossi

See also: Sustainable Development

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Birth

In first-time, European American middle-class mothers with uncomplicated, spontaneous-labor deliveries, gestation lasts approximately 274 days (Mittendorf et al. 1990). At that time, the mother's pituitary gland releases a hormone (oxytocin) that instigates contractions of the uterine muscle and expels the fetus from the uterus. "Labor" involves involuntary uterine contractions, beginning at the top of the muscle, that force the baby out the birth canal. Labor lasts 16 to 17 hours for firstborns. There are approximately 4,000,000 new births each year in the United States. On average, the newborn measures 51 cm (20 inches) and weighs 2700 to 4100 grams (6 to 9 pounds).

Various hazards must be negotiated during the birth process. The birth canal is narrow, and after birth most newborns look red and battered, with misshapen heads. More significant are dangers often associated with oxygen deprivation (anoxia) and anesthetic use during delivery. Fetuses may experience anoxia for many reasons: The umbilical cord (through which the mother supplies the baby with oxygen) may be pinched during a contraction; the baby's orientation in the birth canal may be compromising; the cord may be wrapped around the baby; the baby may be holding onto and squeezing the cord. A baby who is deprived of oxygen for even a short amount of time risks brain damage because brain cells require continuous oxygenation for survival and function.

The pain of childbirth prompts some women to make use of anesthesia at some point during the process of labor and delivery. Anesthesia use is controversial because maternal pain, fetal risk, and physician need are simultaneously at play. Differences between infants of anesthetized and nonanesthetized mothers are not large, and are most evident during the first few postpartum days (Rosenblith 1992). Problems associated with obstetric medication are also becoming less frequent because of the popularity of natural childbirth. Fi-



Birth in a hospital setting (Skjold Photographs)

nally, local anesthetics appear to be effective in reducing labor pain without adverse effects on the infants (Albaladejo, Bouaziz, and Benhamou 1998).

Babies are normally born in a vertex, or head-first, position, or presentation, but alternative presentations are transverse (hammock position) or breech (feet or buttocks first). Since birth in those positions can be dangerous for both mother and child, the attending physician may choose to use a surgical procedure called a cesarean section, in which an incision is made in the walls of the abdomen and uterus. Cesarean sections account for 20 to 25 percent of all births in the United States.

Birth is an event. With incredible suddenness, circulation and respiration are for the first time up to the child, and the newborn (unlike the fetus) is subject to hitherto unknown imbalances, deprivations, discomforts, and stimulus variety. But birth is also a process in continuing development. The child before and after birth does not usually deviate from the normal, genetically maturing schedule; central nervous system function and motor behavior are not significantly altered by birth, and physiological characteristics such as the infant's unique blood chemistry emerge slowly over the

entire course of gestation. Like the fetus, the newborn is also dependent on others: For example, newborn infants are unable even to maintain their own body temperature, lacking both the insulating material (subcutaneous fat) and the functional neural capacity.

Approximately 11 percent of infants are born too early, and 7 percent are born too small (Centers for Disease Control and Prevention 1999; National Center for Health Statistics 1995). An infant is considered preterm if born before 37 weeks gestational age, and low-birth-weight if born under 2,500 grams (about 5.5 pounds). Not surprisingly, gestational age and birth weight are highly correlated. The premature birth rate in the United States increased 17 percent between 1981 and 1995 (National Center for Health Statistics 1995) as a result of technological advances in neonatal care that promote the viability of very small infants (Bernbaum and Batshaw 1997). Today, over 90 percent of infants with birth weights under 2,500 grams, two-thirds of infants born between 750 and 1000 grams, and one-third of infants born between 500 and 750 grams survive.

Premature birth is a major cause of develop-

mental delay (Friedman and Sigman 1992; Hack, Klein, and Taylor 1995), and very preterm, very low-birth-weight infants are significantly more likely than are term infants to suffer lower IQs, and developmental and learning disabilities (Hack et al. 1995). Serious health problems are also more pronounced among very preterm (< 32 weeks gestational age) and very low birth weight (<1,500 grams at birth) babies. For example, respiratory distress syndrome, bronchopulmonary dysplasia (chronic lung disease), and intraventricular hemorrhage (bleeding into the ventricles) are associated with very preterm births (Verma 1995).

Babies are born preterm for a number of reasons (Friedman and Sigman 1992). Abnormalities in the mother's reproductive system may prevent bringing a pregnancy to term. Multiple births (e.g., twins) place excessive demands on the mother, and so many multiple births are preterm. The mother's (or fetus's) health may require the birth to be induced early to alleviate stress. The mother's reproductive system may be immature or may not have had sufficient time to recover from a previous pregnancy (young teen mothers are at greater risk of delivering preterm babies). Conditions that adversely affect general health—including poverty, malnutrition, inadequate medical care, and unhealthy life styles—are also associated with preterm delivery.

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See also: Low Birth Weight Infants; Prenatal Development and Care

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Breast Cancer among Latinas

Breast cancer is the most common form of cancer in the United States; excluding skin cancers, it is the second highest cause of cancer death in women. In 2002, an estimated 203,500 new cases of breast cancer will be diagnosed among women in the United States; approximately 40,000 women in the United States will die from the disease this year (American Cancer Society 2002). Breast cancer is the most common type of cancer diagnosed in Latinas (Trapido et al. 1995).

Although data reveal that Latinas have a lower incidence of breast cancer than non-Hispanic Whites (70 per 100,000 for Latinas vs. 112 per 100,000 for non-Hispanic Whites; National Cancer Institute 1996), the rate at which Latinas are diagnosed is growing quickly. In addition, the prevalence of the disease is bound to increase because of the population growth. In the next twenty years, it is estimated that there will be a population increase of over 5.6 million Latinos ages 45–64, and an estimated increase of approximately 3 million Latinos who are 65 and older (U.S. Bureau of the Census 2000). Given that women ages 50 and older are considered at higher risk for breast cancer, it is clear that we will see a large increase in the number of Latina women diagnosed with the disease.

More research is needed to understand the specific factors contributing to the increased incidence of breast cancer in Latina women. For example, as Latinas move from rural to urban areas, it is possible that they are exposed to higher levels of environmental toxins. In addition, as Latinas become more acculturated, they may bear children in later years or experience earlier menarche. These are just some factors that could contribute to being at greater risk for breast cancer, and fur-

ther investigation of these and other possible factors could shed light on possible interventions to slow down the increase in incidence rate in this burgeoning population.

The significance of the increase can be better understood by examining the realities of Latinas with breast cancer. Experts agree that the survival rate for Latinas is lower than for non-Hispanic Whites, in part because their cancers are detected at more advanced stages (Menck and Mills 2001; Mondiano et al. 1995). Recent studies also suggest that Latina women comprise a disproportionate share of young women with breast cancer, and that the type of cancer they exhibit may be more aggressive (Biffl et al. 2001).

In a recent report prepared by the Institute of Medicine called "The Unequal Burden of Cancer," data showed that of 888 articles published between 1985 and 1997 on National Institutes of Health-sponsored programs relative to cancer in minorities and the underserved, only 48 dealt with survivorship issues (Institute of Medicine 1999). It is clear that more research is needed to understand the mental health needs of Latina breast cancer survivors. Studies conducted with non-Hispanic White women show that breast cancer impacts many areas of a woman's life, including relationships with her spouse or partner, other family members, and friends; social functioning and sexual functioning; problems with fertility as a result of treatment; and financial issues and vocational status. Despite the complexity of the disease, most White women seem to have a successful adaptation to breast cancer. Such an adaptation is especially important for Latina women and families, where familial constellations are more interdependent (Massey, Zambrana, and Alonzo Bell 1995; Vega 1995).

Since the detection of breast cancer, because of familial configurations, will impact Latina families differently than non-Hispanic families, studies that can shed light on the nature of the impact, as well as programmatic interventions that might mitigate familial stress and increase coping skills, are warranted. Moreover, given the concentration of Latina families in urban communities, studies that examine the link between environmental toxins and breast cancer prevalence may shed light on the epidemiology of breast cancer among this burgeoning population.

Barriers to Early Screening in Latinas

There are barriers to cancer detection that many Latinas face, barriers that can result in late detection or suboptimal treatment: lack of access to healthcare, lack of transportation, limited knowledge about the disease, cultural health beliefs, high rates of poverty, low levels of formal education, and language barriers. All these barriers are influenced by the historical and environmental context in which Latinas live.

Lack of Access to Healthcare

Latinas, like other women without health insurance, are less likely to have a mammogram than women who have health insurance (Coughlin and Uhler 2002). Because Latinas tend to hold temporary, part-time employment, and these jobs don't offer health insurance, they tend to have lower rates of health insurance than non-Hispanic White women. Although Latinas and Latinos from various ancestries vary in their insurance coverage, data show that, overall, about 37 percent of the Latino(a) population lacks health insurance (Brown et al. 2000). Moreover, even Latinas who have health insurance find that they have difficulty scheduling mammograms for a time that is convenient. Appointments for mammograms are made during the day when women work. Since many women cannot afford to forgo the pay they earn, they stay at work rather than go to the doctor.

Lack of Transportation

Latinas, whose incomes are low, tend to rely on public transportation. The difficulty rises when there is no direct bus route to the doctor's office. Women cannot afford to travel for hours and leave their obligations unattended for a long period of time. In addition, there are times when the closest clinic does not have access to public transportation, which precludes attendance at that site altogether.

Knowledge about the Disease and Screening Options

Women who understand the need to obtain early screenings will be more likely to obtain them when they are made available. Increasingly, more programs are being developed to inform Latina women about the importance of early detection of breast cancer, its signs and symptoms, risk factors, treatment, and early detection strategies. Re-

searchers have found that women who have attended educational interventions and who have doctors who refer them for mammograms obtain screenings at higher rates (Valdez et al. 2001). Also, Latinas with higher levels of acculturation are more likely to perform breast self-exams correctly than women with lower levels of acculturation (Pera-gallo, Fox, and Alba 2000). Further, women with higher levels of acculturation are likely to gain greater exposure to health promotion messages disseminated through the English-language media and to hold jobs that provide health insurance.

Cultural Health Beliefs

Certain health beliefs act as barriers to early detection. For example, research has shown that women of Mexican descent perceive no need to go to the doctor when they are feeling healthy (Borrayo and Jenkins 2001). Women of Puerto Rican ancestry have expressed similar views, and they have also expressed the belief that breast cancer is painful (Sánchez-Ayéndez et al. 1996). Women who hold these health beliefs are less likely to obtain breast cancer screenings if they are pain-free, yet women could be developing breast cancer without exhibiting painful symptoms.

On the other hand, many Latinas do understand the importance of obtaining screenings in the absence of symptoms, and they are aware that there is a high probability of survival if the cancer is detected early. Yet there are also women who, based on cultural health beliefs, feel that they may have brought the cancer on themselves, or who, based on religious beliefs, feel that if they are diagnosed with cancer, it is up to God to decide their fate. This view that fate is preordained may be influenced not only by deeply held religious beliefs, but also by the reality of Latinas who are diagnosed with breast cancer. For example, young Latinas with breast cancer appear to have a more aggressive type of the disease, as mentioned previously (Biffl et al. 2001). Moreover, Latinas tend to die faster due to late detection (Menck and Mills 2001; Mondiano et al. 1995). Women's exposure to counterparts who suffer more and have less successful outcomes is, in all likelihood, influencing the belief that little can be done to surmount such a powerful disease.

High Rates of Poverty

Research has shown that Latinas whose incomes are low are less likely to obtain screenings than

women with higher incomes (Coughlin and Uhler 2002). These women are less likely to have regular medical care, transportation, and child care, all of which are barriers to early detection.

Low Levels of Formal Education

Women with higher levels of formal education are more likely to obtain regular screenings than women whose levels of formal education are lower (Coughlin and Uhler 2002). Women with low levels of formal education also tend to earn less, and they may have incomes near or even below the poverty level.

Language Barriers

Women who feel most comfortable communicating in Spanish may not receive important messages about breast cancer screening that are broadcast through the English media. Moreover, in the absence of an interpreter, these women may feel reluctant to access a healthcare system that feels foreign and complicated to them. When important messages are conveyed in Spanish, and Spanish-speaking personnel are available at the doctors' offices, Latinas who prefer to speak in Spanish access the healthcare system more readily.

Successful Programs That Promote Early Detection

It is important to keep in mind that there is great diversity among Latina women. Women may hold different health beliefs, they may have immigrated to the United States for economic or political reasons, or they may have been born in the United States of U.S.-born parents, and they may live in different geographic locations with various barriers to healthcare access. Given this great diversity, programs designed to take into account the unique needs of a specific group of Latinas have been the most successful.

The use of *promotoras de salud* (peer health educators) is an effective intervention that builds on cultural models. Trusted women in the community, often women who are viewed as leaders, are trained to inform other women in their communities about the importance of early screenings for breast cancer. The promotoras' standing in the community and knowledge of the community allow them to influence women's decision making. In this way, the informal networks characteristic of communities are used optimally to bring about

change in women's knowledge, attitudes, and behaviors (Buki 1999). Still, more research is needed to determine whom Latinas view as trusted disseminators of health information about breast cancer outside the organized health system, who within the family structure or community are the "guardians" of family and individual health specifically as it relates to breast cancer screening. The goal of this research effort should be to identify those family members or community individuals, so that breast cancer screening information can be filtered through them to the women most in need of cancer screening.

Impacts of Late Detection

Given the challenges that face Latinas, late detection will, and often does, result in serious and long-term health consequences for Latinas and their families. Consequences include the need for more aggressive treatment with fewer treatment options, grief and loss for families and children, and economic strains on families, especially for those households in which the woman with the diagnosis is the head of household, or those in which both parents are employed. Moreover, economic costs of medical intervention and loss of income due to treatment or death strain family resources.

In addition, later detection is likely to cause additional problems for Latinas and their families. In an open family system (one in which intergenerational caretaking patterns and interdependence exist), later detection and its impacts on the woman's ability to function within the family system may result in some changes in familial caretaking roles; what these changes are, the impact that a diagnosis of breast cancer has on family functioning, has not been scientifically documented. Moreover, the influence of the interaction with external entities (e.g., medical assistance) on the family system's functioning and stability is unknown. Thus, research that examines these issues is needed and to support such research, greater public awareness that more can be done to help this population deal with a growing problem, is warranted.

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See also: Acculturation; Cancer: Prevention and Screening; Hispanic Immigrant Experience

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Breast-Feeding and Lactation

Virtually all professional health associations recognize that breast-feeding is the best way to feed an infant (e.g., American Academy of Pediatrics 1997; U.S. Department of Health and Human Services 2000), and rates of breast-feeding are increasing. Benefits of breast-feeding include short- and long-term benefits for infants' and mothers' health as well as convenience and cost savings. Milk is produced naturally in the mother's breasts, and the quantity of milk increases in response to the infant's sucking. The likelihood of breast-feeding is influenced by family, community, and medical factors.

Until the 1940s most infants were breast-fed, and there was a vast reservoir of information about breast-feeding among families, communities, and medical professionals. Some of that knowledge was lost with very low rates of breast-feeding in the 1970s, but breast-feeding rates are increasing in the United States and other developed countries. The current recommendation of the American Academy of Pediatrics (1997) is that infants should be exclusively breast-fed for the first six months and that breast-feeding continue for at least twelve months. The goals of Healthy People 2010 (U.S. Department of Health and Human Services 2000) is that at least 75 percent of infants be breast-fed as they leave the hospital, at least 50 percent at six months, and at least 25 percent at twelve months. The current U.S. rates (1998) of breast-feeding are 64 percent on leaving

the hospital, 29 percent at six months, and 16 percent at twelve months.

Health benefits to infants that accrue from breast-feeding are numerous. Breast milk, together with the colostrum that is secreted in the first few days after giving birth, activates and directs the infant's immune system (Hanson 1997). This protects infants from gastroenteritis (infectious diarrhea), lower respiratory illness, otitis media (ear infections), bacterial meningitis, urinary tract infections, and sudden infant death syndrome (SIDS) (American Academy of Pediatrics 1997; U.S. Department of Health and Human Services 2000). Breast-feeding also offers longer-term protection from obesity, diabetes, Crohn's disease, leukemia, asthma, and allergic disease. These findings suggest that there are health risks associated with formula feeding even in developed countries.

There are also developmental benefits for infants that persist beyond breast-feeding. Breast-fed infants have significant advantages on the achievement of developmental milestones, IQ scores, standardized achievement test scores, and high school competency exams (Anderson 1999; Horwood and Fergusson 1998). These cognitive and developmental benefits are present even when the study controls for background differences among those who choose to breast-feed their infants.

Breast-feeding is very convenient for the mother: no preparation, no cleaning, no spoilage worries. The milk is always ready, day or night. The economic benefits include an approximately \$1,000 savings per child from not having to buy infant formula. In addition, about \$300 to \$500 more is spent per child on health care for formula-fed infants in the first year due to increases in otitis media, lower respiratory tract illness, and gastrointestinal illness (Ball and Wright 1999). A paper from the United States Department of Agriculture (USDA) indicated that the United States could save about \$3.6 billion per year if the breast-feeding rates increased to the Healthy People 2010 goals (Weimer 2001).

Although the infant is born with several reflexes that facilitate breast-feeding, both the mother and the infant need to learn how to breast-feed. The mother needs to learn when her infant is hungry, how to comfortably position herself and her infant, and how to help her infant latch on to the breast. The infant needs to learn how to effectively latch on and suck. For the in-

fant, this learning is facilitated by early access to the breast (within one to two hours after birth), skin-to-skin contact on the mother's chest, and a relaxed atmosphere in which the infant is allowed to set the pace. Breast-feeding is most successful with the mother's and baby's torsos lined up facing each other and with the dark area around the nipple (areola) fully in the infant's mouth. With stimulation from the infant's sucking, oxytocin released from the mother's brain stimulates the milk ejection reflex (MER), or "let-down," in her breasts. This reflex releases the milk from its storage in the breast. With the MER, the mother's breasts may briefly feel tingly or prickly, and milk may drip out. The MER is promoted by relaxation and inhibited when the mother feels tense or uncomfortable.

During the second half of pregnancy, the mother's breasts produce colostrum in small quantities, and colostrum protects the infant from infection with immunoglobulins, white blood cells, and growth factors (Lawrence and Lawrence 1999). Immediately after birth, hormonal changes lead to the transition of colostrum into "mature" milk, a transition that involves changes in the composition of the milk as well as an increase in its volume. Mature milk has more sugar and fat compared to colostrum. By the third to the fifth day after birth, the breasts make about 500 ml of milk each day (compared to 50–100 ml/day of colostrum). This sudden change in volume is referred to as the milk "coming in." Some mothers will experience a day of engorgement at this time. This uncomfortable fullness of the breasts happens when there is more milk produced than the infant can drink. Milk is produced on a supply-and-demand basis. As the infant nurses more, this stimulates the production of more milk, and thus the mother's body is able to keep up with the nutritional needs of her growing child. Weight gain and elimination patterns (urination and defecation) easily allow the mother to determine if her infant is getting enough to eat.

The benefits of nursing, or breast-feeding, her infant that accrue to the mother include the feelings of relaxation and nurturing that come from the hormones released with breast-feeding, oxytocin and prolactin (Gotsch and Torgus 1997). Short-term benefits for the mother also include postpartum weight loss and reduced anemia. Normal milk production consumes about 500 calories

each day for the mother. Breast-feeding protects against anemia primarily by delaying the return of menses. Long-term benefits to women who breast-feed their infants include reduced likelihood of breast cancer, ovarian cancer, and osteoporosis.

From an ecological perspective, we can consider breast-feeding in the context of the family, community, and social institutions. Support from the infant's father and grandmothers can make it more likely that a woman will successfully breast-feed her infant. Communities may provide other supports. For example, the international La Leche League (La Leche League International 1997) offers mother-to-mother support to breast-feeding women through group meetings, individual consultation, and printed information. Some communities offer peer counselor programs, in which women receive training to help other women with breast-feeding. Professional lactation consultants are certified by the International Board of Certified Lactation Examiners to provide accurate information to solve breast-feeding problems. In addition to community supports such as these, the American Academy of Pediatrics has asked its pediatricians to promote and support breast-feeding and to become knowledgeable about lactation and to provide accurate and helpful guidance with the practical aspects of breast-feeding (American Academy of Pediatrics 1997). Most breast-feeding problems have a relatively simple solution and are short-lived if the mother can get proper help.

Only a handful of conditions preclude breast-feeding (American Academy of Pediatrics 1997). Mothers with HIV and untreated active TB should not breast-feed, nor should mothers who are using illegal drugs. Although smoking and alcohol consumption are not encouraged, moderate usage of cigarettes or alcohol does not exclude breast-feeding. Dietary restrictions are usually not necessary. Even a mother with a poor diet can produce healthy milk. Only a very few maternal medications are not safe during breast-feeding. Some mothers who have had breast reduction surgery will be unable to breast-feed. There are rare anatomical causes leading to an inability to breast-feed (such as lack of glandular development). This leaves over 95 percent of mothers physiologically able to support their infant's growth and development through breast-feeding.

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See also: Birth; Osteoporosis; Public Policy and Early Childhood; UNICEF; Women, Infants and Children (WIC), Special Supplemental Nutrition Program

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Bronfenbrenner, Urie

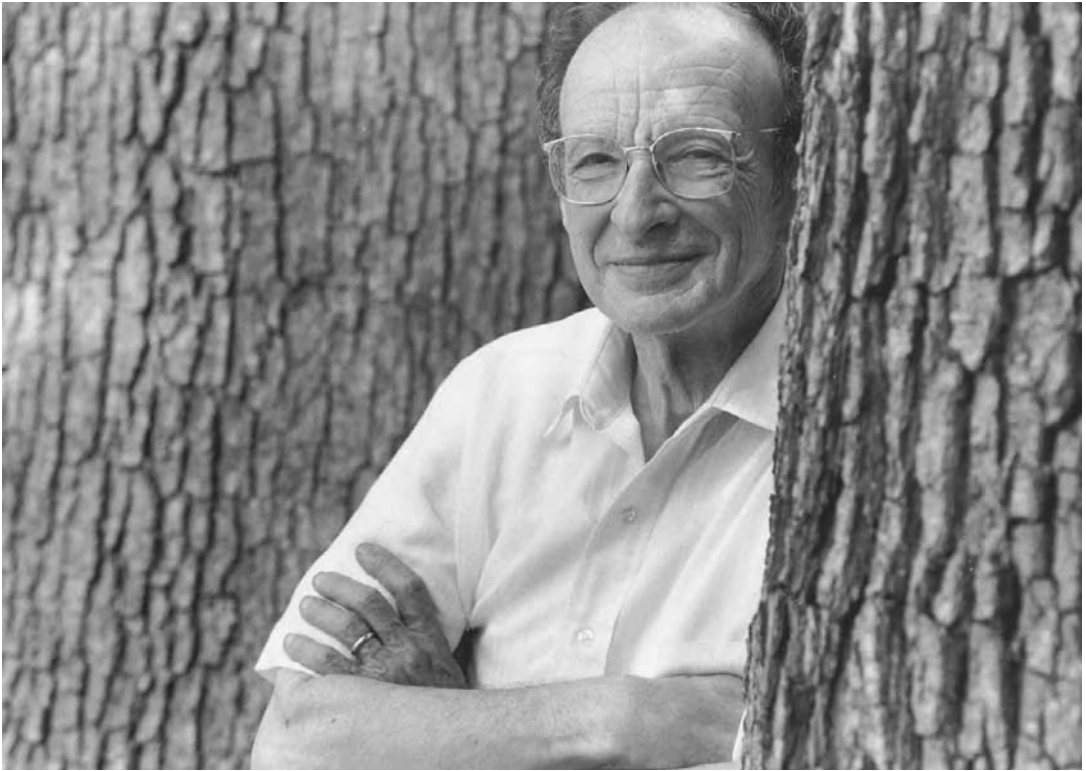
Urie Bronfenbrenner has had a profound, enduring, and generative influence on our understanding of human development. As a teacher, he has influenced generations of Cornell students. Many of his students have gone on to earn distinction as scholars in their own right. His introductory course in human development was so popular that only Cornell's concert hall could hold all the students, and some years they spilled over into a second lecture hall connected via closed-circuit TV. Among the many thousands of students who took that course, some who became social scientists credit him with teaching them how to design research when they were freshmen. His teaching extends to detailed critiques on work in progress, which he generously provides to colleagues and young scholars on campus and around the world.

Born in Moscow in 1917 and emigrating to the United States at the age of 6, Bronfenbrenner has retained his fluent command of Russian throughout his long career as a developmental scientist. In the course of his readings he became aware of the work being done by leading faculty at Moscow

University, all of whom had been colleagues and disciples of Lev Vygotsky—then no longer living, but now generally recognized as one of the outstanding theorists and designers of social programs that were successful not only in halting dysfunctional development, but also in producing increased competence over the subsequent life course. Bronfenbrenner felt that the Russian scientific literature would also be of interest to developmental scientists in the United States and began to refer to it in his publications. But at the time, not knowing the realities of the programs underway, he did so only briefly.

Then in 1954, Bronfenbrenner had an opportunity to speak with some of these scholars at an international meeting in Montreal, and discovered that quite a few of them were familiar with his work and were interested in establishing a program of exchange visits between Cornell University and Moscow University. Shortly thereafter, the exchange began with several visits by Bronfenbrenner, which laid the groundwork for his book, *Two Worlds of Childhood* (1970). These were soon followed with return visits to Cornell by Professor Alexander Vladimirovich Zaporozhits, who had primary responsibility at Moscow University for the design, direction, and scientific assessment of programs that had as their stated goal "the constructive development of children and youth," and that included both families and schools as partners. As the program continued, other faculty and staff from both universities participated in the exchange, as did, eventually, faculty and staff from other universities as well as from government agencies in both nations. The exchanges continued until the mid-1980s, when the joint research reached completion and many of those involved had retired or were no longer living.

In addition to designing creative studies himself, Bronfenbrenner has continually discovered gems hiding in data collected by others. The most impressive of his reinterpretations would today be called a meta-analysis of research on parental practices. Taking a set of findings that others had found inconclusive at best, Bronfenbrenner (1958) separated subjects by the nature of the father's employment—manual and non-manual (admittedly crude but the best that the data allowed). He also distinguished studies according to the age of the children. Finally, he ordered the published studies by the dates when the data had been collected.



Urie Bronfenbrenner (Cornell University)

This more differentiated analysis revealed a clear historical trend toward greater permissiveness, with middle-class parents leading the way. On a much smaller scale, but similarly impressive as an intellectual feat, was the analysis through which Bronfenbrenner extracted from a study of low-birth-weight infants (Drillien 1964) the complex and theoretically important finding that the impact of mothers' responsiveness (on an index of behavior problems at age 4) varied with family social class and with the severity of low birth weight. In brief, maternal responsiveness reduces problem behavior; it has its largest impact on children in the lowest social class and, within that class, on those of normal birth weight (Bronfenbrenner and Morris 1998).

The achievement for which he is best known is systematizing and communicating the way of thinking that led to these insightful interpretations. Known by the title of his 1979 book, *The Ecology of Human Development*, this way of thinking has two main axes. One, to which the book is primarily devoted, applies to the environment or the contexts in which development occurs. Bron-

fenbrenner conceives of that environment as a hierarchy of four systems, nested one inside the other like Russian dolls.

The *microsystem* is the immediate setting that includes the developing person, for example the home or classroom, and what happens in that setting. Key aspects of a child's microsystem are the activities that the child engages in over time, the relationships she has with significant others, and the roles the child plays in that setting. Influenced by the Soviet psychologist Vygotsky, Bronfenbrenner is especially interested in the joint activities that occur between adults and children that contribute to the growing competence of children. However, drawing upon Freud, Bronfenbrenner emphasizes that these joint activities are especially powerful influences on development if the adult and child share a strong mutual emotional attachment.

A *mesosystem* is the system of microsystems in which the child spends time, and the links among them. For example, children spend time at home and school, and each of these microsystems is important for their development. However, the rela-

tions between home and school are also important for their development. What kind of communication occurs between home and school? Do parents and teachers respect each other and work together on behalf of the children? Are their goals and practices compatible? These are questions about the mesosystem.

The third level, the *exosystem*, refers to settings that do not ordinarily include the child but can, nonetheless, influence his development. A good example is the parent's workplace. Circumstances at work may affect the time and energy that parents have to spend with children or the parents' moods and overall psychological well-being. Another example is a school board meeting. Although the child may never attend a school board meeting, what happens at the meeting may have a significant impact on the child's experiences in school.

The *macrosystem* includes the culture, subculture, and social and economic system in which the other settings are embedded. It includes cultural beliefs and values, public policies and program, and social norms that influence how institutions and individuals conduct their day-to-day business. Social class, race, and ethnicity are part of the macrosystem, but Bronfenbrenner warns that simply identifying people and groups by their "social address" is inadequate. We must understand how such influence affects development.

Bronfenbrenner's conception of the environment has made researchers more cognizant of both proximal (e.g., parent-child relationships) and distal (e.g., the parents' workplace, government policies) influences on children's development, of interactive as opposed to unidirectional influences, and of the importance of connections within and among systems. The propositions and hypotheses he set out to explicate this conception continue to stimulate research and shape interpretations of data almost a quarter of a century later.

However, Bronfenbrenner became increasingly dissatisfied with that research because it has been more about contexts than about development. Therefore he set out in a series of essays to restore the centrality of the developing person. The resulting bioecological model incorporates process, person, context, and time (PPCT).

Proximal *processes* occur at the microsystem level, where people interact face-to-face. They also include "solo activities with objects and symbols"

(Bronfenbrenner and Morris 1998, 1013). "Proximal processes are posited as the primary engines of development" (p. 996).

The characteristics of the *persons* who engage in proximal processes matter. For example, when a child and an adult interact, the characteristics of both affect the developmental process: Some adults are more nurturing than others; some children are more curious and more open to new experiences than others. Some person characteristics are genetically endowed; others result from the interaction of this endowment with experience.

Environmental *contexts* (at all four nested levels) vary in the opportunities and supports they afford for development. They are not immutable; the developing person selects and shapes contexts as well as being influenced by them.

By definition, development occurs over *time*. It is also cumulative; those whose development has been fostered at one time are better able to take advantage of future development-enhancing opportunities. Bronfenbrenner stresses that enduring social relationships are most likely to foster development. Time also refers to the historical period in which a person develops, which affords some kinds of developmental opportunities more than others.

Some of the key ideas emerging from the bioecological model are succinctly expressed in the following propositions (Bronfenbrenner 2001, 6965).

Proposition II. Over the life course, human development takes place through processes of progressively more complex reciprocal interaction between an active evolving biopsychological human organism and the persons, objects, and symbols in its immediate external environment. To be effective, the interaction must occur on a fairly regular basis over extended periods of time. Such enduring forms of interaction in the immediate environment are referred to as proximal processes.

Proposition III. The form, power, content, and direction of the proximal processes producing development vary systematically as a joint function of the characteristics of the developing person (including genetic inheritance); the environment—both immediate and remote—in which the processes are taking place; the nature of the developmental outcomes under consideration; and the continuities and changes occurring in the environment over time, through the life course, and during the historical period in which the person has lived.

One of the many provocative propositions and hypotheses that flow from this framework will illustrate its value. Acknowledging that development is not always positive, Bronfenbrenner notes that “the effects of proximal processes vary systematically depending on the developmental outcome,” (Bronfenbrenner 2000, 132) and distinguishes outcomes that enhance competence from those leading to dysfunction. He hypothesizes that “The greater developmental impact of proximal processes on children growing up in disadvantaged or disorganized environments is to be expected mainly for outcomes reflecting developmental dysfunction. By contrast, for outcomes reflecting developmental competence, proximal processes are posited as likely to have greater impact in more advantaged and stable environments” (Bronfenbrenner 2000, 132). In other words, proximal processes can be expected to have their strongest impact on negative outcomes for disadvantaged children and youth, but on positive outcomes for the advantaged.

This hypothesis is illustrated with yet another imaginative reanalysis, this time with data collected by Small and Luster (1990) relating parental monitoring to school performance (GPA) in three family forms: two-parent, single mother, and mother with stepfather, and separately for boys and girls. The effect of parental monitoring (a proximal process) was strongest in families with two biological parents when the mother had some education beyond high school. Bronfenbrenner also found that parental monitoring had a stronger effect on the achievement of girls than boys. This was true for all three family types, but strongest for girls whose mothers had more than a high school education (Bronfenbrenner and Morris 1998, 1003–1005). Consistent with his hypothesis, for a positive outcome (GPA) the effect of the proximal process is strongest in the most advantaged families, whereas in the Drillien (1964) study, the negative outcome (problem behavior) was most strongly affected by a proximal process (maternal responsiveness) in the least advantaged families—but for the children of normal birth weight. In other words, maternal responsiveness did not help GPA much in the least advantaged families, but it could lessen problem behavior significantly, at least for children of normal birth weight.

Throughout his career, Bronfenbrenner has challenged researchers to study human beings in

the settings where they live and grow, rather than relying largely on laboratory experiments. He coined the term “ecological validity,” using it to mean “the extent to which the environment experienced by the subjects in a scientific investigation has the properties it is supposed or assumed to have by the investigator” (Bronfenbrenner 1979, 29). He also champions “developmental science in the discovery mode,” implicitly rejecting the conventional notion that only “research in the verification mode” is rigorous (Bronfenbrenner and Morris 1998, 999–1001).

Urging researchers to look beyond the laboratory manifests Bronfenbrenner’s commitment to improving the lives of people and families. For him, the purpose of understanding human development is to promote human development. He has pursued this purpose directly as an adviser to policy makers. He was one of the founders of Head Start and has influenced other legislation through published work and extensive testimony and consultation. He has also welcomed opportunities to speak and write for educators, human service professionals, parents, and the public. His teaching ability enables him to communicate effectively with people who are not scholars, but also without patronizing. Rather than just simplifying, his approach is to learn about his audience first, then to relate his message to their concerns, and on that basis to challenge them with complex ideas.

The message Bronfenbrenner has delivered loudest and longest is a warning that chaotic forces in the macrosystem threaten the capacity of American families “to make human beings human.” In *The State of Americans: This Generation and the Next* (1996), he and his colleagues amass data to show that, relative to other developed nations, youth in the United States are more likely to be victims or perpetrators of homicide, become teenage parents, and eventually spend time in prison. Children in the United States are more likely than children in other developed countries to live in poverty and in single-parent households. He has consistently maintained that in order to develop optimally, children need to engage in progressively more complex activities on a regular basis for an extended period of time with someone who is committed to the child’s well-being and with whom the child develops a mutual emotional attachment. As he memorably synthesized the research in a congressional hearing and elsewhere,

“Somebody has to be crazy about the kid.” He has also pointed out that the primary caregiver and the child are more likely to engage in such activities and develop these emotional attachments if another adult provides support and encouragement for the primary caregiver, and also shares in childcare and household tasks. Although this support person is typically the father, single parents may also receive support from another adult in the home, or key members of the social network outside the home, such as relatives, neighbors, or friends.

Bronfenbrenner attributes the origins of his ecological perspective to his personal history. Being born in Russia but brought up in the United States, he has always had the dual perspective of the immigrant. In the Russian cultural tradition, science and the arts are not so separate as in the West. His mother nurtured his love of music and literature, and Russian literature has always influenced his thinking about people in society. He learned about ecology in the natural world from his father, a physician, who, after arriving in the United States, was employed at Letchworth Village, a state institution for developmentally delayed individuals in downstate New York. In long walks around the grounds of the institution his father, who also had a degree in zoology, would ask why the same plant looked so different in two different locations and then point to such factors as moisture, shade, wind, and soil type to illustrate the complex interdependencies between an organism and its physical environment. Living on the institution’s grounds as a boy, the young Urie had daily contact with clients who had been labeled feeble-minded, but who nonetheless made valued contributions to their small community. He noticed that many became markedly more competent when given both the opportunity to contribute and the support they needed to do so.

He was also influenced by the boys in the Pittsburgh neighborhood where he lived briefly upon arriving in the United States. His multiracial, multiethnic gang taught him how to “play fair,” especially in baseball, a lesson he came to see as fundamental to being American. They taught him to speak English in the process, which made him the family’s translator of both the language and the culture. In addition to reinforcing his dual perspective, this experience led him to view the peer group as a complement to the family in the social-

ization of children, a view that motivated some of his earliest research and led him to reject the assumption, implicit in much research, that the family operates in isolation. Robert Cairns and Beverly Cairns (1995) saw in his thesis research, published in the early 1940s, part of the theoretical and methodological foundation for contemporary developmental science. These articles also foreshadow his lifelong advocacy of closer correspondence between theory and design.

Bronfenbrenner received his B.A. in 1938 from Cornell University, with majors in psychology and music. He then received an M.A. from Harvard University and a Ph.D. in psychology from the University of Michigan in 1942, one day before being inducted into military service. Bronfenbrenner was assigned to the Office of Strategic Services, where he participated in developing methods to assess the capability of potential spies. His colleagues included Theodore Newcomb, Edward Tolman, Kurt Lewin, and Henry Murray. Lengthy after-hours discussions with these luminaries extended his education. He especially enjoyed talking to (and singing with) Lewin, whose formulation that behavior is a function of the interaction between characteristics of the person and the environment strongly influenced Bronfenbrenner’s conception of the ecology of human development.

At the end of World War II, Bronfenbrenner took a position as assistant professor of psychology at the University of Michigan, but was soon lured to Cornell University in 1948, with a joint appointment in Psychology, in the College of Arts and Sciences; and in Child Development and Family Relationships, in the College of Home Economics. Although colleagues warned him to keep his distance from the lower-status college, he was drawn to the department, where people worked directly with children and families and where strong women faculty members invited him to learn from and contribute to their extension activities around the state. He maintained his primary identification with that department throughout his career and is now the Jacob Gould Sherman Professor of Human Development and of Psychology, emeritus. Cornell has honored him by establishing the Bronfenbrenner Life Course Center. He has received numerous other honors, including honorary degrees from universities around the world. Perhaps most fittingly, the American Psychological Association gave him its first Award for

Lifetime Contribution to Developmental Psychology in the Service of Science and Society in 1996, and named the award for him.

Stephen F. Hamilton

Tom Luster

See also: Ceci, Stephen J.; Ecodevelopmental Theory; Vygotsky, Lev

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Bubolz, Margaret M.

Margaret M. Bubolz is one of the foremost contemporary thinkers and theorists in family-centered human ecology. A prolific and long-term contributor to theory development in human ecology, Bubolz distinguished herself as a collaborative researcher, writer, and educator in what may be called the Michigan State University (MSU) school of human ecological thought. Working with other faculty and graduate students in the College of Human Ecology, Bubolz was and remains a leader in development of this school of thought, which places special emphasis on the family ecosystem, that is, interdependent family members as bio-physical and social individuals and the family as a social group in interaction with their natural physical-biological, social-cultural, and human-built environments. Bubolz has made scholarly contributions to human ecology as a field of study primarily in the arena of conceptualization and theory development to provide the foundation for

professional practice in home economics, family and community services, family resource management, and higher education.

Bubolz was born Margaret Jacobson in 1925 near the small town of New York Mills, Minnesota, to Finnish-American parents. Her upbringing in a large farm family with seven siblings in a rural community and her experiences as a youth with 4H activities through the Cooperative Extension System influenced her pursuit of a bachelor's degree in home economics education at the University of Minnesota, St. Paul. Following graduation in 1947, she taught home economics in junior and senior high school in Minnesota for a year, then entered the Minnesota Cooperative Extension Service, first becoming a home agent in two counties, then home agent supervisor and assistant professor at the University of Minnesota. Building on her interests in rural development and family life, she completed a master's degree at Cornell University in 1956 in education and rural sociology and a doctoral degree at Purdue University in 1963 in sociology and psychology. After a brief period at Pennsylvania State University as a home and family living coordinator, she moved to MSU, where she initially was a district leader, then a family life specialist with the Cooperative Extension Service, with simultaneous appointment as assistant and then associate professor. This experience in programming to address the needs and concerns of rural families, their values, resources, and relationships, provided the groundwork that supported and guided her future theoretical focus.

From 1969 to 1974, Bubolz was professor and chairperson of the Department of Family and Child Sciences at MSU, during which period she was a prime mover in redirecting the college from home economics to human ecology, not only in the name but also in vision, philosophy, and advancement of theory and scientific research. From 1974 until her retirement in 1991, Bubolz was a professor in the MSU Department of Family and Child Ecology. Upon the death in 1983 of Beatrice Paolucci, another visionary professor and leader in human ecological thought at MSU, Bubolz carried on some of Paolucci's thinking, expanding upon her concepts and applying them to research and practice in family ecology.

After leaving her administrative position, Bubolz initiated a long-term research program in the conceptualization of quality of life and the de-

velopment of methods for assessment of individuals' and families' perceived quality of life (Bubolz et al. 1980). This led to concentrated effort in the exposition of human ecology theory on the level of what might be termed *grand theory*. She began with the delineation and definition of basic human ecological concepts and a model of the human ecosystem that has application at various levels of environmental complexity (Bubolz, Eicher, and Sontag 1979). Building on this early work, she later specified the normative value structure of human ecology; further refined and specified general system, human ecological, and family ecological concepts; and formed theoretical propositions, including premises and assumptions of human ecology theory, particularly applied at the family level (Bubolz and Sontag 1993).

Bubolz placed emphasis on the interdependence of families with resources in both the micro and macro environments (Bubolz 1991). Families, diverse in structure, ethnicity, life stage, and socioeconomic status, have various needs and hold values that they try to realize through decision making and activities of daily living. These needs and values influence the formation of goals and the use of resources and artifacts to achieve goals. By interacting with diverse environments, families engage in adaptation through transformation of matter-energy and information via processes of perception, organization, communication, decision making, and management. They also carry out activities related to sustenance and use of technology and foster human development. The quality of life and quality of the environment are outcomes of such family functioning. In the aggregate, families' actions can help realize core ecological values of survival of humans and other living species and the sustainability of the nonliving environment (Bubolz and Sontag 1993). This ecological perspective on family life both formed the foundation of and grew from her research on family stress and coping (Bubolz et al. 1986), families on small farms (Sontag and Bubolz 1996), and resource exchange and management (Rettig and Bubolz 1983a, 1983b).

As professor emerita since 1991, Bubolz continues her contributions to the field of human ecology through historical writing (Bubolz 1996) and continued conceptualizing (Bubolz 2001). She has served as a consultant to universities, government, and foundations and as an invited speaker both

nationally and internationally on topics such as social capital, integration of knowledge in human ecology to address persistent practical problems of families, and a critical science perspective on the ecology of human development and the family.

Bubolz has then dedicated her professional career to important areas of inquiry that have positive consequences for families. In recognition of her creative scholarship and innovative teaching and research, Bubolz is the recipient of numerous awards. Bubolz directed thirty doctoral dissertations and has served on many more doctoral committees. Thus, the influence of her thought and guidance extends to many areas of the world, in more and less developed countries, where many of her students occupy positions of professional leadership. She has inspired many students and colleagues with her creative intellect and enthusiasm for teaching and research on issues vital to individuals' and families' quality of life.

M. Suzanne Sontag

See also: Cooperative Extension System (CES); Paolucci, Beatrice; Social Capital

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Cancer: Prevention and Screening

Cancer affects everyone directly, through a personal diagnosis, or indirectly, through a family member or friend. Cancer is the second leading cause of death in the United States (American Cancer Society 2002), with overall costs of cancer reported by the National Institutes of Health topping \$156.7 billion in 2001 (American Cancer Society 2002).

A disease characterized by the uncontrolled growth and spread of abnormal cells, cancer causes include *external* exposures to carcinogens, such as chemicals, viruses, and radiation, and *internal* factors associated with hormones, genetic components, and decreased immunity (American Cancer Society 2002, 1).

Everyone is at risk for developing cancer. Approximately half of the male population will at some point develop cancer, and approximately a third of the female population. Exposure to known cancer-causing agents increases the risk of developing cancer. Heredity is associated with only 5 to 10 percent of cancers, leaving up to 90 percent of cancer occurring because of genetic damage from external or internal agents causing cell overgrowth (American Cancer Society 2002, 1).

The leading sites of all new cancer diagnoses in 2001 included prostate cancer for men ; 31 percent) and breast cancer for women (192, 200; 31 percent). In the same year, the leading diagnoses of the type that usually causes death included lung and bronchus cancer for men (31 percent) and lung and bronchus cancer for women (25 percent) (American Cancer Society 2001, 44). Each of these cancer

diagnoses is either detectable at an early, treatable stage (prostate and breast cancer) or preventable (lung and bronchus cancer). These facts and statistics suggest the need for concerted efforts to increase prevention and screening education within communities and families from an ecological perspective, taking into consideration the interaction of individuals and their environments.

Prevention

Certain characteristics associated with cancer, such as genetic makeup, age, and sex, are immutable and inaccessible to change. Reducing the exposure to environmental cancer-causing agents is therefore important to decrease the incidence of developing cancer. Prevention involves the avoidance of agents known to increase the likelihood of developing cancer.

Tobacco smoke is the main environmental causative agent associated with lung cancer. Efforts to prevent lung cancer must include helping individuals avoid smoke, either through smoking cessation or reducing their exposure to second-hand smoke. Community involvement in the support of smoke-free environments is essential in the fight against lung cancer and other cancers where there is strong evidence that smoking is a causative agent (Glantz 2001, 463).

Avoiding sun exposure and the untoward effects of ultraviolet radiation reduces the development of skin cancers. Current recommendations include the use of sunscreens, clothing, and shade to protect from the sun. The incidence of certain skin cancers is on the rise, a fact attributable to in-

creased sun exposure from depletion of the ozone layer and lifestyle changes (Jerant et al. 2000, 357). Although mass screening to detect skin cancer is currently not recommended, community effort to increase public awareness is an important component of prevention.

Essential factors associated with cancer prevention include proper nutrition and physical activity (Go, Wong, and Ritva 2001, S3126). Up to a third of all deaths from cancer each year have nutritional factors associated with them (American Cancer Society 2001, 33). Diets high in plant foods (fruits and vegetables), with limited amounts of animal products (meats, dairy) and high-fat foods contribute to a reduction in cancer (American Cancer Society 2001, 33). Coupled with exercise and decreased caloric intake, nutrition is an essential component of prevention. Growing evidence suggests the need to address the issue of obesity to reduce cancer deaths attributable to the disease. Prevention requires community involvement in the development and support of public awareness and educational programs that promote physical activity and nutrition.

Screening

Screening efforts contribute to a reduction in late-stage diagnosis of certain types of cancer (Prorok, Kramer, and Gohagan 2001, 29). Cancers typically targeted in widespread screening efforts include breast, cervical, and colorectal cancer. Screening provides the opportunity to diagnose cancer at an early, more treatable stage and contributes to increased life expectancy or cure.

Breast-cancer screening includes recommendations for monthly breast self-exam, annual clinical breast exams, and mammography. Screening for breast cancer in developed countries contributed to a reduction in the mortality rate of breast cancer deaths from 18.1 per 100,000 in 1985 to 6.8 percent between 1989 to 1993 (Moss 1999, 144).

Cervical-cancer screening involves a yearly Pap smear, a test designed to detect abnormal cells of the cervix. Certain groups of women participate in cervical-cancer screening less often than other groups. Cervical-cancer-screening rates are lowest among Hispanic women and women with low income, low educational levels, and no health insurance (American Cancer Society, 2001).

Colorectal-cancer screening for men and women (age 50 years and older) includes a yearly

fecal occult blood test (FOBT) to check for the presence of blood in the stool. Invasive screening techniques, using flexible sigmoidoscopy every five years or colonoscopy every ten years, allow the physician to examine the colon for polyps or cancerous lesions and remove these abnormalities before they become invasive. Screening by all of these methods reduces mortality rates. However, screening for colorectal cancer remains low and varies by race and ethnicity (American Cancer Society 2001, 12). Because of the social taboos related to cancer of the colon and rectum, efforts to increase screening must incorporate knowledge of the values and beliefs of different cultural groups, delivered in a comprehensive program (Cuzik 1999, 252).

The treatment of late-stage cancer of any type is expensive for individuals and the health care system. Therefore, effective cancer prevention and screening programs must consider cultural beliefs about cancer, costs of screening and prevention, needs of the community, and access to services and physicians who can perform the screening tests.

An Ecological Perspective

A human-ecology model and family ecosystems as a subset of this model provide a framework for examining the interaction of individuals within and between their communities and environments (Bubolz and Sontag 1993, 439). Cancer prevention and screening program development using an ecological approach takes into consideration cultural values and beliefs associated with cancer, communication of information within and between systems, and access to needed services.

Values and beliefs about cancer vary among individuals, families, and cultural groups. The use of prevention and screening programs requires that individuals recognize the risk of getting cancer at a future date and believe that early intervention has an effect upon cancer when it is diagnosed. At the same time, any study of the disparity in health care experienced by racial and ethnic groups must include a consideration of the part played by discrimination and racial bias rather than cultural beliefs in causing this disparity (Thomas 2001, 1047).

The transmission of information about cancer prevention and screening within family systems requires an understanding of family communication. Using a family paradigm approach, bound-

aries established as part of the family power structure determine what information and individuals have access to family members. To reduce the number of individuals diagnosed with late-stage cancer, individuals and families must recognize the need for prevention and screening and must then be able to participate in appropriate programs and strategies. Regular access to the same health care provider builds trust and promotes the transmission of information within the family system. Lay leaders, faith communities, and trusted family members and friends provide resources to assist in the dissemination of prevention and screening information within family systems. When viewed as a priority, cancer prevention and screening information can lead to early diagnosis of cancer and a reduction in mortality rates associated with late-stage disease.

Access to prevention and regular screening is essential for the diagnosis of early-stage cancer. Community efforts to increase prevention and screening require an understanding of the types of services currently available and the development of services if none exist. Once an individual has been diagnosed, access to cancer treatment services is essential. Yet those individuals least likely to participate in screening also may not have the same opportunity to receive appropriate treatment. Lack of insurance to cover the costs of treatment results in poorer outcomes and higher rates of mortality with ethnic and minority populations carrying the greatest burden (Roetzheim et al. 2001, 1754).

Coordinated efforts of state and local governments to develop community coalitions designed to help those at greatest risk for getting cancer must include assessments of the barriers to prevention and screening.

The Family Professional, Policy, and Research

The family professional is uniquely prepared, through an understanding of the interaction of individuals with their environments, to develop and promote public awareness programs about prevention and screening within communities. An understanding of the role families play in the fight against cancer may contribute to early diagnosis and reduced mortality. This suggests the need for collaborative efforts between family and health care professionals, community leaders, and state and local governments in program development

designed to increase public awareness about prevention and cancer screening.

Prevention measures must begin with young families with children and continue throughout the life course. One of the most difficult tasks faced by concerned parties is convincing the young that early participation in preventive measures such as smoking cessation will result in long-term positive outcomes and a reduction in cancer rates. The family professional is an essential player in strategy development designed to address the diverse needs of individuals within families in the quest to reduce the incidence of cancer.

Policy development must function to reduce the disparities related to cancer. Policy to reduce disparity and eliminate barriers to prevention and screening must include the means to provide universal health insurance coverage, increase education levels overall, and provide a living wage so that families can access needed services.

Efforts to reduce the mortality rates associated with cancer require an ecological approach and an understanding of the interactive relationships between individuals within families, communities, and their environments. Future research needs include efforts to understand the role of the family in relationship to prevention and screening. We must also gain a better understanding of the relative importance of racial bias and discrimination versus cultural beliefs and values associated with participation in prevention and cancer screening. Even though a cure for all cancer remains elusive, prevention of some cancers and screening for others can reduce the mortality rate associated with cancer.

Susan K. Hoppough

See also: Breast Cancer among Latinas; Smoking and Tobacco Use; Tobacco Prevention and Youth

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Cardiovascular Disease

The term "cardiovascular disease" (CVD) refers a group of disease entities that affect humans of all genders, races, ages, socioeconomic classes, and environments. CVD is a major public health issue, since it is the leading cause of death in developed and developing countries. CVD refers to diseases of the circulatory system or the heart and network of blood vessels that carry oxygen and nutrients to the rest of the body. The primary cause of CVD is atherosclerosis, or thickening and loss of elasticity of the blood vessels. CVD, in turn, can lead to a range of medical problems, including heart attacks, sudden cardiac death, strokes, and gangrene. Factors that increase the likelihood of an individual developing CVD include genetic makeup (e.g., family history), psychosocial issues (e.g., depression, type A personality), environmental issues (e.g., tobacco use, sedentary lifestyle, poor nutrition, obesity), and biological issues (e.g., high blood pressure, high cholesterol levels, diabetes mellitus). These factors overlap with each other to increase risk. Although individuals cannot alter their genetic makeup, they can change their life-

styles so that they reduce the risk of developing CVD. CVD is often diagnosed only after a person experiences symptoms of the disease, which can include severe chest pain or palpitations. Typical treatments are risk factor avoidance or reduction, interventions that return blood flow to affected organs, and rehabilitation.

International trends suggest that environmental factors play a key role in rates of CVD. Although people from everywhere in the world are affected by CVD, individuals living in developing countries are less likely to experience heart attacks and strokes than individuals in developed countries. These lower rates have largely been attributed to a more active lifestyle, lower tobacco use, and the lower-fat diets more common in developing countries. In contrast, individuals in developing countries, who tend to have less developed medical care, are more likely to be exposed to the types of infections that can lead to heart disease (Howson et al. 1998).

In developed countries, such as the United States, attempts to prevent, diagnose, treat and rehabilitate CVD have increased life expectancies. However, as the population ages, the risk for developing coronary artery disease and strokes also increases. CVD is the overall leading cause of death in the United States, but when results are broken down by age, it does not become the leading cause of death until the later decades of life. CVD was responsible for claiming nearly 950,000 lives in the United States in 1998, which is 40.6 percent of all deaths (American Heart Association 2001 Center for Disease Control/National Center for Health Statistics 1988–1994). Nearly half of these deaths were due to coronary heart disease (CHD), and nearly 85 percent involved people age 65 and older (American Heart Association 2001 Center for Disease Control/National Center for Health Statistics 1988–1994). The American Heart Association (AHA) estimates that in 2001 the United States will spend \$298.2 billion on CVD and stroke (American Heart Association 2001).

Prevention of the factors that cause CVD, especially atherosclerosis, is best started before individuals find out they have the disease. The biological, environmental, and psychosocial determinants are mostly modifiable. Scientists continue to identify more variables that cause CVD. Multidisciplinary approaches, using clinicians, nurses, public health officials, and other health care workers, have been

used in reducing CVD risk factors and identifying and treating CVD. To reduce risk factors individuals need to be aware of their risk factor profiles; many, however, lack this knowledge. According to the Sixth Report of the Joint National Committee on Prevention, Detection, Evaluation and Treatment of High Blood Pressure, almost a third of the people with high blood pressure in the United States don't realize they have it (Joint National Committee 1997 and American Heart Association 2001). Also despite widespread efforts to promote screening programs, women tend to underestimate their heart disease risk. Physicians have traditionally been more aggressive in diagnosing and treating men than women.

Compared to Caucasians, African Americans are at greater risk of CVD, including hypertension, stroke, and coronary heart disease. The higher CVD rates have been attributed to a range of factors, including worse access to health care and screening and health care professionals' less aggressive treatment of risk factors and disease. The National Institutes of Health have made reduction of CVD disparities by race and sex a priority.

Although resources are needed to help identify more risk factors for CVD, public health officials argue that available resources should be used to help society modify risk factors that are already well documented. One in five deaths from CVD is attributable to smoking (American Heart Association 2001). Diet and physical activity have also been implicated as important risk factors in CVD. Other risk factors, such as high blood pressure, high cholesterol, diabetes, and obesity, can be controlled by proper diet and moderate physical activity. Debate still continues over whether nutrients, antioxidants, and vitamins actually reduce the risk of some cardiovascular diseases. Examples of nutrients that may prevent the development of coronary artery disease include Vitamin E, Vitamin C, and folic acid. Large ongoing clinical trials should give definitive results in the near future.

Diagnosing CVD usually occurs after clinical symptoms appear. Coronary artery disease has many diagnostic procedures, including stress tests (stress induced by using a treadmill and by medicine), cardiac catheterization (i.e., threading a tube from a peripheral blood vessel into the heart so that vessels that supply the heart can be imaged), and computed tomography (i.e., CT scans or X-rays that reveal the anatomy of the body parts

of interest). The American Heart Association and the American College of Cardiology have created guidelines based on clinical trials that help physicians decide which diagnostic procedure is best suited for the different presentations of coronary artery disease.

The treatment of CVD is focused around risk factor modification, the restoration of blood flow to affected organs, and rehabilitation in patients who have already had a cardiovascular event. These treatment modalities are all focused on the individual and are very costly. With an increasing consumption of fast foods and high percentages of physically inactive people, the United States has a long battle with CVD ahead. An ecological perspective to treating CVD is not to focus on the individual, but to focus on the environment that produces CVD risk factors (e.g., taxing high-fat foods to decrease consumption and structurally changing our living environment to make it more conducive to physical activity).

Jeffrey C. Lederman

Becca R. Levy

See also: Smoking and Tobacco Use

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Catholic Schooling: The Achievement of Poor and Minority Students

Educational researchers have been intrigued by the fact that low-income African American and Latino high school students tend to excel in Catholic schools, particularly when compared with their peers in public high schools (Bryk, Lee, and

Holland 1993). On average, Catholic as compared to public high school students tend to have higher grade point averages (GPAs) and Scholastic Achievement Test (SAT) scores, and to be much less likely to drop out of high school and much more likely to continue their education after they graduate from high school. The success of low-income minority students in Catholic schools reflects a powerful and unique connection between individuals (students, teachers, and administrators) and their context, with positive results for students of color. In order to understand these differences in academic achievement, educational researchers have compared curricula offered in Catholic and public high schools, expectations and standards for student achievement, school climate, and school management practices (Coleman and Hoffer 1987; Bryk, Lee, and Holland 1993; Hill, Foster, and Gendler 1991).

The most interesting finding is that Catholic schools appear to offset the educational disadvantage ordinarily associated with poverty, minority status, low parent education, and single parenthood. For example, in Catholic high schools, students who come from single-parent homes do as well in tests of verbal and mathematics achievement as their peers from two-parent families. This is not the case for students in public high schools, where the school achievement of students from single-parent homes is lower than that of students from two-parent homes. In addition, public-school students from single-parent homes are more likely to drop out of high school than their counterparts in Catholic schools.

The body of research on the higher achievement of Catholic as compared to public schools is not without controversy. The greatest concern among critics has to do with the issue of what is called self-selection. In other words, Catholic schools are schools of choice, and parents who choose a Catholic education for their children may be fundamentally different from parents who do not make this choice. It is possible that the most motivated and concerned parents choose Catholic schooling, thus drawing in the most motivated, best-behaved, and, perhaps, brightest students (McPartland and McDill 1982). The fact that parents must pay tuition raises the possibility that these schools serve wealthier students. Furthermore, critics argue that, as private schools, Catholic schools can admit and expel whomever they wish.

Self-selection probably plays a role in the higher achievement and more positive attitudes about learning that have been documented by educational researchers. Paul Hill and his colleagues did find that, relative to the public high school students they studied, Catholic high school students were slightly more advantaged in terms of family income and parent education (Hill, Foster, and Gendler 1990). On the other hand, Catholic schools have the greatest success with the most economically disadvantaged students (Bryk, Lee, and Holland 1993), and routinely admit students who need a great deal of attention—those with behavior problems as well as students who are far below grade level. Their success is achieved with far fewer resources than are available to public schools, where the average amount of money allocated for the education of each pupil is three times that of Catholic schools. Furthermore, researchers who have examined expulsion rates have noted that they are no different for inner-city Catholic schools than for inner-city public schools (Bempechat and Boulay 2001; Hill, Foster, and Gendler 1990).

Educational researchers who have studied tracking (the practice of grouping similar-ability students in the same classroom) and curriculum requirements in Catholic and public high schools have reported that, generally, Catholic schools are more demanding of their students than public schools, with higher expectancies and standards for both academic achievement and social behavior (Lee and Bryk 1988; Marsh 1991). In a study of thousands of students across the United States, Valerie Lee and Anthony Bryk (1988) found that significantly more Catholic than public school students were enrolled in the academic track. These researchers also found that there was a stronger relationship between students' educational aspirations and their track placement. In other words, almost all the students in Catholic schools who wanted to go to college were in the academic track by the tenth grade. In contrast, public school students with similar plans were much less likely to be enrolled in their school's academic track by the tenth grade. Further, regardless of the track into which students are placed, Catholic school students are required to undertake more instruction in basic courses. For example, even in the lower tracks, such as general or vocational, Catholic students are required to take one full year more of mathematics instruction than public school students.

Recent research has shown that, among low-income African American and Latino fifth- and sixth-grade students, those enrolled in Catholic schools have more positive beliefs about learning than their public school peers (Bempechat 1998; Bempechat, Drago-Severson, and Boulay 2002). In a survey of their beliefs about learning, Catholic school students indicated that they believed that doing well in mathematics was due to their abilities. They believed that failure, when experienced, was *not* due to lack of ability. In contrast, their public school counterparts believed that success in mathematics was due to external factors, such as luck, and failure, to lack of ability. These beliefs can be detrimental, since they suggest that these students perceive that they have little control over their learning. When students believe that they lack ability, for example, they are more likely to give up in the face of difficulty. This tendency to give up reflects a belief that many students share, that ability is a quality of the self that is internal, relatively stable, and over which they have little control (Weiner 1994).

Scholars who have examined school management practices have noted that Catholic schools operate with much less bureaucracy than public schools, a fact that allows them to be more focused on the educational needs of their students (Bryk, Lee, and Holland 1993; Hill, Foster, and Gendler 1990). Unlike public high schools, Catholic high schools are, according to researchers, strong organizations that encourage rather than discourage individual initiative. Perhaps most importantly, these schools are oriented toward a single, shared vision of preparing students for higher education. In the service of this mission, Catholic schools embrace a central curriculum, in which high expectancies and standards are maintained for all students, and where there is a much lower tendency to separate students according to ability level. Furthermore, individuals within the Catholic school community—teachers, administrators, students, and parents—are each held accountable for the academic achievement of all students.

Currently, educational researchers are studying the ways in which Catholic and public school students themselves describe their educational experiences. Through in-depth interviews, this trend in the research is oriented toward understanding how students perceive their learning in these different institutions.

Janine Bempechat

See also: Community Schools; Faith-Based Organizations; Full-Service Schools; High School; High School, Advising Students in; National Association for the Education of Young Children (NAEYC)

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Ceci, Stephen J.

Stephen J. Ceci graduated from the University of Delaware (B.A.) in 1973. After receiving his M.A. at the University of Pennsylvania in 1975, he moved to Great Britain to pursue a Ph.D. in developmental psychology under mentorship of Michael J. A. Howe. Upon return to the United States in 1978, Ceci joined the University of North Dakota as an assistant professor of psychology.

While at the University of North Dakota, Ceci's interests in cognitive development began to take on an ecological orientation. He began experimenting with aspects of the physical and social context to determine what effect it had on memory and reasoning. Until that time, such contextual

variations were viewed by many as “noise,” to be controlled or removed as a source of unwanted variance. Ceci realized the potential of context as an explanatory construct, and he began designing experiments with this in mind. This direction of his work led him ineluctably to the work of Urie Bronfenbrenner at Cornell University. After two years at the University of North Dakota, Ceci resigned his post to assume a similar one at Cornell.

At Cornell, Ceci flourished under the watchful eye of Urie Bronfenbrenner. In a series of collaborations that included a number of highly influential and often cited papers, Ceci and Bronfenbrenner found that their different academic backgrounds were highly complementary. Ceci was trained in state-of-the-art experimental techniques and Bronfenbrenner was a master ecological theorist. Partly as a consequence of their unusual collaboration, Ceci was awarded the lifetime Helen L. Carr Chair of Developmental Psychology. This honor came in 1990, when Ceci was only 40.

Ceci’s research focus can be broadly construed as the bioecology of intellect development. Under this rubric are his studies of the development of intelligence and memory (in particular alternatives to psychometric theories of intelligence, and his ecological model of cognitive development), and his groundbreaking work on children’s courtroom testimony (particularly as it applies to allegations of physical abuse, sexual abuse, and neglect). Both programs of research lean heavily upon the concept of ecological context of development. For instance, in a landmark 1985 paper with Urie Bronfenbrenner, Ceci showed that even microlevel cognitive processes (e.g., calibration of one’s psychological sense of time, or one’s internal mental clock) are under the influence of children’s physical and social environment (Ceci and Bronfenbrenner 1985), a conclusion further developed in his book, *On Intelligence, A Bio-Ecological Treatise on Intellectual Development* (Ceci 1996).

Drawing upon his research on intellectual development in context, Ceci has built a worldwide reputation in the field of children’s courtroom testimony. His studies on young children’s eyewitness accounts are characterized by the use of real-life situations and materials, adding to the ecological validity of his findings. His research on children’s courtroom testimony culminated in an award-winning article entitled “The Suggestibility of Children’s Recollections: An Historical Review and

Synthesis” (Ceci and Bruck 1993), which has become a citation classic, with nearly 400 cites to date and numerous awards.

Currently, Ceci codirects the Cornell Institute for Research on Children (CIRC), a multimillion-dollar, National Science Foundation–funded center for the conduct, synthesis, and dissemination of developmental science in the public interest. As part of this center, Ceci commissions teams of international scholars to study important societal problems and develop consensus reports that are translated into public policy papers. Among the list of luminaries who serve on CIRC’s advisory board is, unsurprisingly, Urie Bronfenbrenner.

Although his career is still far from completed, Ceci has amassed an enviable portfolio of awards, honors, and prizes. He has received over \$5 million in governmental and foundation grants; he is the author of nearly 300 articles, books, reviews, and chapters; and he has given hundreds of invited addresses and keynote lectures around the world. He has appeared on national television (ABC, NBC, CBS, PBS) and international television (BBC, CBC) many times. In addition, he is quoted frequently in major syndicated magazines and newspapers such as *The New York Times*, *Newsweek*, and *Time Magazine*.

Ceci is the recipient of over two dozen awards, the latest of which is the 2002 American Psychological Association’s Bronfenbrenner Award for Lifetime Contribution to Developmental Psychology in the Service of Science and Society. Formerly, he has been the recipient of the Lifetime Achievement Award for the American Academy of Forensic Psychology, and a National Research Career Development Award from the National Institute of Child Health and Human Development. He currently serves on seven editorial boards and coedits the journal he founded for the American Psychological Society, *Psychological Science in the Public Interest* (PSPI); and he is a member of numerous prestigious advisory boards, including the National Academy of Science’s Board on Behavioral, Cognitive, and Sensory Sciences, the National Science Foundation Advisory Board for the Social, Behavioral and Economic Sciences, the Canadian Institute for Advanced Research (CIAR), and the White House Task Force on Research on Children and Adolescent Research (plus many National Research Council and governmental boards).

Currently, Ceci lives with his intellectual soul

mate, Wendy M. Williams, herself a professor at Cornell University, and they divide their time between Ithaca, New York, and Litchfield, Connecticut, where they raise their children.

Eddy H. de Bruyn

See also: Bronfenbrenner, Urie; Investigative Interviews with Children

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Child Abuse

There are four primary types of child abuse: physical abuse, sexual abuse, emotional abuse, and neglect. Physical abuse is any intentional use of force that risks physical injury, harm, or pain, which includes hitting, slapping, choking, biting, burning, shaking, beating with an object, or otherwise harming a child. Sexual abuse occurs when a person forces a child to participate in any sexual activity in which a person uses a child for satisfying sexual needs. Sexual abuse includes intercourse, fondling a child's genitals, masturbation, and exploitation through prostitution, production of pornographic materials, or exhibitionism. Emotional abuse occurs if there is a long period of inattention to the child's needs for love and affection, or when a person ignores, blames, or threatens a child. Emotional abuse also includes spousal abuse in a child's presence. Neglect represents a failure to provide a child's basic needs, such as food, clothes, a warm place in which to live, health

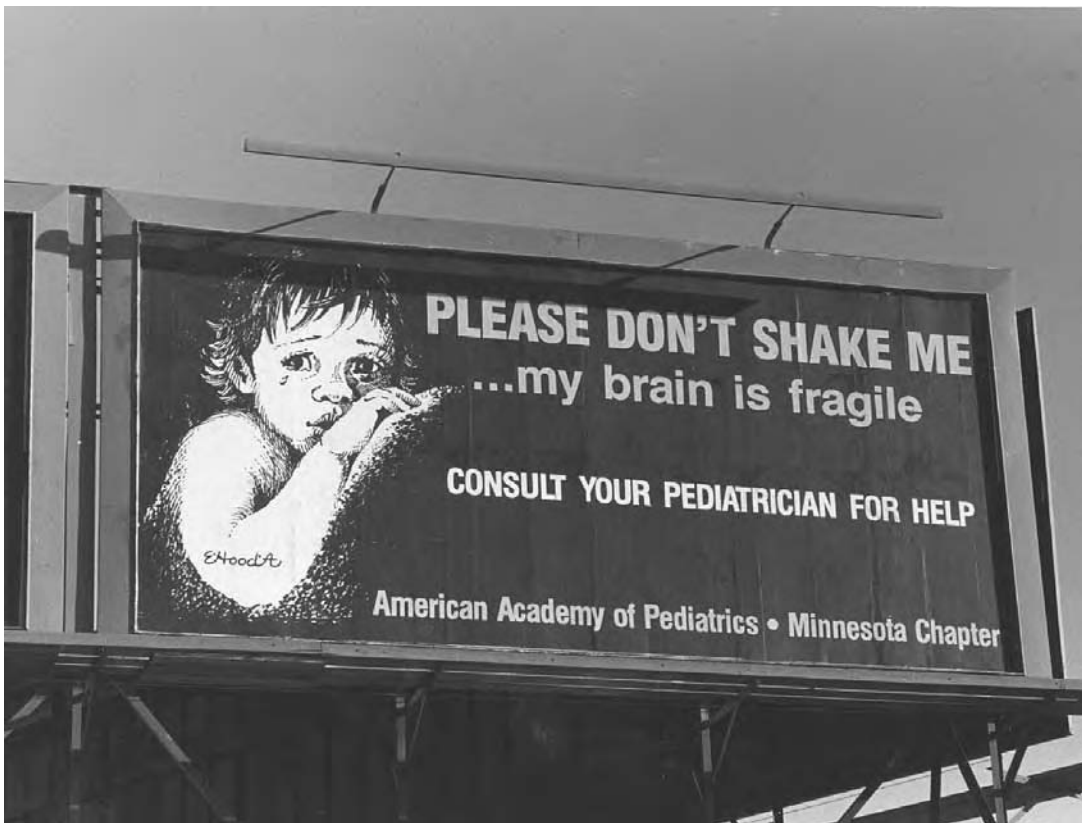
care, and education. Neglect also includes leaving a child alone at home or with inadequate supervision (Wolf 1999).

The U.S. Department of Health and Human Services (2001) estimates that there were 826,000 victims of child abuse in 1999 across the United States. The rate of victimization is 11.8 per 1,000 children: 58.4 percent suffered neglect, 21.3 percent were physically abused, 11.3 percent were sexually abused, and 35.9 percent were emotionally abused (the sum of percentages is more than 100 percent because children may have been victims of more than one type of abuse). The highest victimization rates were for children under 3 years old, and rates declined as age increased. Rates for many types of abuse were similar for male and female children, but the sexual abuse rate for female children was higher than the sexual abuse rate for male children. However, these numbers do not represent an accurate picture of child abuse in the country, since numbers of abused children are not officially reported.

Although the literature usually identifies parents as the prime perpetrators, older siblings or peers, relatives, and other adults who are not family members may also be abusers. Furthermore, it is necessary to understand that children are often abused with two or more types of maltreatment.

To be able to prevent child abuse it is necessary to understand the risk factors that lead to child abuse. Current approaches to understanding the causes of child abuse emphasize the combination of individual, family, environmental, and sociocultural risk factors, and their dynamic interaction.

Parents who abuse their children tend to be socially isolated, to have no friends, relatives, church, or other support systems (Hecht and Hansen 2001). The strongest risk factor for child abuse is poverty or low income. Parents who are unemployed or live with their children in impoverished communities, or both, show psychological distress such as anxiety, depression, and hostility (Hecht and Hansen 2001). Parents who are raising their children alone tend to experience economic stress along with the additional stressors of increased child-rearing responsibilities and the lack of another parent to support the raising of the child. In general, parents who experience a lot of stress, perceive child rearing as more difficult than enjoyable, and report higher levels of anger and conflict in the family tend to abuse their children.



The problems of child abuse affect many levels of human ecology. ((Michael Siluk)

Prior child abuse and family violence in childhood may continue a cycle of violence across generations. Other characteristics of families in which abuse may be more likely involve parents who abuse drug or alcohol or parents with cognitive deficits. In addition, parents may be abusive when they want to control the world, when they show their power by expressing negative behaviors to their children and other family members, and when they believe (and also express their belief) that children deserve harsh punishment (Wolf 1999). Although a child's behavior may play a role in the onset, continuation, or acceleration of abusive or neglectful adult behavior, it is important to understand that children are not responsible for their own abuse; child abuse is an adult action that is never justified.

Many children who experience abuse develop social, behavioral, and emotional problems. However, it is not possible to predict with complete precision the effects for each child because of the heterogeneity of personal, social, and cultural backgrounds, personal life experiences, and family

conditions. What is possible is to present the most common effects of child abuse for each type of abuse.

Physical child abuse causes unusual injuries in some parts of body, such as the stomach, cheeks, ears, buttocks, mouth, or thighs, that an active child cannot easily get from everyday playing. Black eyes, human bite marks, and burns the sizes of a cigarette do not come from typical children's play. A child who is physically abused may seem to be self-destructive or aggressive and violent toward others. A child may wear inappropriate clothes to cover the injured body, may seem to be afraid of parents and other adults, and may spend a lot of time at the playground and outside of the house because of a fear to go home (Hecht and Hansen 2001).

Sexually abused children might show different kinds of physical and health indicators of abuse, such as sexually transmitted diseases, genital bleeding, genital pain or itching, problems while walking or sitting, or wearing broken, dirty, or bloody underwear. Sexual abuse seems to be asso-

ciated with a number of internalizing behaviors such as depression, suicidal ideation, anxiety, low self-esteem, and somatic complaints. Moreover, sexual abuse is related also to a number of externalizing problems, such as school problems, problems with peers, self-abusive behavior, inappropriate sexual games or knowledge, and promiscuity. Many sexually abused children develop symptoms associated with posttraumatic stress disorder or other clinical disorders (Webster 2001).

Emotionally abused children are likely to show delinquent or aggressive behavior, substance abuse, delay in physical development, and a problematic sense of self-worth. Emotional abuse may affect a child's happiness, relationships, and success (Hecht and Hansen 2001). Neglected children may sleep in class, steal food or beg for it, say that their parents are never at home, show self-destructive behavior, or drop out of school.

Overall, the effects of child abuse depend on how the child perceives and interprets the abusive act and on the different life circumstances faced by a child. In any case, a number of positive influences, such as supportive adults within and outside the family, supportive siblings, and successful school achievement may over time moderate the effects of abuse (Wolf 1999).

Given that the problems of child abuse affect many individual, family, and cultural levels of human ecology, the comprehensive prevention of child abuse should target all these levels. Individual and family support programs and education should be conducted for families, especially during periods of transition and stress. Interventions for preventing the onset of abusive behavior, such as media campaigns, crisis hotlines, and community enhancement of social networks have been strategies used throughout the United States to express and clarify community values and promote a prevention orientation (Daro 1993; Wolf 1993). Communities need to support a variety of interventions because individual families must have access to a range of supportive, educational, and therapeutic services in order to effectively reduce and prevent the multiple causes of child maltreatment.

Helena Jelcic

See also: Externalizing Disorders; Public Policy and Early Childhood; Sexual Abuse

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Child and Family Poverty

Compared to all age groups in our country, children have the highest poverty rate. At the outset of this century, 19 percent of American children under the age of 18 lived in poverty (U.S. Bureau of the Census 1999). When children near the poverty line are added to this group, this rate skyrockets to 39 percent. Additionally, 41 percent of children age 6 and under live near or at the poverty line. These figures do not bode well for the United States, given that numerous studies have demonstrated the negative effects of poverty on children's physical, cognitive, and socioemotional development. Currently, the three main contributors to high poverty levels include the rise in female-headed households, low educational attainment, and a declining labor market for low-skilled workers.

Simply put, poverty means not having enough money to meet the basic human needs of food, shelter, and clothing. The index used to determine poverty status was originally formed by estimating the minimal cost for food expenditures for families of varying sizes and multiplying this value by three. This calculation was deemed appropriate in 1959, because food constituted about one-third of household expenses. The current



Child begging with father (Skjold Photographs)

poverty threshold, which is based on this formula, takes household size into account and is adjusted annually for the cost of living (based on the Consumer Price Index). Thus, families who receive less money in a year than the federal poverty threshold are considered poor. Another less common indicator of wealth is household socioeconomic status (SES), which is based on the primary breadwinner's level of education, occupation, and income.

The official poverty index has been challenged by many organizations because of concerns that the measure does not adequately address standard-of-living changes since the 1960s in such areas as child and medical care. Indeed, there is great concern for the larger group of at-risk children from low-resource households who do not meet the official poverty criteria (i.e., below 100 percent of the poverty line). Due to the efforts of researchers and policy makers, children who live below 200 percent or 185 percent of the poverty line (but above 100 percent) are eligible to receive assistance from federal programs such as Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) and School Lunch much as their lower-income peers do.

Dispelling Poverty Myths

Poverty is not just an urban phenomenon. On the contrary, according to the National Center for Children and Poverty (NCCP), poor children age 6 and younger are located in urban (29.9 percent), rural (26.4 percent), and suburban (16 percent) environments (1999). Contrary to some popular misconceptions, most low-income families work. In 1997, nearly two-thirds (65 percent) of poor children age 6 and under had at least one employed parent (NCCP 1999). Longitudinal studies have also shown that persistent economic hardship leads to poorer physical, psychological, and cognitive functioning and not vice versa (Haan, Kaplan, and Camacho 1987; Lynch, Kaplan, and Shema 1997).

Risk Factors: Parenting

Research suggests that poverty affects children's social and emotional development indirectly through its influence on parenting. Parental characteristics such as child-rearing styles, mental health, and coping skills all appear to partially explain how poverty exerts its influence on child adjustment. Stressors associated with economic

hardship contribute to higher levels of child maladjustment, in part by increasing parents' tendency to use harsh and inconsistent discipline. Financial strain may also steer parents toward ineffective parenting styles that require less effort (e.g., physical punishment or reliance on authority). Taken as a whole, poverty appears to contribute to child maladjustment by undermining parents' capacity to respond to their children in a sensitive and consistent manner.

One protective mechanism that may buffer children from the harmful effects associated with economic disadvantage is the amount of social support available to primary caregivers. The availability of social support reduces the likelihood that low-income parents will engage in punitive parenting, which is important because, as numerous studies have demonstrated, parenting styles are linked to children's adjustment. For example, social support may shield mothers from the effects of some stressors and thereby decrease the potential for maternal depression, which in turn reduces the likelihood of nonresponsive parenting.

Although harsh parenting seems to explain part of the reason why economic hardship is associated with problem behaviors, research has also shown that physical discipline and restrictiveness are not necessarily linked to child maladjustment for some at-risk families (Deater-Deckard et al. 1996). Considering that controlling parenting styles appear to be adaptive for children who live in dangerous neighborhoods, it appears that context informs parenting as well as influences how children respond to different types of discipline.

Consequences

Due to the complex and dynamic nature of child development, the effects of economic disadvantage permeate a child's interactions in multiple settings, such as the home, neighborhood, school, and social environments. Poverty may compromise children's well-being directly through the absence of essential resources, such as adequate nutrition and child care, or through the presence of harmful substances, such as lead chips from peeling paint in old houses. The strongest effects of poverty are on children's cognitive development and achievement scores compared to children's emotional outcomes. Strong evidence exists to show that the effects of poverty on parenting and the quality of the early home learning environment represent the

main ways in which children's socioemotional adjustment and academic achievement may be undermined. Early childhood poverty (0–5 years) seems to have the greatest influence on high school completion, compared to poverty experienced in later childhood (6–10) or adolescence (11–15) (Duncan et al. 1998).

Physical Health

Birth Outcomes. Low birth weight (2,500 grams or less), which is more likely for children born to impoverished mothers, places children at increased risk for cognitive and emotional problems that may persist throughout the life course. Additionally, low birth weight is linked to infant mortality.

Nutrition. While being underweight is associated with poverty, American children from low-income households are more likely to experience deficits in their nutritional status as opposed to malnutrition or starvation. At the same time, obesity is becoming a paramount problem for low-income children. Foods that are low in nutritional value but high in calories are often less expensive for parents to purchase in relation to healthier foods, which may partly explain the increase in weight gain among poor children.

Lead Toxicity. Given that poor preschoolers are three times more likely to have lead in their bloodstream than are their more economically advantaged peers (Secombe 2000), toxicity that results from lead exposure might explain how poverty is linked to declines in children's cognitive functioning. Today, eating chips from deteriorating lead-based house paint is the primary source of lead exposure for young children.

Potential Buffers of Poverty

Studies on protective factors suggest that poverty may not necessarily be linked to problematic adjustment. Instead the presence or absence of certain experiences or qualities may buffer some at-risk children from the harmful outcomes associated with economic disadvantage.

Quality of Parent-Child Interactions

The value that parents place on education may distinguish those children who make it out of highly impoverished neighborhoods from those children who do not. A positive parent-child relationship as well as a cohesive and warm family environment is

highly protective and may shield children from some of the adversity associated with economic hardship.

Mentors

At-risk children who have adults who take a special interest in them and act as role models do better emotionally and academically compared to those children who do not receive support or guidance from a mentor. However, it would be misleading to imply that mentors initiate these relationships with disadvantaged youth. On the contrary, resilient youth often seek out prosocial connections with others. While these relationships are protective, they do not erase the developmental consequences associated with childhood poverty.

Neighborhoods

Social cohesion among neighbors, combined with a willingness to intervene on behalf of the common good, appears to be associated with reductions in child maladjustment and community violence (Sampson, Raudenbush, and Earls 1997). Neighborhood settings that are characterized by mutual trust and a commitment to supervise and monitor behavior may buffer youth from the negative effects of economic hardship.

Interventions

Comprehensive interventions that provide in-home services to families in addition to early childhood education appear to be most effective in reducing poor school performance and the onset of problem behaviors. For example, interventions that include a preschool component in addition to long-term home visitation have been shown to mitigate some of the effects of poverty on children's scholastic performance (Campbell and Ramey 1994). It is important to recognize that protective factors do not make children invulnerable to the threats posed by poverty.

In 2001, the NCCP outlined three steps aimed at reducing the child poverty rate. The first initiative calls for an increase in family income through an expanded earned income tax credit (EITC) for working families, as well as access to affordable child care, health insurance, and transportation to and from work. It is notable that since the EITC became more readily available in 1993, tax policy has become one viable way to combat poverty for poor working families. The second initiative encourages

increases in cost-effective prevention programs such as the Special Supplemental Nutrition Program for Women, Infants and Children (WIC) and Head Start. Third, NCCP advocates for adolescent pregnancy prevention programs that have been shown to be effective, such as the Teen Outreach Program.

Lyscha A. Marcynyszyn

See also: Adolescent Pregnancy and Prevention; Head Start; Lead Poisoning; Low Birth Weight Infants; Public Policy and Early Childhood; Women, Infants and Children (WIC), Special Supplemental Nutrition Program

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Child Care: Issues for Infants and Children

Child care (defined as nonparental care that occurs on a regular basis) has come to play an essential role in modern family life in the United States. Not only does it provide support for parental employment, it also serves as an important context for child development. With the majority of parents in married-couple and single-parent households now working, the number of children who spend part of their day in the care of someone other than a parent has increased dramatically over the past few decades. In 1995, approximately 75 percent of children under the age of 5 and nearly half of all school-aged children were in some type of regular child-care arrangement (Smith 2000, 70). Indeed, the "average" American child spends a substantial number of hours in care and typically experiences multiple arrangements each week. Beginning in 1996, changes in the work requirements for families receiving welfare have further increased the demand for child care.

Because child care affects the daily lives of so many children and families, it has become a topic of great interest in the field of human development. Researchers have examined why families choose certain types of care; how characteristics of care are related to child outcomes; and, how factors at the community, state, and national levels influence the child care options available to families.

Types of Child-Care Arrangements

Child care can be classified into two broad types of care arrangements. *Center-based care* (also called formal care) refers to licensed or regulated group care that takes place in an institutional setting. States set maximum standards for child-to-staff ratios and group size, as well as minimum safety requirements; these regulations vary greatly across states. Center-based care includes programs that are designed primarily to supervise children while parents are working, as well as those designed to enrich or provide early education to young children (e.g., Head Start or preschool). *Home-based care* (also called informal care) refers to care provided by relatives or nonrelatives in either the child's home or the caregiver's home (e.g., family day-care homes). Home-based care may be for one child or a group of children, unregulated or regulated, and paid or unpaid. Parents often use a combination of formal and home-based arrangements.



Parent dropping off child at day care center (Elizabeth Crews)

Parental Preferences and Constraints

Parents choose different types of child-care arrangements based on a complex combination of their preferences and the constraints they face. Parents may use care because they work or attend school, or because they believe that it provides certain opportunities to their children. Preferences for certain types of care likely reflect parents' values, as well as their beliefs about which arrangements will provide the best care for their children and will best suit the specific needs of their family (e.g., work schedules). Many of these factors are difficult to measure, and it has proven challenging for researchers to identify exactly how child-care decisions are made. One of the most significant predictors of child-care use is child age. Parents have different concerns and goals, and face different care options for children of different ages.

Infants and Toddlers

Nonmaternal care has become commonplace even

for very young children. A national study of child care reports that 72 percent of children experience regular nonmaternal child care during the first year of life (National Institute of Child and Human Development Early Child Care Research Network 1997). On average, children enter their first care arrangement at 3.3 months for an average of 28 hours per week. Early entry into care may be because of a mother's desire to return to work, a limited leave policy, or limited resources. Under the new welfare laws, fourteen states require most parents with children under age 1 to work, and an additional twenty-three states require the parent to find work after the child's first birthday.

Home-based care from relatives is the most commonly used arrangement for infants and toddlers. One large-scale longitudinal study of child care reports that fathers provide the first nonmaternal care for infants in one in four families (NICHD Early Child Care Research Network 1997). Center care is less available for this age group, but

it is also the case that many parents have reservations about placing very young children in center and nonrelative care. Parents worry about whether formal care will provide the nurturance and attention needed by infants. Moreover, parents worry about the safety of their children in the care of strangers, especially during the preverbal years (Lowe and Weisner 2001). Nevertheless, it is estimated that 22 percent of infants and toddlers are cared for in centers, with another 34 percent in nonrelative home-based care (Ehrle, Adams, and Tout 2001).

Preschool-Age Children

Preschoolers (3- and 4-year-olds) are more likely than either younger or older children to be in formal arrangements (Smith 2000). As their children enter the preschool years, parents may be increasingly interested in the social and educational opportunities that center-based care can offer. Between the ages of 3 and 5, children also have increased access to this type of care in the form of preschool programs, Head Start, and pre-kindergarten programs. These types of programs are often half-day, and may be one reason that preschool-age children are more likely than younger children to be in several arrangements at the same time (Smith 2000).

School-Age Children

Child-care research has focused primarily on infants, toddlers and preschoolers. Once children begin school the need for child care is reduced, yet millions of school-age children still require care during the hours before and after school while their parents are working. Few jobs offer the flexibility necessary to accommodate a school-aged child's schedule; this problem is especially true for those parents who must work full-time to remain self-sufficient or who work nontraditional schedules that do not overlap with school hours. School holidays (most notably the summer break) are also a time when many families need care for older children. Child care for this age group involves a wide range of activities, including center-based before- and after-school care, as well as such structured activities as sports and lessons.

National data from 1995 indicate that 39 percent of children between the ages of 5 and 14 participated in structured enrichment activities outside of school hours (Smith 2000, 70); another 43

percent received regular care from a relative, 17 percent were in center-based or nonrelative care, and 18 percent regularly cared for themselves (Capizzano, Tout, and Adams 2000). Though typically not defined as child care, *self-care* is an important issue for this age group.

Research suggests that, in addition to child age, a range of parent and family-level factors (e.g., parent education, household composition, and ethnicity) are associated with the likelihood of using different types of care (NICHD Early Child Care Research Network 1997). For example, Hispanic families are more likely to use relative care; whereas White and Black families are more likely to use center-based care (Capizzano 2000).

Cost

Many parents struggle with finding and paying for adequate care for their children. High costs can limit families' child-care options. Center-based care is typically more expensive than home-based care, and can cost the equivalent of a year's tuition at many public universities (approximately \$4,000–\$10,000 per year for full-time care). Care is also usually more expensive for younger versus older children, because they spend more hours in care and rates are often higher for this age group (especially for infants).

Finding affordable child care is particularly difficult for low-income families. For this reason, poor families are less likely to use paid care; when they do pay for care, however, they spend 500 percent more of their income on care than families who are not poor (Smith 2000). The recent welfare reform legislation has exacerbated child-care issues for low-income families; the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 greatly increased the number of parents required to work, including those with very young children.

Recognizing that the new requirements would intensify the need for child care, policy makers simultaneously increased funding for child-care subsidies. Despite the wider availability, however, only 12 percent of children who were eligible for subsidies in 1999 received them (U.S. Dept. of Health and Human Services 1999). The extent to which this figure reflects low take-up by families as opposed to inadequacies of the subsidy system has been debated; low usage rates are likely the result of multiple factors. First, not all families who

are eligible for subsidies use paid care; some families may prefer types of care that are free or low-cost (i.e., care by friends or relatives). Subsidies generally can be used for informal or home-based arrangements, as well as formal arrangements, though many states require that the care be certified or regulated (i.e., meeting minimum safety and health standards). Second, families may not know they are eligible for assistance, particularly if they are not receiving welfare. Parents who have recently transitioned from welfare to work appear to be largely unaware of the availability of subsidies. Third, the way subsidy systems are structured can make it difficult for parents to make use of them. Most states require parents to make a copayment, and the process of obtaining and maintaining subsidies can involve several administrative hurdles. Requirements that parents maintain a continuous level of employment and an income below a set level do not fit with the sporadic nature of low-wage work.

Thus, parents whose work hours fluctuate can cycle between eligibility and ineligibility, making it difficult to maintain a stable subsidized arrangement. Finally, subsidy reimbursement rates are usually lower than market rate, and therefore not necessarily sufficient to pay for quality care. A recent analysis of several experimental welfare-to-work programs suggests that generous and well-structured child-care assistance can increase families' use of subsidies and decrease child-care problems related to parents' finding and maintaining employment (Gennetian et al. 2002).

Availability

Availability issues place additional constraints on the types of care families can use. Care for infants and school-age children is often more difficult to find than for preschool-age children. For example, the current supply of school-age child care is estimated to meet less than 25 percent of the demand in urban areas (U.S. General Accounting Office 1997). Market supply conditions vary greatly across states and communities. In general, the supply of child care tends to be lower in low-income neighborhoods than in higher-income neighborhoods, and may be particularly scarce during non-standard hours and for children with special needs (U.S. General Accounting Office 1997). Only 10 percent of centers and 6 percent of family child-care homes offer care on weekends (Phillips 1995),

and fewer offer care during the nighttime hours. Again, this issue is heightened for low-income parents, who are much more likely than other parents to work evenings, weekends, or rotating shifts.

Effects of Child Care

Quality

Most of the research on child care has revolved around its effects on developmental outcomes; this body of work demonstrates that quality of care is critical. Child-care quality is usually assessed by (1) the child-provider relationship (e.g., amount of verbal and cognitive stimulation, responsiveness, stability); (2) structural and caregiver characteristics (e.g., ratios, group size, caregiver education, physical environment and materials); and (3) health and safety provisions. Quality is often assessed using observational methods, though these are quite time-intensive and costly to use. Some indicators of quality (such as child-to-staff ratios, group size, and teacher education and training) can be assessed using questionnaires or interviews.

The primary challenge in examining the relationship between child-care quality and child outcomes is the fact that child care is a naturally occurring event rather than part of a well-controlled experiment (where children are assigned to different types of care). Families who choose different types of care are likely to differ in many ways, making it difficult to disentangle the effects of care on children. Despite methodological challenges, child-care research over the last two decades has provided a fairly consistent and convincing argument that quality matters. Poor-quality care has been associated with delayed language and reading skills, as well as problematic social behavior, including aggression toward adults and peers. Children in high-quality care, on the other hand, perform better on cognitive tasks and have fewer behavior problems than their peers in low-quality care. The size and endurance of these effects is not entirely clear.

Despite research demonstrating its importance for child development, high quality care is not readily available; on average, care in the United States is rated as poor to mediocre in quality. It is estimated that 40 percent of infants in child-care centers experience care that jeopardizes their health, safety, and development, and that one-third

of family child-care homes are of inadequate quality (see Vandell and Wolfe 2000). In general, children from more disadvantaged homes receive lower-quality care, with the exception that the working poor and families just above the poverty line experience the lowest quality, because they have only limited access to child-care subsidies and intervention programs such as Head Start.

One question often asked by parents and debated by researchers, policy makers, and practitioners is whether certain types of care are more beneficial to children than others (e.g., formal versus home-based arrangements). Given the large variation in quality across types of arrangements, this question is not straightforward. When quality is held constant, center-based care during the infant/toddler and preschool years is associated with better cognitive, language, and school performance than home-based care (NICHD Early Child Care Research Network 2000). The advantages of center care over home-based care for cognitive and intellectual development may be due to the fact that they are uniformly subject to state-specific regulations on group size, child-to-staff ratios, and safety, whereas this is the case for only some home-based arrangements (primarily family day-care homes). Centers are also more likely to have developmentally appropriate materials and may have staff trained in child development and early education. For school-age children, formal arrangements appear to benefit academic skills, social behavior, and peer relationships more than informal arrangements (e.g., hanging out with friends) or self-care. Children who experience high amounts of self-care are more likely to have problems with truancy, poor school performance, and substance abuse (see U.S. Department of Education 1998). Structured and supervised care may be particularly important for low-income youth, who often live in dangerous neighborhoods and are exposed to negative peer groups (e.g., gangs).

Age of Entry and Stability of Care

Along with quality, researchers have also examined whether age of entry into care, the number of hours spent in care, and the stability of care matter for how children are affected by child care. One concern has been that nonmaternal care at an early age might interfere with the development of a secure attachment between mother and child. Much of the available data, however, does not sub-

stantiate this concern, and instead identifies the mother as the primary influence in determining the mother-infant relationship. The more important question concerning early care may be how quality of care interacts with children's experiences at home; there is some indication that high-quality care may serve as a protective factor, while low-quality care may compound other risk factors (National Research Council and Institute of Medicine 2000).

Stability of care has been linked primarily with effects on social behavior. Stable arrangements allow children to develop a relationship with their provider and with other children. Children may experience instability because of turnover in child-care staff or because family circumstances lead them to be in multiple arrangements (consecutively or concurrently). It is estimated that 34 percent of infants and toddlers of working mothers are in two or more arrangements each week (Ehrle, Adams, and Tout 2001); relatively less is known about how many different caregivers children are likely to experience over time.

Early Childhood Interventions

Quality of care appears to be particularly important for children who are at risk; low-quality care may exacerbate existing problems, while high-quality care may act as a protective factor. Several early childhood intervention programs have provided intensive services to low-income children and their families in the context of a preschool program, with notable success in improving such outcomes as academic achievement, grade retention, freedom from crime, and adult earnings (see Vandell and Wolfe 2000).

Head Start is one of the largest and oldest early childhood intervention programs. Started in 1965, this federally funded preschool program was designed to improve the school readiness, social skills, and health of children from low-income families. As part of the Head Start program, parents also receive a range of services and supports. Over the years, evaluations of Head Start have shown generally positive short-term effects on children's academic performance and IQ, as well as long-term effects on cognitive ability, achievement, social adjustment, grade retention, and educational attainment (Barnett 1995; Currie and Thomas 2000). The long-term effects of Head Start are somewhat tenuous and appear to depend in

part on children's ethnicity and their school experiences in the years after Head Start (Currie and Thomas 2000). Historically, Head Start has not been considered child care because of its half-day schedule and involvement of parents. With increased pressure on low-income parents to work (and to work full-time), there have been some efforts to expand Head Start to better meet the needs of working poor families. Some Head Start programs now provide "wrap-around" child-care services to extend the program to a full day. In 1995, Early Head Start was also started to provide child and family development services from birth to age three. An initial evaluation of Early Head Start demonstrates positive effects on children's cognitive, language, and social-emotional development after one to two years of program participation (U.S. Dept. of Health and Human Services 2001).

Policy Issues

Evidence that high-quality child care is in short supply and often unaffordable raises questions of what can be done at the local, state, and national level to improve families' access to care that supports parents' employment and children's development.

Child-care workers historically earn very low wages, and receive no benefits or paid leave. As a result, staff education and training levels are usually low, and turnover rates are high (estimated to be 31 percent a year for centers). Increasing tuition rates to improve staff wages, however, would only increase the already substantial financial burden that child-care costs pose to families. Alternatively, public or private funds could be used to subsidize wages and provide benefits to child-care workers.

All center-based care, as well as some forms of home-based care, is subject to state regulations on quality. These regulations mandate minimally acceptable levels of supervision and safety, and vary widely across states. Quality may be improved by increasing state standards, although policy makers and others have expressed concern that doing so will make some types of care unaffordable for families, and may also increase the likelihood that home-based providers will choose to be unregulated.

The distinction between day care, preschool, and early childhood programs has become less clear in recent years. Many programs now provide a range of services including supervision and nur-

ture while parents are working, early learning and school preparation, health and developmental screening services, and interventions for at-risk families and children. Given the increased need for care while parents are working and the increased interest in preparing children for school, some have argued that such integration needs to be more widespread, and that it warrants public funding (similar to the public education system).

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See also: Attachment; Head Start; Maternal Deprivation; National Association for the Education of Young Children (NAEYC); Public Policy and Early Childhood

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Child Custody

Child custody refers to the legal and physical rights and responsibilities parents have with respect to their child.

Questions of child custody are usually thought of in connection with divorce, and divorce certainly does account for many cases in which child custody must be decided. At a divorce rate of 4.0 per 1000 population in the United States in 2001 (U.S. Department of Health and Human Services. National Center for Health Statistics 2002), which amounts to approximately 1.1 million divorces a year, and an average rate of 0.9 children per divorce decree, approximately 1 million children are affected by divorce each year in this country. Divorce, however, is not the sole reason for child custody allocations. Currently one out of three children in the United States is born to unmarried parents (U.S. Department of Health and Human Services. National Center for Health Statistics 2002). The legal determination of custody is not based on parents' marital status, and thus the number of children affected by child custody allocations is much larger than the number of children affected by divorce. Reporting of child custody

cases is neither uniform nor comprehensive within and across states, and many states only begin recording custody-related data after families enter mediation. Official numbers of custody allocations do not account for cases that never utilize mediation services or the large number of parents who resolve their custody issues informally. Only if parents cannot agree on a custody arrangement and seek the help of the court will the courts become involved.

There are two primary types of custody. Legal child custody refers to the right to make all major decisions regarding the child's health, welfare, education, and religious training. Physical custody is the right to the daily care and control of the child. In practice, one may encounter different types of child custody, which involve various combinations of legal and physical rights:

Sole legal custody grants to only one parent the right to legal custody. This "custodial" parent has the right to make all major decisions regarding the child, independent of the other parent. The other parent, who is referred to as the noncustodial parent, typically has visitation rights, including overnight visits, vacations, and holidays.

Sole physical custody grants exclusive physical custody to one parent. Only in rare cases are both sole legal and physical custody granted to only one parent. Most commonly this is the case when the other parent has neglected or abused the child.

Joint legal custody grants legal custody rights to both parents equally. This means that parents need to inform and agree with each other before making major decisions for the child.

Joint physical custody grants physical custody rights to both parents. However, the actual amount of time each parent spends with the child may not be equal. Parents with joint physical custody may have a parenting plan, a specific court order, or an informal arrangement that specifies the actual times the child will spend with each parent. Parents who share physical custody typically also share legal custody; however, sharing legal custody does not necessarily entail shared physical custody.

Split custody refers to "splitting" siblings between parents and may entail any combination of physical and legal custody.

When parents cannot agree on custody issues they may take their dispute to court, where a judge will decide the specific custody arrangement, based on the child's best interests. What consti-

tutes the child's best interests has historically been subject to ideological changes. Until the mid-nineteenth century, fathers were unequivocally favored in custody decisions, and mothers had virtually no rights. Over the next hundred years, psychologists increasingly emphasized that the mother was naturally the more nurturing parent because biology predisposed her to the parenting task. The father was seen as playing an indirect role, as the provider for the mother-child relationship. As a result, the allocation of custody rights shifted from a complete right of fathers to a sweeping preference for mothers. The new maternal preference was expressed in the "tender years doctrine," which held that children of tender years should be raised by their mothers.

In the 1970s and 1980s, further significant changes occurred. The courts and the country moved away from the presumption that mothers are always the best parents. The "tender years doctrine" was discarded in most states because it was solely based on gender and was thus unconstitutional. Many states began to require that parties to a custody dispute had to first attend mediation. Mediation is a non-adversarial process through which a neutral person, typically a mental health professional, attempts to help parents settle their dispute. Another important change was the shift to a preference for joint custody in many states: Joint custody is ordered unless it is proven not to be in the child's best interest. Other states grant joint custody only if both parents agree to it. Under the Uniform Child Custody Jurisdiction Act, judges are required to give "full faith and credit" to custody orders issued in other states and to enforce these decrees.

Currently the majority of children, approximately 85 percent, who live with a single parent live with their mothers (U.S. Census Bureau 2001). About 40 percent of these children live with mothers who have never been married. The numbers of children living with fathers increased to 2 million in 2000 (U.S. Census Bureau 2001). In father-headed households, it was more likely that fathers were divorced (44 percent) than never married (33 percent) (U.S. Bureau of the Census 1998). In contrast, mothers who were the custodial parent were as likely to be divorced as never married. The increase in father-headed households reflects the efforts of a growing national fatherhood movement and, perhaps as a result, father-friendlier courts.

What Determines the Child's Best Interest?

An estimated 90 percent of child custody cases are settled according to the parents' wishes. The courts will accept what parents propose. Critics point out that this process does not necessarily insure the child's best interest. If, for example, violence exists in the family, the terms of the agreement may not be fair but coerced and may prolong the child's exposure to violence. When parents cannot agree, the court tries to evaluate the best interests of the child, considering many factors. The best-interests-of-the-child standard has been much criticized because it is imprecise and may therefore contribute to legal conflicts between parents, as each has an incentive to demonstrate that he or she is the better parent (Fineman 1988).

Another criticism is based on the observation that the best-interests standard does not provide clear and definite guidelines but leaves the decision to the judge; it may thus permit judicial bias and arbitrariness, as judges may weigh criteria according to their own personal values. The following describes some of the primary factors that judges may consider in their decision making.

The Parent-Child Relationship

It has been recommended that young children be placed with their primary caregivers to minimize disruption for the child (Maccoby 1999). Other things being equal, this recommendation is probably followed, although fathers have protested that this standard favors mothers. In response, it has been suggested that this standard provides an incentive for fathers to be involved in their children's upbringing during the marriage. Parents' ability to provide adequately for the child (e.g., food, clothing, medical care) is also taken into account.

Continuity in the Child's Experience

The courts consider not only the child's continuity with the primary caregiver but continuity with home, schools, and community. In the spirit of continuity, some states and some judges may favor the parent who is more likely to allow the nonresidential parent access to the child.

Parents' Mental and Physical Health

Courts frequently depend on expert testimony to ascertain the effect of parents' health on children. It needs to be demonstrated that parents' health affects child rearing in order to be deemed relevant.

Courts may also consider any special needs the child may have, including those influenced by the child's age and gender.

Lifestyle and Conduct of Parents

Parental conduct, including drug or alcohol use, likelihood of exposing the child to secondhand smoke, parental neglect or child abuse, and, increasingly, evidence of domestic violence, may influence the determination of child custody. In contrast, parents' sexual relationships are no longer considered relevant unless it can be shown that parents' activities have a negative impact on the child.

The Wishes of the Child

Whether the child's wishes should be considered is controversial and varies from state to state. For example, Georgia permits children age 14 and older to choose the parent who will have custody, whereas California and most other states do not rely on the child's age but consider the child's maturity. There is a concern that children may not know what is in their best interests and may even pick a parent because he has more money or is more permissive. A further concern is that letting the child choose the custodial parent will induce later guilt feelings in the child.

Sometimes neither parent is fit to have custody of the child because, for example, of substance abuse, criminal activity, or child abuse and neglect. The court may in these situations award custody to a third party (e.g., relatives or foster parents).

Evaluation of Different Custody Arrangements

Parents commonly ask whether any custodial arrangement is better than another. Because of the great diversity in individuals and in their living circumstances, there is no simple answer to this question. That is, we cannot generalize that any one type of arrangement is better for all children or all parents. However, it is possible to identify certain trends from an examination of the research on child custody.

A primary advantage of joint custody is that it permits continuing contact and involvement with both parents (e.g., Wallerstein and Kelly 1980). Joint custody has also been linked to parents' higher satisfaction with the custody arrangement because it alleviates some of the burdens of par-

enting for each parent, as parents get time off for their own interests. These positive outcomes are found primarily if parents agree to joint custody. In contrast, if parents did not want joint custody but the court ordered it nonetheless, joint custody has been associated with lower rates of well-being and satisfaction and higher rates of relitigation (Maccoby 1999).

Disadvantages of joint custody include less stability for children. They must be shuttled between the parents, which may mean strong contrasts in family structure when one or both parents have remarried, different household rules and parental expectations, and often even a change in socioeconomic status from one household to another. Joint custody also poses problems for parents who want to move to a different area. Perhaps the most crucial consideration is parents' level of conflict. Research has consistently shown that ongoing parental conflict is a primary predictor of children's maladjustment (e.g., Hetherington and Parke 1993). A recent meta-analytic review of thirty-three studies found that children in joint physical or legal custody tended to be better adjusted than children in sole custody (Bauserman 2002). They showed fewer behavior and emotional problems, higher self-esteem, better family relations, and better school performance than children in sole custody arrangements. The parents in these joint-custody arrangements tended to report less conflict than parents in sole-custody families.

However, this does not mean that joint custody *causes* less conflict or better child outcomes. The more likely explanation is that more cooperative parents choose joint custody and that their cooperation and parental commitment contribute to both less conflict and better child outcomes.

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See also: Divorce, Children's Adjustment to; Divorce Mediation; Father-Child Relationships following Divorce; Remarriage

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Child Development, Cultural and Community Influences on

The ways in which children experience the changes involved in growing up, as well as the ways in which families support this process, are shaped by the cultural communities in which they live (Harkness and Super 1995). The complex and ever changing ecologies of communities, including such elements as economic practices, contact between generations, and governance systems, give rise to unique beliefs about children, how they are raised, and ultimately how they develop.

Although past research has tended to focus on the mother's and, to a lesser extent, father's role in child rearing, it is important to recognize that other individuals are also an integral part of children's development. However, who these individuals are and the extent to which they are involved vary by community. In some communities, pediatricians, preschool teachers, and day-care workers play a major role in providing support and advice to parents. Children spend hours learning from and being entertained by television characters such as Big Bird and Barney, and babysitters temporarily come into homes to feed, bathe, and play with young children. In other communities, mothers delegate much of the care of their children to

older siblings, under the watchful eyes of grandmothers, neighbors, and aunts, and traditional healers and shamans are called in when advice from experts is needed.

Because those involved in parenting generally come from the same community, they often share common beliefs about how best to raise children. These beliefs may be explicit, but more often than not they are unquestioned, taken-for-granted ideas about the nature of children, how they should develop and what is needed to prepare them for adult roles (Harkness and Super 1996). In some communities, newborns are considered to be part of the spirit world and thus need to be indulged in an effort to convince them to join the human world (Lancy 1996). In such places, caregivers believe that an infant's every need should be met on demand in order to draw them into close family relationships. In other communities, it is believed that this type of responsiveness will spoil children. Newborns are thought to be totally dependent and thus to need to learn to regulate themselves by adapting to adult feeding and sleep schedules (Harkness and Super 1996).

Parents in different cultural communities also have diverse expectations about young children's milestones. For example, the extent to which developmental events are recognized and celebrated, whether it be Baby's First Word, Baby's First Step, or Baby's First Errand, will vary by community. Similarly, expectations and feelings about when these culturally salient milestones should occur are shaped by context (Harkness and Super 1995). In some communities, this may mean expecting three-year-olds to buy bits of food or greet adults using appropriate titles. In other communities, parents focus more on toddlers being able to control their temper or achieve independent toileting. Even in areas as seemingly universal as walking, talking, and eating, there is noticeable disparity between what communities expect. For instance, some believe that children can eat solid foods during the first few months while others see this as detrimental, believing that they should be exclusively breast-fed for much longer periods.

Community dynamics are also reflected in parents' views about what is needed to develop appropriately—what is seen as physically, socially and cognitively good for children. For example, parents in some areas of the world believe that young children need to be actively encouraged to eat, or even

force-fed, in order for proper physical growth to occur (Harkness and Super 1996). Yet this is unthinkable in other communities, where it is understood that children are able to regulate their own food intake and will eat when hungry. Likewise, some communities believe that frequent face-to-face conversations and play are necessary for normal social and cognitive development (Schiefflin and Ochs 1986), while other communities assume that normal development requires highly regulated routines of rest, stimulation, and sleep (Harkness and Super 1996). More stimulation is not necessarily considered better.

Parenting beliefs, or what parents say, may be clearly reflected in parenting practices, or what parents do. But usually the connection between belief and practice is hidden by a myriad of other factors and circumstances. Parents may, for example, believe that elderly female relatives are the best caregivers for young children. Yet, due to such constraints as limited resources and migration, they may not be able to meet this ideal. In addition, parents in different communities may have similar expectations for their children (e.g., obedience, cleverness), but different ways of helping their children to achieve these goals.

Regardless of these seeming inconsistencies between belief and practice, taken together, the parenting practices of communities transmit messages to children about cultural values and valued ways of being (Harkness and Super 1995). Each community generates daily routines around feeding, sleeping, hygiene, and socialization to meet the perceived needs of its young children. Where these routines take place and how children and others participate in them are structured by specific community dynamics. For example, in some communities children fall asleep in the midst of ongoing family activities, eventually to be scooped up and tucked in next to parents and siblings (Morelli et al. 1992). In other communities, “bed-time” is a highly structured event. At a predetermined hour, children are prepared to sleep by themselves. Teeth are brushed, stories read, lullabies sung, and bottles warmed, and children are tucked in with their favorite blankets and stuffed toys. Similarly, feeding takes many forms. In many communities, young children continually eat small portions of food from easily accessible cooking pots and rice boxes, often while wandering around with other children. In contrast, young children in

other communities are strapped into highchairs and pulled up to tables to eat with adults. Food is often specially prepared and apportioned by caregivers at “mealtimes,” and helping oneself to snacks is discouraged.

Socialization is an area that is particularly shaped by community differences. For instance, the extent to which language development is actively promoted varies quite a bit from community to community. Adults in some communities simplify what they say according to children’s perceived understanding, using distinctive “baby talk” to facilitate early communication. In other communities adults may also see the need to adapt language for young children, but instead use structured call-and-response routines to foster the development of appropriate language skills (Schieffelin and Ochs 1986). In still other communities adults seem not to make any adjustments at all in the use of language, only initiating conversation if directions need to be given or information is required. Rather than explicitly being taught, young children in such communities develop language and other necessary social skills through observation and imitation of everyday life (Rogoff 1990).

The ways in which communities raise their young children vary widely, and children, as a result, develop different skills at different rates. However, despite this difference, it is important to realize that most children, regardless of where they live and how they are raised, ultimately grow up to be contributing adults and valued community members.

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See also: Acculturation; Early Childhood Assessment; Culture and Human Development; Early Childhood Education; Ecodevelopmental Theory; Families, Southeast Asian; Family Diversity; Family Paradigms; Parent Education Programs for Immigrant Families

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Childhood Obesity

See Psychological Consequences of Childhood Obesity

Children from Immigrant Families

Since 1990, the number of children of immigrant families in the United States has grown approximately seven times faster than the number of children to U.S.-born families. Given this growth rate, it is estimated that one out of every five children under the age of 18 living in the United States (14 million) is an immigrant or is a child of an immigrant parent (Board on Children, Youth and Families 1998). This figure can be viewed in light of the fact that approximately 99 percent of today's Americans are either immigrants themselves or have ancestors who came to this country within the past 400 years, which, in terms of the history of global migration, is a minuscule span of time (Cafferty et al. 1983). Therefore, the experience of today's immigrant families is one that is shared, at least in some measure, with a majority of American families, whether currently or within their family history.

The children of immigrant families make up an extremely diverse group, rendering it difficult to build generalizations regarding their needs, strengths, and risks. Beyond the basic needs of food, clothing, shelter, physical safety, psychological nurturing, health care, and education, it appears that the needs, strengths, and risks of children of immigrant families vary considerably.

Some children of immigrants do very well in their new country. On many measures of health and well-being, many children from immigrant families perform as well as or better than U.S.-born children with U.S.-born parents. Evidence from the Ontario Child Health Study (Munroe-Blum, Offord, and Kate 1989) indicates that immigrant children are not always at heightened risk for psychiatric disorders or poor school performance and also

tend to make use of mental, health, and social services less often than their nonimmigrant peers. However, despite the many success stories, it is important to recognize that the consequences of immigration for immigrant children and their families can be lifelong and that, while many immigrant children succeed, others work very hard just to survive (Suarez-Orozco and Suarez-Orozco 2001).

A large number of individual and contextual variables impact the successful and healthy development and acculturation of children from immigrant families. Consequently, it may be necessary to reevaluate the assumption that all children of immigrant families experience the same kind of acculturation process.

Contextual variables

The contextual variables include, but are not limited to, the following:

Pre-Immigration Status and Experiences in Country of Origin

Immigrant children and families come to the United States for a variety of reasons and under a host of circumstances. While some families come to the United States to flee from war and violence, others may come in search of new opportunities for themselves and their children. Some families come to the United States with many monetary and nonmonetary resources, while other families come with very few social and economic resources. The pre-immigration experiences as well as the level of resources that immigrant families come with can impact their acculturation process. Families that come with previous experiences of violence and fewer resources are often at higher risk for acculturative stress.

Pattern of Arrival

A large percentage of immigrant families come to America in units, rather than as a whole family (Suarez-Orozco and Suarez-Orozco 2001). These intrafamilial separations differ in length of time, with the longer separations being usually more challenging for the family and more difficult for the children.

Sociopolitical Relationship between Receiving Country and Country of Origin

International relationships between countries often impact the immigration process and accul-



Immigrant children learning local language (Skjold Photographs)

turation experiences of immigrant children and families. Immigrant children and families who are originally from countries that are not politically allied with the United States may face particular hardships. For example, immigration policies are influenced, in some measure, by political relationships between nations, and often immigration laws and other structures allow powerful countries to distinguish between wanted and unwanted immigrants.

Social Capital of Receiving Region

Different regions in the United States are equipped with varying levels of social capital, which includes the monetary and nonmonetary resources of a particular ethnic community that can assist with jobs, launch businesses, and establish a pool of suppliers and clients (Portes 1995). Immigrant children and families who move to an area that is richer in social capital may find more economic resources and more support from an ethnic enclave.

Social and Cultural Milieu of the United States

The social and cultural milieu of a country can change over time and is dependent on other contextual factors. For example, economical trends tend to impact the social context, attitudes toward immigration being one example of a domain that is susceptible to these kind influences.

Individual Variables

The individual variables that impact the development and acculturation process of children from immigrant families include, but are not limited to, the following:

English Language Proficiency

The level of English language proficiency is an area where immigrants greatly differ and an area that can significantly impact the acculturation experience. Some immigrant children and families come to the United States fluent in English, while others come with very little English proficiency. Although speaking English is likely to have a favorable impact on school success for immigrant children, it is unclear whether simultaneous maintenance of the home language is positively or negatively correlated with school success. Language differences between home and the English-speaking school have been considered one of the major factors im-

acting school success. However, Mouw and Xie (1999) argue that bilingualism has a positive effect on academic achievement because speaking multiple languages stimulates cognitive development and maintaining language proficiency in their native language allows immigrant children a mechanism to resist unwanted assimilation.

Documentation Status

Some immigrant children and families have documentation that proves their temporary or permanent status as U.S. residents or citizens, while other immigrant children and families do not have any documentation and are here illegally. Nondocumentation status is often extremely stressful for immigrant children and families.

Acculturation Strategy Adopted

The way in which an individual engages in or associates with the host culture is described as an acculturation strategy. The strategies of acculturation include (1) *assimilation*, which occurs when individuals do not wish to maintain their original cultural identity and primarily seek social relationships with the dominant society; (2) *separation*, which is characterized by a maintenance of the original culture and identity, and by a wish to avoid social relationships with the dominant society; (3) *integration*, which occurs when individuals wish to maintain relationships with their original culture and at the same time want to develop social relationships with the dominant society, and (4) *marginalization*, which occurs when individuals do not maintain their original cultural identity and do not have a desire to develop social relationships with the dominant society. Differences in acculturation strategy appear to be a factor that contributes to the amount of acculturative stress experienced by an individual (Berry, Segall, and Kagitcibasi 1997).

Given the variety of individual and contextual factors that impact the acculturation and development of children from immigrant families, understanding the general health, psychological, educational, and social needs of this population requires a more comprehensive view. The internal and external variables as well as the interaction between them need to be considered when designing and implementing services and programs, and when devising educational plans. This perspective is especially important, given that for children of im-

migrant families, performance in school, psychological adjustment, and the acculturation process interact (Munroe-Blum et al. 1989).

The most critical context for the acculturation of children is the school. Although some of the specific needs of immigrant children are related to their newcomer status, another potential area of need is related to the home-school link. Immigrant children and U.S.-born children of immigrant parents have to negotiate what is often a misalignment between the culture of home and the culture of school. This can be particularly stressful, especially as many schools are unable to meet the academic needs of this student population. Since schools serve as acculturating organizations for children from immigrant families, they have a great deal of power to facilitate the healthy development of these individuals. In order to do so, schools must make both internal organizational changes (e.g., rethinking the belief that assimilation is the only way to acculturate) and external changes (e.g., creating, implementing, and sustaining programs that target the special needs of this population).

In the same way, since both individual and contextual variables are critical in determining the acculturation process of children of immigrant families, successful interventions of any kind aimed at helping this population require change at the individual and context level.

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See also: Acculturation; Families, Southeast Asian; Family Diversity; Hispanic Immigrant Experience; Parent Education Programs for Immigrant Families

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Children of Alcoholics

Recent national estimates indicate that there are more than 30 million individuals currently living in the United States who have grown up in an alcoholic family—such individuals are referred to as children of alcoholics (COAs). COAs are at increased risk of expressing a range of undesirable outcomes. For example, male COAs are four times more likely than male non-COAs to have serious problems related to the consumption of alcohol (e.g., passing out, drinking and driving) and to develop a clinically diagnosed alcohol disorder. COAs, in general, are also more likely than non-COAs to have academic difficulties, mental health problems such as depression and anxiety, behavioral problems such as physical fighting and stealing, and legal encounters with the police and other legal authorities.

Although COAs, relative to non-COAs, are at increased risk for behavioral maladjustment and poor health outcomes, most COAs in fact do not develop serious difficulties; rather, many COAs adapt to their adverse circumstances and proceed with development across the life span in a manner much like non-COAs. These highly disparate developmental pathways and outcomes among COAs (i.e., some manifest heightened levels of academic, behavioral, and emotional problems, whereas others manifest a more normative developmental pattern) have precipitated considerable interest among scientists and clinical practitioners. There has been an increasing focus on genetic and human ecological factors that seem likely to play more of a role in those COAs who develop serious difficulties in adjusting to the challenges and opportunities confronted during the lifelong course of human development.

Biological factors have been identified among COAs that contribute to risk for the development of alcohol problems and other forms of maladjustment. For example, maternal alcohol consumption during pregnancy, a prenatal biological influence, has been associated with a wide range of negative effects on offspring, including facial aberrations (e.g., thin upper lip and elongated flattened mid-face), skull or brain malformations, neuropsychological and intellectual deficits (e.g., impaired attentional control), and behavioral problems (e.g., impulsivity) (Streissguth 1986). These negative effects have been referred to as fetal alcohol effects (FAEs) and collectively as fetal alcohol syndrome (FAS). Longitudinal studies, in which children with FAEs or FAS are studied periodically from birth across time, indicate that these children have persistent problems in academic performance (e.g., lower school grades, lower IQ scores, more learning problems, poorer short-term memory functioning) and behavior domains (e.g., impulsivity, aggression) into childhood and adolescence, and probably beyond (Streissguth et al. 1995).

In addition to these prenatal (biological) influences associated with maternal alcohol consumption, genetic influences have also been identified as risk factors for COAs. For instance, by attaching electrodes to the human scalp and recording electrical responses to stimuli, researchers have found that COAs differ from non-COAs on an electrical response referred to as P300 (a positive event-related potential response that occurs approximately 300 milliseconds after stimulus presentation). The P300 response has a large genetic component and has been associated with important cognitive functions (e.g., allocation of attentional resources and maintenance of working memory). The P300 response amplitude has been found to be significantly lower among COAs compared to non-COAs. Although a genetic explanation is neither a definitive nor comprehensive explanation for differences in outcomes between COAs and non-COAs, research findings regarding the P300 response do suggest that COAs may inherit a neurobiological (brain) deficit (i.e., reduced P300 response), which in turn impacts important cognitive (thinking) functions related to attention and memory, adversely influencing behaviors (e.g., attentional-focus, memory retention) and performance (e.g., test scores) in key contexts such as school and the home.

Besides genetic and biological influences, family influences have been a prominent focus of factors impacting COAs. For instance, parenting deficits, such as harsh discipline, low monitoring (e.g., not knowing where their children are, or who they are with), and inconsistency (e.g., one day cheerful and helpful, the next day angry and obstructive) are more typical among parents of COAs than parents of non-COAs. Such parenting deficits may be attributable, in part, to heavy alcohol consumption by parents that may impair parental judgement and decision making, and may also influence mood fluctuations that children experience as inconsistency. Parents of COAs, relative to parents of non-COAs, are also more likely to have higher levels of marital conflict and violence. COAs exposed to higher levels of marital conflict and violence are more likely themselves to develop emotional and behavioral problems, and to fail to optimally develop important adaptive capacities related to emotional self-regulation and perceived self-competence. Problems associated with heavy alcohol use by the parents of COAs may also undermine the family (and child's) sense of economic security; an alcoholic parent may lose a job or frequently miss work, thereby producing financial strain on the family unit (e.g., Windle and Tubman 1999).

Several individual attributes have also been found to distinguish COAs from non-COAs. For instance, COAs have been reported to have more difficult temperaments than non-COAs, and this may bode ill for interpersonal relationships with parents, siblings, peers, teachers and other adults. A difficult temperament is characterized by higher levels of activity, greater distractibility, more negative mood states (e.g., anger, hostility, negativity), and inflexibility (e.g., difficulty adjusting to changes). COAs with a difficult temperament are commonly viewed as problematic or difficult to get along with, and thereby may not benefit from positive interactions with significant others (e.g., family members, teachers, peers) to develop important social-cognitive skills, positive perceptions of self, and prosocial behaviors (e.g., empathy). Moreover, because temperament has a strong genetic component, both COAs and their parents may have difficult temperaments, resulting in heightened levels of parent-child conflict within the family context.

Other individual attributes that distinguish COAs from non-COAs are alcohol expectancies. Al-

cohol expectancies are beliefs associated with the consumption of alcohol, whether positive (e.g., alcohol helps me think more clearly), or negative (e.g., alcohol impairs my thinking). COAs are more likely to perceive alcohol as having more positive effects and fewer negative effects than non-COAs, thus suggesting that COAs are more predisposed to drink alcohol because they believe it will produce more highly desirable effects. When confronted with stressful circumstances in life, COAs are also less likely than non-COAs to use problem-solving coping strategies. That is, rather than seeking systematic solutions to the stressful life events encountered, COAs are more likely to use coping strategies (e.g., drinking) to avoid addressing the problem.

As noted at the outset of this contribution, it is important to retain the fact that most COAs do not develop serious alcohol problems or express mental health difficulties. However, there are a number of risk factors, many enumerated above, that often occur within the family ecology of COAs that pose considerable risk for disrupted development. Important work remains to determine both how it is that many COAs appear to follow a normative developmental course despite these adverse family circumstances, and how interventions can be applied early in development to assist those COAs who are at risk for problematic outcomes.

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See also: Prenatal Development and Care

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Children of Incarcerated Parents

Current estimates indicate that between 1.5 million and 2 million American children have an incarcerated parent, and that many thousands of others have experienced or will experience the incarceration of a parent at some point in their lives (Seymour 1998). Given the escalating rates of adults being incarcerated in the United States, these figures are only likely to increase in the future. Most researchers traditionally assume that the consequences of the incarceration of a parent are negative and potentially traumatic for their children (Sack, Seidler, and Thomas 1976). Yet, many crucial variables (e.g., child's age and gender, type of criminal offense) need to be taken into consideration when assessing the overall impact of a parent's incarceration on the children (Gabel 1992).

The rate of incarceration in prisons and jails in the United States has recently escalated at an extremely fast pace. According to the U.S. Department of Justice (2001), the proportion of incarcerated U.S. residents has increased from 1 in every 218 to 1 in every 142 from 1990 to 2000. This trend seems to have affected both men and women. In 2000, there were 110 female inmates per 100,000 women in the United States, and 1,297 male inmates per 100,000 men (U.S. Department of Justice 2001). Certain minorities are affected more than others. For instance, 12 percent of Black males, 4 percent of Hispanic males, and 1.7 percent of White males in their twenties and thirties were in prison or jail in 2000 (U.S. Department of Justice 2001). As a direct result of this exponential increase, a growing number of children in the United States now have a mother or father in prison. Although their precise number is still unclear, mainly due to the lack of a specific agency or

system charged with collecting data about this population, it is commonly estimated that approximately 200,000 children in this country have an imprisoned mother, and that more than 1.6 million children have an imprisoned father (Seymour 1998).

Despite the scarcity of precise information in the field and the constraints inherently associated with prison settings, most studies usually conclude that the incarceration of a parent produces negative consequences for the children (Sack, Seidler, and Thomas 1976). Among the most commonly cited effects are the strains of economic deprivation; loss of parental socialization through role modeling, support, and supervision; feelings of abandonment loneliness, shame, guilt, sadness, anger, and resentment; eating and sleeping disorders; diminished academic performance and disruptive behaviors at home or school. In addition, feelings of being stigmatized by peers, teachers, and society in general might emerge, unless the incarceration is seen as a direct result of social prejudice against minorities (Gabel 1992). Finally, many children receive a distorted explanation of why their mother or father is absent, which might lead to further problems. Indeed, such practices are universally condemned in the literature as harmful to the child, and potentially the cause of behavioral difficulties (Sack, Seidler, and Thomas 1976).

Yet, much of the research involving children with incarcerated parents has been methodologically limited (Gabel 1992). This is partly due to the diversity of situations that individuals may encounter. In that respect, many different variables need to be taken into consideration when assessing the overall situation of a given child and the impact of the parent's incarceration. These variables include the age, developmental stage, and gender of the child; the parent's gender (e.g., mother or father); the kind of criminal offense committed by the parent; the type of relationship between the incarcerated parent and the child or other family members prior to the parent's incarceration; the duration of imprisonment; the type and frequency of visits and other contacts; the child's living arrangements during and after the parent's incarceration (e.g., remaining parent, grandparents, foster care, adoption); the family's ethnicity and socioeconomic status (SES).

As in other types of separations (e.g., divorce), several studies have shown that behavioral changes

in children can be accounted for by other factors in addition to the separation itself. For children of incarcerated parents, such factors may include parental discord, home instability, and financial stress (Gabel 1992). Sometimes, imprisonment can even represent a source of relief from difficulties associated with the removed parent (e.g., financial strain, domestic violence, sexual abuse).

However, in most cases, the incarceration of a parent is a difficult and painful event in the life of a child. In that respect, the amount and quality of the contacts that children are allowed to establish and maintain with their incarcerated parent are crucial variables. In fact, several studies have shown that children who interact with their incarcerated parent only once a month or less develop substantial emotional needs as compared to children who visit their parents more often. These studies have also indicated that failure to provide nurturing relationships that fulfill these emotional needs might contribute to a continuation of the cycle of incarceration (Landreth and Lobaugh 1998).

On the other hand, when regular contacts and visits take place, children get an opportunity to better understand their parent's situation, to see the parent realistically, and to express their emotional reactions to the separation. Regular visitation also allows parents and children to maintain their existing relationship, thus allowing the family to reunite more successfully following separation (Johnston 1995). Yet, despite these beneficial aspects, approximately one-half of incarcerated parents in the United States do not receive any visits from their children, while many others receive only infrequent visits (Seymour 1998).

In any case, children of incarcerated parents face unique difficulties. Assessing and addressing their specific needs is a complex task, and the child welfare system faces many challenges in that respect. However, this growing population demands attention.

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See also: Attachment

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Children's Health in Family Policy

All children and adolescents require preventive health care. Children, especially those in low-income and poverty situations, are unlikely to receive such care without health insurance. Providing access to health care for uninsured low-income children has been the focus of two major federal/state programs: Medicaid and the State Children's Health Insurance Program (SCHIP). These two programs—referred to as the health care safety net for low-income children—are prime examples of macrosystem policies (i.e., policies that operate at the societal level; Bronfenbrenner 1979) designed to improve the ecology of children's health.) The goal of both initiatives is to ensure meaningful health benefits to children who are at risk of poor health due to economic circumstances, benefits that include routine preventive care, as well as treatment for acute, emergent, and chronic conditions.

Medicaid

In 1965, the federal government enacted Medicaid, authorized by title 19 of the Social Security Act. Medicaid is a joint federal- and state-funded health insurance program for the poor, financed through general tax revenues. The federal government share ranges from 50 percent in the wealthiest states to 80 percent in those states with the lowest per capita personal income. In some states, local governments share a portion of the state costs. The program is administered by each state under federal regulations and guidelines.

Two basic groups of individuals are eligible for Medicaid: low-income children and families, and the aged, blind, and disabled. An eligible Medicaid recipient must meet income and asset limits that

vary by category. Medicaid is available to children whose family income is below 100 percent of the federal poverty level (FPL).

Since its inception, both program enrollment and expenditures have grown well beyond original expectations. A major expansion occurred in 1989, when the United States Congress mandated that states provide all Medicaid services allowable under the Social Security Act to children under the age of 21. Medicaid has been a successful program in providing health care to millions of uninsured children at the lowest levels of poverty: In federal fiscal year 1998, for example, 20.2 million children were covered by Medicaid. Even so, during the same time, more than 10 million children remained uninsured (U.S. Department of Health and Human Services 2001). Moreover, because of state differences in definitions of allowable income and assets, some have reported that only half of the persons who are below the federal poverty standard actually qualify in their states for Medicaid (Raffel and Raffel 1994).

SCHIP

As part of the bipartisan Balanced Budget Act of 1997, the State Children's Health Insurance Program (SCHIP) was born. Created under title 21 of the Social Security Act, the broad goal of SCHIP is to extend health insurance coverage to uninsured children whose families earn too much for Medicaid but too little to afford private health insurance. The law targets children living in families with incomes below 200 percent of the federal poverty level (FPL).

SCHIP is the largest expansion of the federal commitment to health insurance since the enactment of Medicare and Medicaid in 1965. This program, which began in fiscal year 1998, makes approximately \$4 billion available to states each year. To obtain these federal funds, states must contribute matching funds at rates that are 70 percent of their state share under Medicaid. Under SCHIP, states can expand their existing Medicaid programs, establish a program separate from Medicaid, or combine the two approaches. Unlike Medicaid, however, SCHIP is not an entitlement program, which means that the state is not obligated to provide title 21 benefits to all children who qualify, and can establish a waiting list for the program. To be eligible for title 21–financed premium assistance, federal law specifies that a child

must be under age 19, be uninsured, be ineligible for Medicaid, not be the dependent of a benefits-eligible state employee, and have a family income at or below 200 percent FPL.

The State Children's Health Insurance Program is noteworthy for the considerable flexibility it extends to the states in designing their children's health insurance initiatives. While states expanding coverage through Medicaid are largely held to that program's rules, states creating new programs have the freedom, within certain federal limits, to design new benefit packages and service delivery arrangements, impose cost sharing, adopt simpler eligibility rules and processes, and avoid the entitlement obligation of Medicaid by creating enrollment or budget caps, if they desire. Three years after the passage of title 21, every state (and the District of Columbia) had a SCHIP program up and running, with eighteen states adopting Medicaid expansions, fifteen implementing separate programs, and eighteen choosing a combination approach (Health Care Financing Administration 2000). This successful program enrolled 3.3 million children during federal fiscal year 2000.

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See also: Bronfenbrenner, Urie; Ecodevelopmental Theory; Public Policy and Early Childhood

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Coactions

See Individual Development as a System of Coactions

Cocaine and Crack

The 2000 National Household Survey on Drug Abuse (NHSDA) reported that an estimated 1.2 million Americans, aged 12 and older, were current cocaine users and that 265,000 were current crack users (Department of Health and Human Services 2000). Estimates suggest that at least an additional 1.2 million people may be classified as occasional cocaine users (used in the past year but on fewer than twelve days). Although these rates reflect slight declines in general cocaine use over the past twenty years, most experts agree that cocaine remains one of the most serious challenges to health and welfare in America's communities.

The prevalence of cocaine abuse is strongly associated with the ease with which the drug can be modified to a cheaper and yet more potent form such as crack. Research has shown that drugs that are more readily abused tend to be the ones that are less expensive and more easily obtained. Indeed, crack cocaine is very inexpensive to produce and to obtain, usually bought for as little as a few dollars. Because most street forms of cocaine are cheap, there are few obstacles to experimenting with it and going back for more. Like all abused drugs, cocaine serves to exploit the vulnerabilities of individuals who may not have the resources they need to assist them in avoiding risky behaviors. Despite the stereotypes of drug abuse risk, cocaine has been shown to be an equal opportunity drug that can degrade the functioning of anyone who becomes ensnared within its powerful effects.

Cocaine hydrochloride, the powdered form of cocaine, is the most recognized form of the drug; it is inhaled through the nose (by snorting, as it is called), dissolved in water for intravenous injection, or smoked. Crack is the most popular form of smoked cocaine in the United States. It is made from cocaine hydrochloride dissolved in water that is mixed with baking soda or sodium bicarbonate and heated. The process leaves a soft mass of cocaine drug that, when dried, takes the form of a hard (crystallized) chunk of concentrated cocaine. Crack "rocks" are usually smoked in glass pipes that are used to vaporize the crystallized drug. Cocaine users who smoke the drug do so because this method allows extremely high doses of the drug to reach the brain more quickly than snorting the drug through the nose would. As a result, a more efficient, intense, and immediate high is achieved



Person doing cocaine (Michael Siluk)

with a smaller and therefore less expensive amount of the drug.

In any of its forms, cocaine acts as a stimulant, producing increased activity or alertness within the brain and nervous system, and sometimes producing a euphoric emotional state. At moderate doses, cocaine can cause negative experiences such as nervousness, paranoia, and anxiety. When used in high doses, the drug can cause nausea, sleeplessness, tremors, and psychotic mental states. Consistent use at high doses of the drug can cause seizures, stroke, respiratory arrest, and death. Injecting or smoking cocaine is particularly dangerous because a hyperconcentrated cocaine dose reaches the bloodstream and brain almost instantaneously, greatly increasing the risk of a deadly physical reaction.

Ironically, consistent use of cocaine generally results in desensitization to most of the drug's pleasant effects and sensitizes the user to the dangerous convulsive effects of the drug. In fact, it is common for cocaine users to report that they seek but fail to achieve as much pleasure as they did from their first exposure. Cocaine users often develop a psychological dependence on cocaine, in which they come to rely on the drug to maintain a

desired level of physical and emotional functioning that never seems to be met, even though they never quite seem to achieve it.

The powerful reinforcing properties of cocaine compel individuals to spend a great deal of time and effort in obtaining the drug, even while destructive physical and social consequences dominate their lives. Unfortunately, cocaine abuse also tends to degrade the functioning of people around them, especially family and friends. Because cocaine abusers often exhibit poor judgment and behave impulsively, their ability to maintain responsibilities at home and work may suffer, leading to family stress and work difficulties. Research has shown that cocaine abusers can become trapped within a dangerous cycle of stress and desperation, which can result in domestic neglect or abuse and social alienation.

Hundreds of millions of dollars are spent each year in order to meet the countless challenges that cocaine use creates, including criminal, family, health, and work-related problems. Because the problems and costs of cocaine abuse are complex, they are rarely resolved by simple social or legal strategies. Unfortunately, families and communities carry more than half of the financial costs and

suffer nearly all of the ecological damage associated with cocaine. Therefore, any strategy designed to reduce the use of cocaine, crack, or other drugs must work to develop and reinforce the foundations of families and the communities in which they live.

For information about drug abuse treatment and referral, call the National Drug Information and Treatment Referral Hotline, 1-800-662-HELP. This hotline provides drug-related information to people seeking a local treatment program, and directs those affected by the substance abuse of a friend or family member to support groups or services. Valuable resources can also be found on the Internet, including the National Institute on Drug Abuse (www.nida.nih.gov) and the National Clearinghouse for Alcohol and Drug Information (www.health.org).

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See also: Domestic Violence

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Cognitive and Language Skills: Early Environmental Influences on Apes

The study of our closest evolutionary relatives can tell us much about our development as humans. Apes are our closest relatives (as we are theirs) and their physical, social, and cognitive development is therefore the most revealing of any nonhuman species when one attempts to draw evolutionary parallels that may shed light on early human behavior. Recent research in the field has provided strong evidence that chimpanzees have complex learned behaviors that could be classified as cultural (Whiten et al. 1999). These findings underline the importance of studying our closest evolutionary relatives when attempting to explore the earliest development of human cultures. As cultures are often determined by environment, the

study of how environment affects apes can be very revealing in the study of human ecology. Recent studies at the Language Research Center in Atlanta, Georgia, some of them so recent that they have not yet been published, have found that the right environment during early development can stimulate cognitive abilities in apes previously thought to be unattainable in nonhumans.

Three bonobos and a chimpanzee were raised by human caregivers in a language-enriched environment; they have demonstrated language abilities comparable to at least the level of a two-and-a-half-year-old human child. Other nonhuman language research failed to demonstrate similarly complex abilities despite extensive cultivation, due to minor, but important, environmental differences (Gardner and Gardner 1969; Terrace 1979). Additionally, a bonobo and a chimpanzee, reared in the enriched environment but only after the age of two, failed to develop similar language abilities, suggesting a sensitive period to language acquisition in apes similar to the sensitive period of language acquisition suggested for humans (Williams, Brakke, and Savage-Rumbaugh 1997).

Early ape language research (Furness 1916; Hayes 1951; Kellogg and Kellogg 1933) concentrated on attempting to teach apes to speak—a futile attempt, as apes do not have the physical equipment to produce human language (Lieberman, Crelin, and Klatt 1972). Later researchers such as Alan and Beatrix Gardner and Herbert Terrace and his colleagues changed their focus to gestural communication (sign language)—a modality more suited to the apes (Gardner and Gardner 1969; Terrace 1979). These researchers did find some communication abilities, but later researchers called into question the linguistic abilities of these apes. The criticism focused on the fact that apes learned to produce symbols in very structured contexts, but either failed to produce them outside those contexts, or failed to recognize those symbols when used by others. These researchers had focused on *training* the apes to use signs, assuming that the apes would not learn to utilize symbols without specific training (Terrace et al. 1979; Savage-Rumbaugh et al. 1980).

Other studies focused on training the apes to utilize a computerized keyboard to create sentence-like structures. In one such study, the chimpanzee Lana could very quickly activate a long string of keyboard presses to request food items or

other environmental changes (Rumbaugh 1977). This study was criticized along with the sign-language studies for showing language-like structures that were much less impressive than they looked. For example, Terrace criticized his own work as well as that of others by stating that all of the apes simply produced symbols until they got what they wanted (Terrace et al. 1979). In the case of Lana, Terrace suggested that she produced “stock” sentences in which the only meaningful piece was the lexigram that contained her request.

Savage-Rumbaugh later found that chimpanzees trained to use the computer keyboard could learn to produce and recognize symbols and only use them in meaningful contexts, but only with specific training on each type of symbol used (Savage-Rumbaugh 1986).

Savage-Rumbaugh later went on to work with bonobos (*Pan paniscus*), an ape closely related to the chimpanzee, often incorrectly known as a pygmy chimpanzee (Savage-Rumbaugh and Lewin 1994). She began to train Matata, an adult female bonobo, using the same approach she had used successfully with the chimpanzees. Matata, however, was unable to learn more than the very basics of symbol use. Despite her failure, Matata’s son, Kanzi, amazed his caregivers when, at the age of 2, he began to use the lexigram keyboard spontaneously, with no direct training. It also became clear that Kanzi could comprehend the use of spoken English by his caregivers, although this ability was completely unexpected. After all, several language-using apes by that time had failed to acquire the ability to comprehend spoken English. How was it possible that Kanzi, with no direct training, had learned what his mother, the focus of the study, and all other language-using apes had not?

Kanzi had been beside his mother as she had been trained in symbol use, and thus his environment was markedly different from hers or those of the early ape language subjects. Kanzi was very young when first exposed to the lexigram keyboard, a fact that had surprising importance in his success. His caregivers also utilized spoken English and gestures, when appropriate, to communicate. This multitude of linguistic inputs created an environment that was richer in communication than those of other language-using apes. A key component of this language environment was the provision of an evolutionarily adaptive method for the humans to express themselves (English) as well as an expressive

method that the apes could utilize easily (a lexigram keyboard). These communicative options allowed for the maximum use of language by both the apes and the humans. The final environmental distinction, and perhaps most the most important, was that the use of language (whether in spoken English or through the use of the keyboard) served an important communicative purpose for Kanzi.

While Matata was being trained to use symbols, Kanzi was free to use the symbols or not. During daily interactions with humans and his mother, their communicative use of spoken English and the keyboard provided predictive power to the infant ape. When a human caregiver would mention a type of food, that type of food would often be offered to the apes. When a caregiver mentioned a location, that location would likely be a destination for the apes. In contrast, the environment of the other language using apes could be considered to be communicatively impoverished. The early ape language researchers had assumed that the apes required a strong stimulus to acquire symbol use. With that restriction in mind, they heavily rewarded any use of a symbol, whether used communicatively or not. In this type of environment, the apes quickly developed an association between a reward and the particular kind of gesture or printed picture whose use would result in the food, but did not necessarily assimilate the communicative function of language. Indeed, several of these sign-language-trained apes seemed to have trouble comprehending others’ use of symbols. Also, these language-trained apes had a high frequency of direct imitations of their caregivers, a tendency not shared by Kanzi.

Once the researchers at the Language Research Center realized the importance of this communicative power of symbol use, they exploited it further. Kanzi’s days were transformed from training sessions into daily interactions with caregivers, during which his desires could be communicated via the keyboard and his caregivers would collaborate with him to determine the events of the day. In this manner, Kanzi attained not only predictive power, but some measure of control by being able to successfully communicate his desires. These communicative powers promoted symbol use in Kanzi that was not restricted to requests, but also included comments, statements of intent, and value judgements. Kanzi was later tested for comprehension of English sentences alongside a two-

and-a-half-year-old human female and was found to have a similar proportion of correct responses. Later, a second bonobo, Kanzi's sister Mulika, was also successfully reared to comprehend English and utilize the keyboard.

After the linguistic successes of Kanzi and Mulika, one question remained: Was this linguistic ability truly attributable to the environment or did bonobos differ enough from chimpanzees to allow their acquisition of an ability that was beyond the chimpanzee's reach? To explore this puzzle, a bonobo and a chimpanzee were coreared in the same enriched environment that had proved successful with Kanzi and Mulika.

Panbanisha (a bonobo) was born to Kanzi's mother Matata and four weeks later Panpanzee (a chimpanzee) was brought to the Language Research Center to be raised alongside her. For three years these two apes were nearly inseparable, raised in as close to an identical environment as was possible. Panpanzee became the first chimpanzee to acquire language abilities at similar level to Kanzi's, and her abilities and Panbanisha's have not proved to be significantly different statistically. Again, their environment seems to have been the important factor in their linguistic success (Savage-Rumbaugh, Shanker, and Taylor 1998).

Finally, another research project was initiated to determine the importance of early exposure to the development of language abilities in apes. A bonobo and a chimpanzee, both over the age of two, were brought into the language-enriched environment. Although these apes were exposed to the same environment and the same caregivers as Panbanisha and Panpanzee, these apes failed to acquire similar language abilities. These results stress the importance of early environment in producing language abilities in apes, implying that apes, although not specifically evolved to use human language, can acquire language abilities during a sensitive period in early infancy (Williams, Brakke, and Savage-Rumbaugh 1997).

These findings are consistent with the prominent belief in human language research that exposure during infancy is paramount for language to develop normally in humans. "Normally," in this instance, implies that the human in question learns to utilize the language as a native speaker would. Much research into second-language acquisition in humans demonstrates that speakers who acquire a second language after childhood never

learn it at the same level as a speaker who learned earlier. Additional evidence from "wild children" (children not raised with human contact) suggests that human children who are not exposed to normal language use in early childhood never acquire language at an adult level (Bloom 1993).

Upcoming findings from the Language Research Center will show that the language-competent apes can learn new words with very few exposures to them, a phenomenon similar to that known as fast mapping in children. Apes also make errors on vocabulary tests that suggest that their mental representations of symbols are contained in a hierarchical categorization system. Such a system is also considered to be part of the mental representations of symbols by humans. The apes also preferentially order lexical combinations in a way similar to young children. This preferential ordering could be conceived of as a precursor to complex syntax in the language systems of humans. These complex linguistic abilities have previously only been seen in humans and underscore the importance of early environment in the promotion of complex cognitive skills.

Because apes acquiring language require the same kind of early exposure as humans do, one can argue that our closest relatives have a language acquisition biology that is very similar to that of a human. However, to date, ape language studies have not reported any ability in the apes to use syntax at the level of a child over the age of two. This may be a crucial evolutionary difference. However, the lack of data that show syntactical abilities in apes may yet turn out to be due to an early environment that did not stress syntactical abilities. It is certainly clear that abilities that are not part of the apes' naturally evolved abilities (e.g., understanding spoken English) can be promoted by the right early environment (Savage-Rumbaugh, Shanker, and Taylor 1998).

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See also: Parent-Child Synchrony
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Cognitive Assessment

Psychologists and educators have been interested in studying and measuring cognitive abilities for almost 200 years. Cognition refers to thinking and reasoning skills, rather than to emotional functioning or the feeling aspects of human experience. Interest in assessing cognitive abilities grew from efforts to identify and teach gifted children and children with mental retardation and to match individuals with jobs that best utilize their cognitive skills. During World War I, for example, the U.S. military turned to cognitive assessment as a method of selecting individuals for specialized

training, such as piloting aircraft.

The testing of cognitive abilities is a common practice today in schools, businesses, the military, and mental health clinics and hospitals. Psychologists continue to develop new measures of cognitive abilities and to use measures that have existed for many years. Some of the most common traditional measures of cognition are intelligence tests, such as the Wechsler Intelligence Scale for Children, third edition, the Wechsler Adult Intelligence Scale, third edition, and the Stanford-Binet Intelligence Scale, fourth edition. These tests are administered to one person at a time and assess cognitive skills such as abstract reasoning, word knowledge and verbal reasoning, numerical reasoning, short-term and long-term memory, concentration and attention, and visual-motor skills. Other familiar measures of cognitive abilities include college and graduate school entrance examinations, such as the Scholastic Aptitude Test (SAT) and the Graduate Record Examination (GRE). These tests are administered in group sessions, rather than individually. These tests assess word knowledge, verbal reasoning, and mathematical reasoning skills, in addition to other skills.

Although cognitive assessment remains a common practice in the United States, the practice is controversial. This controversy is related, in part, to group differences in the results of cognitive assessment and to the use of the results in making important educational decisions. The average scores of African American and Latino youth are lower than those of White youth. Thus, when test scores are used for identifying children for special education, African Americans and Latinos are more likely than Whites to be classified as mentally retarded. When test scores are used for college and graduate school admissions, Whites are likely to be admitted at higher rates than African Americans or Latinos. Ethnic and racial group differences in test performance can be explained by a variety of factors. These include cultural bias in testing conditions and test content. Poverty and racism also determine whether young people have the opportunities to learn the skills measured by these tests. When the results of cognitive testing result keep racial and ethnic minorities from attending good colleges and universities and from obtaining good jobs, the cycle of poverty and racism continues.

Controversy also exists concerning the skills assessed by traditional cognitive measures. Although

these measures are commonly believed to assess innate or genetic ability, they actually measure skills that are learned throughout life in school, at home, and in the community. The kind of skills that young and old people learn depends upon the kind of learning opportunities available to them, the kind of skills valued by the community or culture in which they live, and the kind of skills they use or practice in their lives. Cognitive assessments are designed to measure cognitive skills, rather than emotional, social, or cultural factors, yet all of these factors interact and influence performance on cognitive tests. For persons living near the North Pole, for example, snow is an important element of the environment that impacts daily life. Individuals living in this region can identify many different types of snow and have knowledge of many different words that distinguish these different types of snow. If a teenager living in New York City were to perform poorly on a test assessing cognitive knowledge of snow types, low genetic or inherited ability is not likely the reason for the poor test performance. The teenager's daily experience in identifying snow types and the relevance of this knowledge to survival and success clearly influence the teen's cognitive knowledge and skills on this task. Assessing the cognitive ability of a teen in New York City by asking questions about snow types is an example of cultural bias in test content. The questions are not relevant to success in New York City and are thus biased for New York teens.

As previously mentioned, cognitive assessments typically measure abstract reasoning, word knowledge, mathematical reasoning, memory, and visual-motor and spatial skills. These skills are learned within the home and school and are related to success in school. Critics of traditional cognitive measures of assessment point out that these skills are important to success in middle-class European American culture in the United States, but not in many subcultures in the United States and throughout the world. The measures tend not only to ignore cognitive skills that are valued in other cultures but to neglect a number of skills that are in fact important for success in middle-class America. Robert Sternberg (1992), for example, noted that the Graduate Record Examination (GRE) assesses a type of analytical reasoning that contributes to success in graduate school. It does not, however, measure other skills, such as creativity and practical knowl-

edge, that are related to success both in graduate school and in later professional work. People who make the most important scientific discoveries exhibit creativity and the ability to generate new ideas, which are not assessed by traditional cognitive measures. People who are successful in the work world also possess practical knowledge about how to get things done, which is ignored by most cognitive assessments.

Howard Gardner (1983) also criticized traditional cognitive measures and expressed a belief that tests need to be expanded to assess a variety of culturally and socially relevant skills. Gardner's theory of multiple intelligences identifies many different kinds of intelligence. In addition to linguistic/verbal, spatial or visual-spatial and logical/mathematical intelligences, which are assessed by traditional cognitive measures, Gardner's model includes musical intelligence, bodily-kinesthetic intelligence (related to movement and athletics), interpersonal intelligence (related to understanding others), intrapersonal intelligence (related to self-understanding), and naturalist intelligence (related to awareness of the environment). Gardner expressed the hope that through awareness of the multiple types of intelligence, psychologists, educators, parents, and others would come to recognize and value a broader range of skills than are assessed by traditional cognitive measures. This way of thinking encourages schools to think about ways to help children develop skills across all seven domains of intelligence.

Traditional models of cognitive assessment were conceptualized without taking into consideration the ecology of human development. Contemporary models and assessment strategies, such as those of Sternberg and Gardner, take into account the importance of culture, recognize the interrelationship of cultural, social, and emotional development, and consider the critical role of environment in the development of cognitive skills. Knowledge of the role of the culture, economics, and education for the development of cognitive skills is important. This knowledge may offer suggestions for enhancing cognitive competence for children across a variety of cultures.

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See also: Creativity and the Arts in Child and Adolescent Development; Early Childhood Assessment

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Colonias, Las

Those communities that constitute a world in between two worlds (*entre dos mundos*), *las colonias* (unincorporated settlements, neighborhoods, or communities in Texas and other areas of the Southwest), represent an ecological challenge for researchers and practitioners. If we subscribe to theories that discuss levels of embeddedness in the ecology of human development (e.g., Bronfenbrenner 1977, 1979; Gottlieb 1991; Lerner 1984 Magnusson and Stattin 1998), then a general understanding of the real-life situations within which children and families exist and interact becomes central to our conceptual and practical understandings. Although the general study of human ecology has introduced various methodological and conceptual challenges, they are manifested in an even more complex manner for those who live in the colonias.

Colonias, as opposed to municipalities, often have little in the way of a support system to sustain housing. Water and sewer systems, paved roads, and police protection, for example, are lacking or nonexistent. Residents of colonias, the majority of whom are legal U.S. residents on the U.S. side of the border and Mexican citizens on the Mexican side of the border, are generally part of the maquiladora industries and service economies of nearby urban communities. Yet, although part of larger systems, residents tend to look toward their cultural heritages and past to shape their worldviews and life values. In other words, residents on both sides of the border tend to look to the interior of Mexico, where the majority of their families continue to reside. Deep connections, both emotionally and financially, are a core root of identity and sufficiency, as many of these colonia residents offer financial support to their families.

Colonias are not new to the United States, having emerged along the U.S.-Mexican border over

the last half-century. Although originally (and still predominantly) inhabited by Mexican laborers, they now serve as residential communities for a large population base, especially in light of the rising cost of affordable housing options and the shortage of low-income housing. Colonias have, for example, dramatically increased along the length of the U.S.-Mexican border, with more than 1,400 colonias in Texas alone.

But for most researchers, policy professionals, practitioners, and the general public, these inhabitants are the forgotten Americans. As an interesting footnote, *The Forgotten Americans* was the title of a documentary film developed at Southwest Texas State University, with funding from the W. K. Kellogg Foundation, to begin addressing the social and political challenges and realities of residents of both sides of the border. The term "Americans" here refers to hemispheric residency, not a U.S. identity. The film was broadcast nationwide by PBS on December 14, 2000, airing 282 times in 40 states to 60 million households and 152 million people, according to the PBS report of March 2001. Aside from such impressive attempts as this film, the daily lives and realities of the inhabitants of las colonias have generally been overlooked; they are not a focus of research, policy development, or programmatic interventions. Yet these contexts offer unique opportunities to understand the ecology of human development.

Strengths

One major strength of the culture of the colonias lies in its family networks. Families of Mexican origin are typically characterized by a large and cohesive familial unit embracing both lineal relatives (e.g., siblings) and collateral relatives (e.g., cousins). Thus Mexican families have direct-descent hereditary and secondary relatives ties beyond the nuclear family that are strong and extensive, with reciprocal rights and duties involving all relatives, including grandparents, aunts, uncles, and cousins. Unrelated relatives (fictive kin, that is, people regarded as relatives but in whom no blood or legal relation exists) are also considered to be part of the extended network (Gonzalez 1992; Vega 1995).

Another strength is the value placed on education. This value has cultural roots, and it also has important contemporary cultural meaning. Specifically, gaining an education, or being *bien*

educado, possesses a cultural meaning that is an integral component of the socialization process of realizing common family and cultural values of being well educated, respectful, and respected in both the Mexican community and the larger society. As noted in the film *Forgotten Americans*, despite the fact that not all parents were bilingual, their children still achieved academic success because the family was together.

Within the household structure, parents assign responsibilities (household and educational) to their children and communicate with each other, as well as with other adults in their surrounding environments, which extend into their family, church, and schools. These networks are used by families as a support system and to resolve problems, and, as Luis Moll and Nancy Gonzalez have noted, they offer important “funds of knowledge” (Moll and Gonzalez 1995, 443).

Although it might not seem ideal, the environmental layout of colonia households offers a unique structure supporting educational and intergenerational opportunities. Specifically, since their homes are small, youth must do their homework at the kitchen table and thus are immediately connected to adults and neighbors who enter their homes freely and frequently. Thus, given the open nature of colonia households, the flow of traffic with other visiting adults is further fostered.

Another advantage of the colonias is the open layout of the community itself. Specifically, homes tend to be built in proximity to each other and to use an open-space architecture. Stated somewhat differently, traffic patterns, community gardens, and the flow of people in and out of neighboring homes promote a sense of community for residents and create a community fund of knowledge (Moll and Gonzalez 1995) for residents. This is manifested in the comfort and ability of community residents, building upon the knowledge, skills, and expertise shared by certain individuals, to create an informal labor exchange economy (e.g., plumbing services might be exchanged for electrical assistance).

Challenges

Familial and community strengths notwithstanding (which, due to space limitations, cannot be expanded upon), life in the colonias presents an array of challenges that impact the developmental pathways of individuals and families. As previously noted, these communities exist across the

border region of the United States and Mexico. In the state of Texas alone, this area spans nearly 1,260 miles, from El Paso–Ciudad Juarez on the western side of the state to Brownsville–Matamoros on the eastern side of the state. This span covers five Mexican States and forty-three Texas counties; add into this the entire U.S.-Mexican border region, and one comes to quickly recognize that the border region covers not only a vast geography, but also different sociopolitical realities. This dispersion means that the binational, bicultural, bilingual, and bipolitical subculture involved differs within itself, as border issues are often left to be resolved by municipalities, rather than by national or international border policy. Thus, relatively proximal communities may have different policies to which they must adhere.

By every economic indicator, the Texas border region has grown at a rate that exceeds the national growth of either Mexico or the United States, and despite the infusion of industries related to the North American Free Trade (NAFTA) agreement, the prosperity has not impacted residents (Bustamante 1992). Many jobs are in the service sector, and many in unregulated maquiladora factories, international or U.S.-owned factories that have relocated to the U.S.-Mexican border to take advantage of labor costs and tax incentives. Accordingly, there are challenges that impact family and individual well-being. Most obvious, for example, is the lack of affordable high-quality housing and insurance and quality health care. In addition, environmental toxins have been inadvertently introduced into the water tables and general environment because of lax environmental regulations related to NAFTA. This environmental degradation in the form of air, water, soil, and biotic pollution has occurred as a result of population and industrial growth. The major categories of pollution found are inorganic and organic chemicals and nutrients and disease agents. As a result of lack of sewers and household drainage systems, disease agents such as bacteria, viruses, and amoebas are prevalent in colonias (Jones 1999).

Finally, along the border between Texas and Mexico, many preventable diseases are considered to be reaching epidemic proportions. Cases of Hepatitis A and gastrointestinal viruses borne by contaminated food and water, for example, are four times as common in these parts of Texas as in the rest of the state (Texas Department of Health

1996). The impact of the rapid growth on health has been significant. High levels exist of infectious diseases such as Hepatitis A, and other diseases, such as diabetes, allergies, diarrhea, and asthma, are a result of environmental lead exposure and pesticides found to be very prevalent in colonias (Texas Department of Health 2000). Moreover, as recently as 1998, all but two of Texas's forty-three border counties, which include the colonias across this region, were federally designated medically underserved communities.

Binational coordination is imperative; health has no boundaries, and certain diseases ignore the border. Furthermore, improving water and the environment in general, promoting community health, and preventing disease need a holistic approach that recognizes and builds on the strengths and cultural values of the Hispanic community (e.g., family structure, loyalty, and solidarity).

A Land of Opportunity

Entre dos mundos. Between two worlds. These three words describe the ecological context of colonias residents. To the north are prosperity and dreams. To the south are family and history. Colonias residents, trying to keep their feet in both worlds, have migrated to a land of opportunity that confronts them with numerous challenges that impact their developmental pathways. Ironically, although research might show that these residents, and the youth in particular, possess the four anchors of healthy development that James Garbarino (1998) has identified as necessary for healthy outcomes, numerous social and environmental toxins may make that healthy development unlikely. Research that can document the effects of these toxins, as well as the mechanisms that promote resiliency, will deal with issues that human ecologists should devote attention to in the quest to understand the ecological and systemic factors that influence human development.

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See also: Acculturation; Adolescence in a Cultural Context; Bronfenbrenner, Urie; Children from Immigrant Families; Ecodevelopmental Theory; Hispanic Immigrant Experience; Latino Leadership

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Community Schools

A community school is a K-12 educational institution that combines the best educational practices with a comprehensive range of health and social services as well as supportive resources to ensure that children are socially, physically, and emotionally ready to learn (Children's Aid Society 2001). Community schools, also known as comprehensive or full-service schools, were established to address the nonacademic barriers to learning that a significant number of schoolchildren face—including poverty; violence in the home, school, and neighborhood; chronic health problems; inad-



Students at a community school (Michael Siluk)

equate nutrition; unsupervised out-of-school time; unsafe sex; and mental health problems. Community schools are unique in that they address the needs of the whole student (Walsh and Murphy 2002).

Community schools represent a radical departure from traditional schools. Typically, elementary and secondary schools have primarily focused on the cognitive development of children, while families and community agencies have assumed the responsibility for socioemotional development. However, an increasing awareness of the impact of numerous barriers to learning is leading to a realization that a comprehensive, integrated approach to fostering children's healthy development and learning is necessary. In urban and rural areas across the country, community schools have been designed to provide a systemic, collaborative approach to education that recognizes the intimate link between a student's performance in the classroom and that student's physical, social, and emotional health and well-being. In addition to collaboration across the institutional boundaries of school and agency, effective interventions in the school require the collaboration of a wide range of professions, including teaching, school administration, school counseling, psychology, social work, medicine, and law (Dryfoos 1990).

What Do Community Schools Look Like?

Community schools serve as a center for the collaborative efforts of teachers, student support staff, school administrators, parents, and community members and agencies to address barriers to student learning. These schools are open extended hours, before and after school as well as on weekends, and offer programming that provides supervision during out-of-school time as well as educational enrichment activities. Community schools also offer medical, dental, mental health, and vision and hearing services to address health problems that a student may have. In addition, many community schools have family resource centers, which help to include parents in the process of their child's education by offering parent support, as well as courses leading to a general equivalency diploma (GED) and other academic classes. Finally, community schools offer free breakfast and lunch programs to help ensure that every student has the proper nutrition and energy to learn throughout the school day.

Examples of Community Schools

CoZi Schools

CoZi schools are a combination of community school programs developed by James Comer and Edward Zigler. CoZi schools have operated since 1992; they combine the School Development Program (SDP) of the Comer schools (designed to meet the needs of inner city schools and students) with the 21stCentury model of a community school. The SDP is a collaborative decision-making model designed to provide developmental support to help children achieve academic success by engaging parents, teachers, administrators, counselors, school staff, and community members in the learning process. The program called Schools of the Twenty-first Century was developed to provide a continuum of support from birth through adolescence (Yale University Bush Center 2002). CoZi schools were implemented to advance the efforts of the SDP to engage parents more directly in the management of the school through participation in school services. These schools also offer a decision-making model for Schools of the Twenty-First Century so that services within these schools can be expanded. CoZi schools are designed to combine the strengths of the Comer and Zigler models (Coalition for Community Schools 2002).

Children's Aid Society

Children's Aid Society (CAS), the oldest social service agency in New York, collaborated with the New York School Board to create a system of community schools. The mission of the Children's Aid Society is to provide a learning and developmental experience for children, families, and the community by providing a seamless, comprehensive system of services. Included in the framework of services are an extended day program that offers educational enrichment during out-of-school times, dental and medical services, mental health services, a parent-involvement program, events to involve the community, early childhood education, and adult education.

CAS community schools are cofacilitated by the school and a community-based organization, with school-level decision-making bodies that include parents and other community representatives. CAS currently operates eight schools in New York City, with the CAS model also being adopted for

community schools in other cities in the United States (Children's Aid Society 2001).

Beacon Schools

The New York City Youth Bureau developed Beacon schools in New York City in 1991. Community organizations were awarded grants to organize community centers in these schools that offered educational enrichment, social services, recreation activities, and vocational activities designed to involve youth and families in the community (Dryfoos 2000). Ten of New York City's poorest neighborhoods were identified, and Beacon schools were implemented, each school meant to serve as a safe place, open seven days a week, sixteen hours a day, for children and families.

The services offered at a Beacon school vary, depending on the provider agency and the needs of the community, but many include educational enrichment services, art programs, and health clinics. All of the Beacon schools encourage family participation. In addition, the community centers in the schools not only provide services for the students, but also serve as locations for community meetings (Dryfoos 2000).

Conclusion

Community schools work to remove nonacademic barriers to student learning, thereby improving academic achievement. Because community schools are relatively new, there is little in terms of long-term outcome research to ascertain if they are meeting this goal. Joy Dryfoos (2000) completed a preliminary outcome evaluation of forty-nine community school programs. The results showed that thirty-six of the forty-nine programs evidenced academic gains over a two-to-three-year period. In addition, nineteen programs reported improvements in school attendance, while eleven programs reported reductions in rates of substance abuse, teen pregnancy, and disruptive behavior. Twelve programs reported increases in parental involvement in the school, and six programs reported lower rates of violence in the community. Thus, although the outcome evaluations on community schools are relatively new, there is convincing evidence that community schools provide crucial services to improve student learning and development.

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See also: Early Childhood Education; Full-Service Schools; High School; High School, Advising Students in; National Association for the Education of Young Children (NAEYC); Transition from School to Work and Adult Life

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Community Youth Development

Community youth development is an emerging framework whose philosophical roots are grounded in a human ecological perspective and which is being employed in research on adolescence and programs for adolescents (e.g., non-formal educational programs and extracurricular activities). The community youth development framework involves a shift away from concentrating on problems, concentrating instead on strengths, competencies, and engagement in self-development and community development. Indeed, community youth development is defined as purposely creating environments that provide youth with constructive, affirmative, and encouraging relationships with adults and peers that are sustained over time, while concurrently providing an array of opportunities that enable youth to build their competencies and become engaged as partners in their own development, as well as in the development of their communities.

History

Historically, communities have used research and program efforts that were based on problem-focused models rather than on opportunities for positive youth development. These problem-

focused programs and policies have typically focused on the elimination of problems associated with various risk conditions and behaviors. Generally, such efforts have focused on one particular behavior (e.g., drinking, violence, or academic success) instead of on the youth's entire ecology. In addition, these efforts have targeted young people who were already experiencing some form of difficulty in their daily lives (e.g., juvenile diversion or substance abuse problems). If successful, these programs and policies may prevent young people from further engagement in the same risk behavior or from engagement in other risk behaviors (e.g., sexual activity or school failure). However, such intervention and prevention programs do not necessarily prepare young people to meet the challenges and demands that they face now or those they will face in the future. Effectively preparing young people to meet challenges requires providing them with the foundation to make decisions that will promote their own positive development. Thus, programs and policies need to provide a foundation that promotes young people's growth and development by engaging them in skill-enhancing opportunities.

Scholars assert that if the United States, as a nation, is to win the war against conditions that place youth at risk for unhealthy and negative developmental outcomes, communities must develop community-wide efforts that (1) promote positive youth development for all young people and provide youth with the opportunities to develop positive relationships, skills, competencies, and attitudes that will assist them in making positive choices for their lives, and (2) reduce the risks that youth face in the environments in which they live.

In the 1990s, positive youth development used the motto, "Problem free is not fully prepared" (Pittman 1992). However, this motto leaves open an important question, that is, "Fully prepared for what?" Certainly we want our youth to enjoy life and develop the skills and competencies needed to become well-rounded, productive citizens as adults. But what about now, during their youth? Besides being "fully prepared," youth need to be engaged by adults as partners in their own development and in the development of their communities. Developed by the National Network for Youth (Hughes and Curnan 2000), community youth development integrates the positive youth development framework and provides a context

for this engagement. Or, as Pittman (2000) stated, "Fully prepared isn't fully participating." Community youth development moves the focus from problem-free and fully prepared young people to engaged partners.

Defining Community Youth Development

Youth development, either positive or negative, occurs as youth interact with all levels of their ecology and the systems within those levels, including the other people in their environment, such as family, peers, other adults, and members of their communities. Drawing on resiliency research, a community youth development framework shifts the focus from the individual to the interaction of the individual with the multiple levels of her ecology. Therefore, fostering community youth development requires positive supports, opportunities for skill and competency development, and partnerships with youth at multiple levels of young people's ecology and within the systems that comprise that ecology. These partnerships are efforts of young people, aided by adults, to be producers of their own development and shapers of their communities.

Community youth development is defined, then, as an integration of youth development and community development. Community youth development is comprised of four parts: (1) the natural unfolding of the potential inherent in the human organism in relation to the challenges and supports of the physical and social environment; (2) a commitment to enabling all young people to achieve their potential—characterized by a positive, asset-building orientation that builds on strengths and also addresses specific problems faced by some youth (e.g., substance abuse, involvement in violence, and premature parenthood); (3) programs and organizations that employ a planned set of activities that foster young people's growing capacity; and (4) engaging youth as full contributors in problem solving for the community through employment of the skills and competencies that they are developing (Lerner 2002; Perkins, Borden, and Villarruel 2001).

The way community youth development uses intervention and prevention can be explained using the analogy of a medical model. Intervention is defined as discontinuing or stopping an already exhibited problem behavior, as when an individual goes to the doctor for medicine to help stop a dis-

ease from progressing. Prevention, on the other hand, means taking advance measures to keep something (e.g., youth participation in problem behaviors) from happening. To use the medical model once more, prevention would mean going to the doctor for a flu shot to build one's immune system as protection against ever catching the flu. Community youth development is a step beyond prevention. Community youth development is a process by which youth's developmental needs are met, their engagement in problem behaviors is prevented, and, most importantly, youth are empowered to build the competencies and skills needed to become healthy, contributing citizens now and as adults. In terms of the medical example, community youth development can be compared to the individual taking an active role in his health by getting an immune shot and strengthening the body through physically appropriate exercise and dietary actions, in the context of an environment shaped to support him in that endeavor.

Building Blocks

Assets are the building blocks of positive youth development. Assets are the individual and environmental characteristics that promote and enhance young people's development toward becoming successful adults. Developmental assets may be external factors in the young person's environment, such as positive relationships in families, friendship groups, schools, and the community. Or they may be internal factors, such as the teenager's personal competencies, values, and attitudes. Just as there are nutritional building blocks in the food pyramid that are necessary for healthy physical development, assets are the necessary building blocks for healthy youth development. For example, just as one needs to eat calcium-rich foods in order to have strong bones, youth need opportunities for skill development to gain a sense of self-efficacy. One also needs to eat vegetables for the iron needed to build the red blood cells that fight infections, and likewise youth need caring adults for emotional support in the normal struggle to develop their identity.

Assets are not the outcomes of positive youth development. Rather, they are elements of the developmental process, through which young people are able to be contributing members of their communities now and are also launched on a positive

trajectory toward becoming productive citizens in adulthood (Benson 1997). The relationship between assets and risk behaviors, as well as that between assets and healthy and positive outcomes, has been clearly documented in research. The more assets youth possess and have available to them, the less likely they are to engage in risky behaviors and the more likely they are to engage in healthy and positive behaviors (Scales et al. 2000).

National leaders of youth programs, government officials, and policy makers are all seeking direction to address the needs of young people and foster youth's citizenship in their local and national communities. Those who work in the field believe that community youth development provides a framework for the direction they seek. Adopting this framework leads to consciously creating and sustaining environments for socialization and learning that surround youth with external developmental assets and also foster internal assets. Indeed, young people who have grown up in communities that promote their positive development have a better understanding of their own values, often become lifelong learners, are actively engaged in their communities, and are more likely to promote the positive well-being of other young people (Blyth and Leffert 1995; McLaughlin 2000). The goals of community youth development involve what Richard Lerner (in press) has identified as the five Cs: (1) competence of four kinds, academic, social, emotional, and vocational; (2) confidence in the person one is becoming (identity); (3) connection to self and others; (4) character that comes from positive values, integrity, and a strong sense of morality; and (5) caring and compassion. However, from a community youth development perspective, there is a sixth C, as highlighted by Karen Pittman (2000), and that is contribution. By contributing to their families, neighborhoods, and communities, and through participation in youth programs, youth are afforded practical opportunities to make use of the other five Cs.

Community youth development efforts are about creating contexts that foster community youth development. An African proverb sums the community youth development message up nicely: "He who does not cultivate his field will die of hunger." The message is simple: the progression of the world depends on cultivating our youth so that they will grow up problem-free, fully prepared, and fully engaged in their own lives and in the com-

munities in which they live (Perkins, Borden, and Villarruel 2001).

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See also: Adolescence in a Cultural Context; Adolescent Identity Formation; Community-Based Organizations; Ecodevelopmental Theory; Extracurricular Activity Participation; Faith-Based Organizations; Intergenerational Programs in Communities; International Youth Foundation (IYF); Positive Development; Resiliency; Search Institute; Youth Development

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Community-Based Organizations

Over a million community-based organizations exist in the United States, providing much needed support to America's communities (e.g., health programs, shelters, child care, and youth programs) (Van Til 1994). It is by design that these organizations "provide vital services and resources that enhance the quality of life" for community members (Benson 1997, 211). Community-based organizations, or nonprofits as they are often called, are the "newest and fastest growing category of organizations" (Hall 1994, 3). Community-based or nonprofit organizations "actually deliver a larger share of the health and human services financed by government than do public agencies themselves" (Brundy 1987, 6).

History

In the United States, we have a long history of providing community-based services for local citizens. For example, during Colonial America, towns and parishes provided relief to community members when family members and friends were unable to help. These early colonial responses to the needs of community members were the first examples of a kind of intervention that has continued throughout U.S. history, one in which the community steps in to provide assistance when other support systems fail (Kagan and Neville 1993–1994). For instance, in the 1880s, the first settlement house opened in New York. Settlement houses were designed to assist community members in a manner that was "intimate, community-based, and comprehensive" (Kagan and Neville 1993–1994, 6). Community-based organizations have met the needs of the poor, hungry, and sick. Moreover, community-based organizations have also played a role in responding to many important social issues (Stafford, Rog, and Vander Meer 1984). The Civil Rights Movement of the 1950s and 1960s, Mothers Against Drunk Driving, and various school reform acts have all demonstrated the power of a community-based organization to address the needs and concerns of a community and a country.

Defining Community-Based Organizations

Defining community-based or nonprofit organizations is difficult, given the depth and breadth of services these organizations provide. Community-based organizations vary dramatically in both



Local community organizations organize projects such as volunteer house rebuilding. (Michael Siluk)

scope and scale, ranging from community and neighborhood organizations with no assets and no employees to large organizations with sizeable budgets and numerous employees (Hall 1994). The roles of community-based organizations within their areas of service vary widely; most basically, some are direct-service organizations, others intermediary organizations. The mission of direct-service community-based organizations is to provide service directly to their clientele. Their wide-ranging services might include everything from assisting the unemployed to running after-school programs for children and youth. Intermediary organizations are those organizations within the community that link much-needed resources (e.g., money and volunteers) with the various direct-service organizations in the community.

Both direct-service and intermediary community-based organizations are by definition designed to meet the needs of the community members at all ages and stages of life. For example, there are community-based organizations that focus on meeting the needs of newborn babies and their mothers and others that focus on meeting the needs of older adults. Community-based organizations vary in size and scope, identifying their role in the community through their identified mission, funding, and staffing. Moreover, the roles of community-based organizations within the community tend to be focused in three primary areas: (1) service (e.g., Lions, Rotary, and Shriners), (2) advocacy (e.g., Sierra Club, Mothers Against Drunk Driving, and Greenpeace), and (3) member-benefit (e.g., YMCA, Junior League, Toastmasters, and Grange) (Van Til 1994).

Service organizations work within the community to meet the needs of children, youth, and their families, addressing various necessities such as child care, food pantries, and housing for homeless individuals and families. Community-based organizations with a service focus often offer a wide range of educational opportunities for the community. Such programs might focus on everything from how to start a community child-care program to programs that meet the needs of a disabled family member. Moreover, these community-based organizations provide a wide range of programs designed to promote the positive development of children and youth. These organizations vary enor-

mously from small grassroots organizations to large state and national organizations.

Advocacy organizations work to have policies and procedures established that would promote a more just and humane society (Van Til 1994), directing their efforts to changing the policies and procedures that influence the lives of community members. These organizations focus on a wide variety of issues, from advocating for more available child care to creating policies and procedure for a healthy environment. For example, there are community-based child-care networks that have been established across the United States to provide parents with current information about the quality and the availability of child care in their communities. Moreover, there are numerous community-based organizations focusing on the air, water, and land-use issues that affect the quality of the living environment.

The third type of community-based organization is designed to benefit its members through collegiality and a common-interest focus (Van Til 1994). These community-based organizations vary from faith-based organizations to service organizations such as Toastmasters, Junior League, and the Grange. These community-based organizations serve two roles. They build a small community within the organization for their membership, and the membership identifies and strives to address community needs. Thus, these groups have a dual focus, first on their membership and second on the community.

Youth-focused community-based organizations, like their adult counterparts, strive to provide service, advocacy, and benefits to their members. There are some twenty-five national youth-serving organizations that have approximately 300,000 full- or part-time staff (Hahn and Raley 1998). These organizations, such as 4-H Youth Development, Boys and Girls Clubs, and Boys and Girls Scouts, offer young people the opportunity not only to learn important life skills but also to use these skills to better their community through service. For example, Youth Force is an organization run primarily by youth to organize campaigns (e.g., juvenile justice advocacy), outreach events (e.g., Street University, a training institute on organizing and advocacy), and leadership in programming (Burgess 2000). This organization combines all three types of organization: service, advocacy, and member-benefit.

Volunteers

A key element of all types of community-based organization is the person who becomes a volunteer for the organization. Volunteers provide the much-needed manpower to assist these organizations in meeting their goals. In 1998, 109 million people volunteered and gave an approximately 19.9 billion hours in both formal and informal volunteering (Independent Sector 1999). These volunteer hours are equal to approximately 9.3 million full-time employees, and the worth of the volunteer time was estimated at \$225.9 billion (Independent Sector 1999). Thus, volunteers comprise a critical component of the success of many community-based organizations. Without dedicated volunteers to support their work, many of the community-based organizations would have to limit the scope of their work within the community. These volunteers serve to move the work of the organization forward.

Community-based organizations, or nonprofits, are a vital part of the community's infrastructure, the complex network of connections that constitutes a healthy community. This infrastructure is critical to the social capital available within the community. According to Robert Putman (2000), at the end of the twentieth century we face a similar situation as at the turn of the last century—the stagnation of America's stock of social capital. One hundred years ago, that stock of social capital was reduced by urbanization, industrialization, and vast immigration, all of which uprooted Americans from their families, friends, and social institutions. The country righted itself by creating a range of community-based organizations (e.g., 4-H Youth Development, the American Red Cross, and the YWCA). Community-based organizations, or nonprofits, play an important role in reweaving the social fabric needed and desired in our neighborhoods.

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See also: Comprehensive Community Initiatives; Community Youth Development; Extracurricular Activity Participation; 4-H Youth Development

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Compliance

See Treatment Adherence

Comprehensive Community Initiatives

Comprehensive community initiatives (CCIs) plan and enact reforms to shape the immediate ecological systems in which humans live. In the United States, CCIs evolved in reaction to the growing and increasingly fragmented health and human service, education, and justice formal systems that emerged following federal reforms in the 1960s. Early efforts focused on integrating services, filling gaps through services continuums, and building coalitions among the various systems in local communities. As devolution of resources from federal to local control evolved, CCIs extended these efforts, guided by the overarching principle that local solutions are the best response to local problems.

At the community level, CCIs integrate institutions that focus on human development (e.g., schools and service agencies), physical environment (built and natural), economic development, and civic and cultural development. Their purpose is to change the leadership structure and process so that future change, not just immediate needs, can be effectively managed. The general goal is to empower communities and transform systems.

Characteristics of CCIs include the following:

- Local control, responsibility, and relevance, so that systems are designed to fit local assets and needs

- Full democracy; that is, inclusive participation in decision making by local residents, elected officials, and system workers at all levels (i.e., workers, managers, and executives)

- Comprehensive representation from all sectors of the community (e.g., government, nonprofit, religious, business and industry), signifying recognition that social, civic, economic, cultural, and physical community development are inseparable

- Consumer responsiveness, involving consumers of systems as expert partners in system governance and delivery, systems responding to holistic needs of families and individuals, and system components flexible enough to meet unique situations

- Inclusion of historically excluded populations, such as those who have disabilities or are poor, young, or old, or recent immigrants

- Quality and accountability through focus on results and emphasis on cost-effectiveness and efficiency

- Collaboration through interorganizational personnel preparation and formal agreements

- Strength and asset focus, with emphasis on prevention and early intervention, in addition to problem-solving

- Focus on neighborhood capacity and small-area development

- Reliance on leveraging and redeployment of existing resources rather than on infusion of substantial new resources

- Focus on sustainability and lasting change

Comprehensive community initiatives that last over time tend to have clearly articulated vision,

mission, and goals that are understood by members of the community. They emphasize action as well as planning, and they take many shapes and forms. Some are focused on specific (though comprehensive) issues, such as early childhood development or alcohol and drug abuse prevention. Others aim at broad community building, with participants setting the agenda for priority action. Some CCIs are ad hoc informal organizations; others are independent nonprofit organizations. Some are organized as community development corporations (CDCs), which particularly focus on commercial, industrial, and residential concerns while blending the expertise of local specialists in such fields as financing, marketing, and management with wisdom of local residents most affected by the community's status.

Building and maintaining a CCI can be grueling work. The initiative must superimpose new ways of interacting on institutions that have established and mandated activities and organizational cultures. This transformation creates demands and resistance, even when participants agree on common goals. A critical ingredient in an effective CCI is a clearly designated lead agency that has a facilitative style, promoting shared power and full participation among partners and allowing time for giving up old ways and embracing new ones. Comprehensiveness brings forth diverse perspectives, which can lead to complex conflict. Individuals who provide staff support for the initiative must effectively and flexibly manage multiple relationships and activities in a dynamic environment. The core work of CCIs is about building and nurturing relationships throughout the community. Throughout the organization, professional staff must retool to let community residents lead. Staff roles must be facilitative and promoting of resident skill building rather than prescriptive. Often, staff are themselves members of the community and driven by their commitment to its improvement.

Integrating representatives of the corporate community and diverse faith communities into comprehensive community initiative can pose unique challenges. Government and nonprofit organizations, though their organizational cultures may differ considerably, have fundamental mandates to pursue the public good. The corporate community with its profit incentive and faith communities with various paths to their spiritual goals have obvious interests in the public good. How-

ever, their organizational cultures tend to be different from those of public and nonprofit service agencies. Therefore, building bridges among various sectors is a key process for the success of many CCIs.

Lasting CCIs can respond organically as new opportunities and challenges arise. For example, a community that decides to focus on low-income home ownership through a CCI may pursue domestic violence prevention when evidence indicates that families often lose home mortgages due to this problem. Until recently, community members who focused on home ownership tended to work in isolation from those who served families affected by domestic violence.

Some communities have been slow to develop CCIs because of beliefs that they may be cumbersome, difficult, and expensive. Accountability may be hard to document, because CCIs aim to change community processes, which makes for difficulty in measuring results that are clearly attributable to the CCI rather than to another entity. These concerns are likely to be addressed as more information emerges about how to efficiently build effective CCIs.

Foundation and government support have contributed to the growing popularity of CCIs. Examples of foundation-initiated programs include the Mott Foundation's Building Infrastructure program, which supports intermediate support organizations (ISOs) that provide financial and technical assistance to local community-building efforts, and the Annie E. Casey Foundation Rebuilding Communities Initiative, which aims to improve local housing, economic, and human services for improved child and family life. Federally, the Center on Substance Abuse Prevention (CSAP) of the U.S. Department of Health and Human Services funds collaborative partnerships that include businesses, labor unions, faith communities, schools, and the traditional health and human services organizations involved in the issue. Also, the Empowerment Zone and Enterprise Community legislation stimulates broad support in designated underdeveloped areas that are funded through competitive block grants for extended periods of time. An example of a state initiative is Missouri's Family Investment Trust, designed to change the ways decisions are made and services are delivered and financed, which led to the Caring Communities initiative throughout

the state. In the United States, the proliferation of CCIs focused on early life development led the Aspen Institute to establish the Roundtable on Comprehensive Community Initiatives for Children and Families so that participants can share lessons learned and stimulate new ideas. On an international level, the Ford Foundation's Asset Building and Community Development program supports programs across the globe that educate and empower local citizens to understand and influence their area's sustainable development. Many organizations sponsor CCI development, but the key to their success lies in a committed local citizenry who aim to transform their immediate ecological setting.

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See also: Community-Based Organizations; Domestic Violence; Search Institute; Social Justice and Human Science Programs

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Computer and Internet Access Skills for Senior Citizens

See Intergenerational Programs in Communities

Consumer Economics/ Consumer Education

It is increasingly important for consumers of goods and services to recognize well-designed products. This entry provides general guidelines for consumers to consider before initial purchase. A better understanding of what constitutes well-designed products will likely result in greater satisfaction. In many cases, the purchase of superior products will save money by providing a trouble-free, long-term-use benefit to the consumer. This entry seeks, among other things, to increase the awareness and consideration of human factors related to product design before purchase and use (Wickens 1998, 2). These guidelines should be especially helpful for those who plan to purchase durable goods.

Consider the Product’s Ease of Use

When considering a purchase, consider the product’s ease of use. The product should use graphics in such a way that you can see and understand the controls easily. Often this is achieved through the use of sharp contrasting colors or other key color markers. Well-designed products should stimulate visual and tactile interest, so that the mind better understands how each product is to be employed. If possible, read the basic instructions to determine if they are logical and easy to follow. Any instructions should provide a graphic diagram as well as accompanying text. Successful product selection includes being sure that there is a logical fit between need and overall ease of use (Green and Jordan 1999, 4–5).

Note the Quality of Materials and Construction

Note whether quality materials and construction techniques are employed in the products. Materials employed in the construction of products should last over a reasonable period of time. Con-

sider the ergonomic form and fit of products you intend to purchase (Ergonomics Society 2001, 1). If those products are in some way used by humans, material forms should easily interact with standardized measurements of the human body (Jordan 1996, 32). All materials should be conducive to the product’s intended use.

Look carefully at the edges and corners of products. One indication of quality construction is that products employ rounded rather than squared edges and corners. It costs a bit more to round edges and corners during the process of manufacturing, and use of this technique would be one indication of increased design thought involved in the creation of these products. In addition, the safety of products generally increases when products employ rounded edges and corners (Green and Jordan 1999, 75–76). Note any irregular seams, and avoid sharp edges and corners when possible. Avoid excessive ornamentation, as this is usually an indication of inferior quality. Well-manufactured products should be skillfully and neatly fitted together.

Well-designed products tend to be utilitarian, in the sense that they are void of unnecessary moving parts that clearly do not contribute to the overall function of the product. Moreover, well-designed products should be aesthetically appealing; successful products are often a unique blend of function and applied art. In the final evaluation, aim to get an overall sense of the way material forms, function, and construction fit together (Green and Jordan 1999, 6).

Seek the Advice of Professionals

It is important that consumers research products before completing purchases. Read magazines that conduct tests of consumer products in order to become a better-educated consumer. Learn to acquire nonbiased information. When speaking with salespersons, ask lots of questions, and listen carefully. Seek the opinion of several professionals to ensure reasonably correct information. In most cases, avoid basing your decision on the opinion of one salesperson.

In addition, look for manufacturers that consistently produce well-designed, high-quality products. For example, research any trends in the manufacturing of automobiles that show good to excellent marks for the same company several years running. You can then be relatively sure that

buying one of their automobiles will create a long-term use benefit.

Plan Ahead to Avoid Impulse Purchases

Fight the urge to buy products on impulse. Learn to walk away from items the first time you see them and feel the urge to buy them and to allow time to consider products in terms of cost versus benefit. Letting time go by between the first time you see a given product and the time you buy it helps to ensure a greater return on each investment. Make a habit of returning to buy only those products that you have carefully considered.

Plan ahead by focusing your search criteria for a specific product. It is helpful to identify a specific manufacturer and model number. In this manner, your judgment as a consumer is no longer clouded by the variety of products available.

Know Comparative Cost and Warranty Information

An informed consumer is often in a better position to make wise choices. Once you have identified a specific product, it is important to know the relative cost of the product in a given market. Spend time comparing the purchase price between competitive retailers. In addition, comparison shop using mail-order catalog and Internet resources.

In addition, check to see if the manufacturer provides easy access to the company. Specifically look for a toll-free phone number and a street address. Always read and understand warranty information provided by the manufacturer before purchasing any product.

Jeff C. Plant

See also: Energy and Home Usage; Energy Efficiency in the Home; Energy: Standards, Codes, and Labels; Household Appliances, Shopping for

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Consumption, Ethical

Ethical consumption refers to buying practices that frequently eschew immediate personal gain. Often the ethical consumer is willing to forgo traditional interests in price, quality, and convenience in order to address an ethical ideal. These ideals can be grouped around concerns with our environment, with human dignity, and with the dignity of other animals. Ethical consumers might, for example, buy electricity from renewable sources, fair-traded chocolate, or what are called freedom foods, for which an independent organization has verified the practice of some minimum animal welfare standards.

Researchers first began to speak of "green" consumption—which reflected an increase in environmental awareness—in affluent countries in the late 1970s. Later, as it became clear that some consumers were responding to a very wide range of social and environmental concerns beyond these initial concerns, the terms "socially responsible consumption" and "ethical consumption" were used to describe the practice of these consumer groups. Research has confirmed this tendency as an enduring phenomenon, only marginally affected by economic recessions. The rise of ethical consumption closely mirrors the increasing interest in business ethics and ethically screened investment.

Two plausible explanations for the ethical consumption phenomenon have been advanced. One is that in order to maintain their moral integrity, humans are likely to express their ideals in their primary areas of activity: family, work, leisure, and so on. Since most people in the affluent countries expend more time thinking about, engaging in, and recovering from consumption than any previous generation, we should expect to encounter a significant consumer ethics in those communities.

The other explanation is that the nature of the risks we face has changed. We have moved from a situation where the risks were mostly natural: crop failure and food shortages, storms, extremes of temperature, and so on, to one where they are likely to be caused by human beings. These risks are associated with practices such as nuclear

power generation, genetically modified organisms, social instability generated by extremes of inequality, and ailments associated with industrial farming methods. Ulrich Beck (1999) argues that there are two outcomes of such a situation. Firstly, consumption becomes politicized, and secondly, because the consequences are inescapable, everyone is drawn into action and debate.

Increasingly sophisticated methods of assessing the level of ethical consumption are being developed. An instance of this is the new Ethical Trading Index (ETI) developed by the New Economics Foundation and the Co-operative Bank in the United Kingdom. The ETI tracks ethical buying, which was calculated to have grown by 18 percent in the financial year 1999/2000, significantly ahead of general economic growth.

Detailed research by Deirdre Shaw and Ian Clarke (1999) suggests that ethical consumption derives from the concern of individuals to maintain their moral integrity. A consumer who rejects violence might, for example, avoid the products of companies that also manufacture armaments. Some consumers, however, take individual and collective actions aimed to achieve specific changes in society. Many, for instance, have joined boycotts (see Smith 1990). Others have arranged what have been dubbed buycotts, boycotts of specific products, retailers, or producers that have not met their ethical requirements (Friedman 1996). These consumers are inevitably concerned with the consequences of their actions, and their action in the marketplace could be regarded as a considered vote.

The notion of consumption as “voting” in the marketplace can be dated back to the 1940s. The economist L. E. von Mises (Gonse 1990) proposed the concept of consumer sovereignty. His thesis was that it was consumers rather than producers who held ultimate power in market economies. In the 1960s, the UK politician Enoch Powell referred to the consumption choices people make as a “great and continuous general election.” The idea of consumer power became synonymous with the name of Ralph Nader in the United States, where consumer actions were effectively prosecuted. Ethical consumers extend this principle from individual preferences and product quality to wider environmental and social concerns.

In order to cast a meaningful vote in the marketplace, the ethically concerned consumer must

have accurate and up-to-date information. The UK magazine *Ethical Consumer* informs consumers on issues that are of concern in the early twenty-first century. The environmental issues the magazine reports on include company environmental reporting policy, pollution, genetic engineering, and nuclear power. The magazine also reports on animal issues, including testing and factory farming, and social issues, including oppressive regimes, worker’s rights, companies’ codes of conduct, and irresponsible marketing. The editors alert consumers to issues such as political donations companies have made and any specific boycott calls that have been issued. Globalization issues are also included as they occur. So, for instance, consumers were informed which companies were supporting the proposed Multinational Agreement on Investment (MAI), an international economic agreement comprising a set of rules restricting government action regulating international investment and corporate behavior.

The generic areas within which consumers in the various affluent countries have exhibited concerns are similar, but the emphasis varies geographically. There would appear, for example, to be more emphasis on human as opposed to animal rights in mainland Europe than is the case in the UK. Significantly, the Fair Trade movement originated in the Netherlands. The ethical consumption movement in the United States has put a strong emphasis on company policy toward women’s and minority opportunities, an emphasis not as evident elsewhere.

The trends in ethical consumption have been well documented in surveys and market research. Much of this work has been concerned with recording the growing areas of concern and relating consumer attitudes to purchase behavior. Typically, slightly more women than men have reported themselves as ethical consumers, but ethical consumption is far from being a predominantly female phenomenon. Consumers have typically been segmented into categories according to their reported strength of commitment and purchase behavior.

Case study (Newholm 2000) and focus group (Shaw and Clarke 1999) research have suggested that in their everyday consumption people exhibit a considerable diversity of human behavior. For instance, respondents to surveys often report themselves as vegan, vegetarian, piscarian, or pursuing

various low-meat diets. However, seemingly inconsistent practices might be justified. Consumers were found who pursued a vegan diet at home but were vegetarian in public.

A degree of what is called voluntary simplicity is often apparent in the lives of ethical consumers (see Shaw and Newholm 2002). However, thrift, repair, maintenance, and buying second-hand may well be accompanied by high-tech solutions such as solar power installations and expensive bicycles. Simplicity might mean learning to live owning fewer cars or the choice of a frugal lifestyle. Consumers might or might not know about the wide range of issues typically included among the concerns of their affluent culture. Political action, however, did not necessarily follow awareness of particular concerns. An individual might consciously decide to assiduously avoid animal-based products but do nothing about trade inequities. Although aware of Fair Trade products and favorably disposed to the arguments supporting them, they might choose to give their effort to animal rights. The opposite would be equally possible. Hence, individuals' ethical consumption projects were highly diverse, not necessarily consistent, and could only be understood in the context of their particular biographies. Many product sectors claiming to be ethical are now well established, with their own national or sometimes international certification systems and marks of compliance. Examples are the Fair Trade movement, managed forest products, Freedom Foods, and the long-established organics movement. In some of these areas, notably Fair Traded coffee and tea products, claims to higher quality than competing products have been made. Consumer concern in other product sectors, notably fashion and clothing, where child labor and worker's rights are strong issues, is exerting pressure for a similar movement.

Many chapters in *Ethics of Consumption*, edited by David Crocker and Toby Linden (1998), link consumption choices, made on the basis of ethical beliefs, with ecological carrying capacity. Carrying capacity refers to the theoretical calculation of the (human) population size and activity the environment can just maintain. For example, low or non-meat diets are low-energy options. Thus they are linked both to human equity, since more people can be fed as vegetarians than as omnivores, and to environmental sustainability. Transport choices,

replacing car journeys with cycling or public transport, are individually beneficial but also arguably ecologically less damaging. Similar arguments were made in the Brundtland Report in favor of a more equitable distribution between the affluent and poor of the world. Such arguments are inherent in the Fair Trade movement. Although the issues are complex and contested, an ecologically sustainable human future is hardly thinkable without an appropriate ethics of consumption.

The growing recognition of ethical consumption has made possible and necessary the concern with business ethics. Expertise in techniques such as "social auditing" has grown rapidly. As well as new independent organizations offering social auditing services, many mainstream financial auditing companies now additionally offer this service to their clients. The Internet and e-commerce offer new opportunities for ethical consumption. A proliferation of Web sites offer services to consumers, and portals can direct consumers to ethical products, retailers, and producers, while ethical retailers offer products and information about sources of knowledge about products. The possibilities are legion.

Terry Newholm
Deirdre Shaw

See also: Energy Efficiency in the Home; Energy: Standards, Codes, and Labels; Environmental Justice; Environmental Movement in the United States and People of Color; Sustainable Development

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Contemporary Men's Movement

Given the broad diversity of American society, there is no single definition of male identity (e.g., men as providers) appropriate or useful to all men. Likewise, male self-definition and identity may be modified over the life course, in response to diverse contexts and experiences. Eric Erikson, among others, has charted this passage of individuals through the phases of life, including changes in life tasks. For example, male identity (including gender roles) may be modified as one moves from childhood and the teenage years and into middle age, with new roles involving nurturing, mentoring, or other kinds of generative activities (Levinson 1978; Jones 2001). Variation in experience may also influence male self-definition. For example, differences in the expression of male identity and behavior for a White working-class man, an African American man, or a gay man may reflect, in part, the distinctive subculture in which each of these males participate (Galluccio and Galluccio 2001).

As the women's movement developed, many men became aware that they had their own diverse needs, as men. Addressing these needs was the initial impetus for the contemporary men's movement (CMM), as well as for various types of social support that men receive from participation in the various branches of the men's movement. From this movement evolved men's studies, which was deemed necessary to study men and their experience as men. The work of the field of men's studies involves the examination of male subcultures, and how each subculture of men defines masculinity differently. As Stephen Haynes summed it up in a recent article, "In recent years the scholarly study of masculinity (sometimes called the 'new men's studies') has exploded. . . . Emphasis is on the ways masculinity is usually socially constructed ('shaped by historical circumstances and social discourse, and not primarily by random biology'), on multiple masculinities and the dynamics among them, and on the relationship between maleness, masculinity, and the exercise of social power" (Haynes 2002, 144).

The first organization of men's studies scholars was the Men's Studies Task Force of the National

Organization for Changing Men (NOCM). That organization is now known as the National Organization for Men Against Sexism (NOMAS), which is the pro-feminist, gay-affirmative, antisexist, antiracist branch of the CMM organized to promote and support pro-feminist men's work and activities. It looks at its activities and theoretical bases through a sociological lens. Subsequently, the American Men's Studies Association (AMSA) split off from NOMAS in order to encompass a broader array of scholars, representing men and women from various fields of study.

In the CMM, there are several branches, which, in turn, can be placed on a political continuum from left to right. On the left end is the pro-feminist branch of the CMM. This branch looks at society and sees the ways that social structures constrict masculinity. From the perspective of this branch, male self-definition is constructed through social organizations and social structures. For some men, masculine identity might be defined by work experience. Another man's identity might be defined/constructed by his interaction with the dominant culture as portrayed in the media.

The pro-feminist branch (NOMAS) advocates for social changes to correct social practices that restrict men to performing within a narrow definition of a male role as defined by the dominant culture (sometimes called the John Wayne image of manhood). This definition of masculinity may cut men off from feeling and experiencing the full range of their emotions, which may have a negative impact on men's ability to relate with women, children, and other men. The pro-feminist men also advocate changing social structures, removing the structural impediments to men living a fuller life. Examples of typical concerns of the pro-feminist branch are female victims of domestic violence, homophobia, pornography, sexism, racism, and others.

In the center of the continuum is the mythopoetic branch (MP) of the CMM. The definition of mythopoetic is the "reinterpreting and reworking of old stories and myths in ways that are relevant to the emotional healing of contemporary men; a re-visioning of masculinity for our time" (Barton 2000, 264). Practically, the mythopoetic branch of the CMM is focused on individual emotional healing for men, so that they can access a full range of emotions (e.g., anger, sadness, happiness, fear, and

shame) and be able to express those emotions in a circle of men meeting where a sacred space, or ritual space, has been created. In that ritual space, men trust one another and feel sufficiently safe to express feelings of vulnerability so as to be able to engage in the transformative work of addressing emotional concerns. Robert Bly brought this branch to popular consciousness with the publication of *Iron John* in the early 1990s. This branch looks at men's emotional healing from a psychological perspective.

In the early 1990s, there was a ground swell of mythopoetic men's support groups and newsletters. In the early twenty-first century, the main organization in the MP branch is the ManKind Project (MKP) and its gateway weekend event, the New Warrior Training Adventure (NWTa). The NWTa is an initiatory weekend for men, usually held in a rural, rustic setting, away from the pressures and distractions of the everyday world, so that a man may focus on his participation in this initiatory experience and heal some of his emotional wounds, heal his lack of closeness to other men, and heal his lack of male friendship in the crucible of the safe weekend container. Over 25,000 men have been initiated via the NWTa, with trainings having been held in Australia, Canada, Europe, South Africa, and the United States (Pentz 2000).

At the far end of the continuum is the men's rights (MR) branch of the CMM. In some respects, this branch might be considered a backlash against feminism. Though the extent to which it is a backlash may have been overstated, it is true that those in the men's rights movement do believe that some of the ways in which men are socialized create inequalities that put men at a disadvantage. The men's rights movement also protests against the popular perception that only men batter their partners, pointing to the research that indicated that women contribute equally to domestic violence (e.g., Steinmetz 1985). This seminal research was controversial at the time; more recently, it has been supported by subsequent research though it is still controversial and is now more widely accepted (e.g., George 2002).

The men's rights branch has traditionally been composed of men who are individualistic, and as a result this branch has rarely coalesced for any length of time. Other notable branches of the CMM include the Promise Keepers (PK) and the

father's rights (FR) branches. The Promise Keepers branch of the CMM is an evangelical Christian men's organization. The Promise Keepers became famous for being able to fill football stadiums full of men. The main objectives of the Promise Keepers are to promote strong Christian family values, to support the mission of the church, and to encourage men to pursue vital relationships with a few other men (e.g., Brickner 1999). The father's rights branch of the CMM focuses on assisting fathers in obtaining access rights to their children and increased parenting time, as well as more liberal custody provisions and less onerous child support provisions. There are other branches of the CMM. Among these are socialist men, gay men, and African American men. For a description of these branches, as well as a more complete treatment of those discussed above, see Kenneth Clatterbaugh's *Contemporary Perspectives on Masculinity*, second edition.

One advantage of participating in the CMM is that members receive social support. Social supports are ecological, in the sense that they are provided and received in different ecological contexts. One context is the family. Another context may be a men's peer mutual support group or a women's support group.

The branches of the CMM reflect the different kinds of support groups that have evolved in the men's movement. As an example, many of the men's peer mutual support groups in the mythopoetic branch of the CMM would be considered as giving and receiving emotional social support for their members. The support is defined as emotional social support because in these support groups the men are encouraged to share their feelings and in return receive emotional support from the other members of the group.

On the other hand, organizations such as Fathers for Equal Rights, under the FR branch of the CMM, provide an informational form of social support. Usually the non-custodial fathers, non-custodial mothers, and grandparents whose access to their grandchildren has been denied who attend father's rights meetings are looking for information as to how to best represent themselves and prepare court documents with respect to pending litigation regarding access to their children and grandchildren, and parenting time or grandparenting time. In these meetings, emotional support is a secondary concern, whereas the information

being sought meets the primary needs of the people attending, and is the main reason why they attend and continue attending the father's rights meetings.

Edward Read Barton

See also: Domestic Violence; Erikson, Erik Homburger; Father-Child Relationships following Divorce; Gay and Lesbian Studies; Gender Roles and Society; Sex-Role Stereotypes; Sexual Identity Development

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Cooperative Extension System (CES)

A publicly funded, national, non-formal educational system that links the educational and research resources and activities of the United States Department of Agriculture (USDA), land-grant universities in every state and territory and the District of Columbia, and approximately 3,150 county administrative units. (Cooperative State Research, Education and Extension Service 2002). The basic mission of the CES is to translate scientific research knowledge into informational and educational programs that enable people to improve their lives and their communities. Originally the CES organizational focus was in four major program areas: agriculture, home economics, 4-H youth, and community development. Since 1987, CES has expanded its focus to include national initiatives such as the Extension Cares . . . for America's Children and Youth; Food Safety and Quality; and Healthy People . . . Healthy Communities.

Origin of CES

The Cooperative Extension Service was officially created in 1914 when the U.S. Congress passed the Smith-Lever Act. Thus the Extension Service became an integral part of the partnership between USDA and land-grant colleges and universities that was established by the Morrill Act. The Morrill Act of 1862 had donated federal land to states and

territories for an endowment to establish at least one college or university that would focus on agriculture and mechanic arts. In 1887, the Hatch Act established agricultural experiments stations at land-grant universities, with a yearly grant designated for research. In 1890, a second Morrill Act was passed, which spurred the establishment of 17 Black land-grant colleges throughout the South. In 1994, the National Agricultural Research, Extension and Teaching Act established extension education programs in 29 colleges on Native American reservations. Presently there are 106 land-grant colleges and universities located through the United States and its territories.

CES Today

Presently the Cooperative Extension System utilizes both base programs and national initiatives that help provide direction for research and educational programming across the country.

Base Programs

The four base programs (agriculture, home economics, 4-H youth, and community development.) support seven major areas:

1. 4-H Youth Development creates supportive environments in which culturally diverse youth and adults can reach their fullest potential.
2. Agriculture provides science-based information and facilitates the acquisition and application of knowledge and skills focused on agricultural systems.
3. Community Resources and Economic Development improves the long-term well-being of communities through research and experience-based education and through facilitation of community groups.
4. Family Development and Resource Management helps families develop skills in three major areas: family development, housing, and resource management
5. Leadership and Volunteer Development enhances the capacity of people to take action to improve the well-being of self, families, and communities.
6. Natural Resources and Environmental Management furthers the public good and helps people improve their lives through an educational process that uses scientific knowledge focused on issues and needs.
7. Nutrition, Diet, and Health empowers indi-

viduals, families, and communities, including policy makers, to make informed choices about food and lifestyles that support their physiological health and economic and social well-being.

National Initiatives

National Initiatives give programming emphasis to current issues that are of national importance. Initiatives usually run for a five-year period. National initiatives may or may not have a special federal funding. National initiatives have support teams composed of federal, state, and county extension staff. As of January 2002, the CES had the following five national initiatives:

1. Extension Cares . . . for American's Children and Youth improves child-care and youth programs for infants and toddlers, preschoolers, school-age children, and youth in out-of-school time through research, education, and technology.
2. Financial Security in Later Life provides quality leadership for consumer and family economics research, extension/outreach, and higher education resulting in economic security for individuals and families. Programs address issues such as decreasing consumer debt; planning for retirement; and the impact of public issues, policies, and programs on family economic well-being.
3. Food Safety and Quality supports competitive projects that address selected priority issues in food safety that are best solved using an integrated approach (multi-state, multidisciplinary, and including research, extension, and education components). Programs address issues such as control of food-borne microbial pathogens, improving safety of fresh fruits and vegetables, food handler education and certification training, home food processing and preservation and integrated food safety.
4. Healthy People . . . Healthy Communities promotes the capacity of individuals, families, and communities to increase healthy behaviors and lifestyle choices and make informed consumer decisions. Programs address health issues such as cancer education; teenage pregnancy and pregnancy prevention; alcohol, tobacco, and other drugs; self-care; consumer health-care options; environmental health issues; protective clothing and equipment for farm workers; and the potential for agricultural productivity.
5. Workforce Preparation creates opportunities

for learning so that youth and adults can successfully navigate the transitions of school-to-work, welfare-to-work, and work-to-work. This initiative promotes the formation of multistakeholder alliances (business and industry, agencies, schools, non-formal education organizations, government agencies, and citizens) to address workforce preparation issues.

Susan J. Barkman

See also: 4-H Youth Development

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Creativity and the Arts in Child and Adolescent Development

Several disciplines, ranging from the fine arts to the performing arts, are forms of expression that are included under the umbrella term “arts.” There are many different types of art forms. Examples of fine or visual art forms include painting, drawing, sculpting, architecture, and photography. Drama, dance, music, and performance art are generally considered examples of performing arts. Some art forms do not fit within the boundaries of either performing or fine arts, but are rather a combination of the two. Examples of these include costuming, directing, producing, stage-managing, stage design, light design, and filmmaking. The arts play a fundamental role in many people’s lives. For many, the arts serve as a primary source of expression. Many schools include the arts in their curriculum. The combination of arts and academics in the schools works to foster creative thinking. In addition, many students pursue various art forms outside of the school setting. Some people may even go on to pursue the arts as a career. Yet, the importance and relevance of the arts to the development of children, adolescents, and young adults is generally overlooked or minimized.

How the Arts Help Children and Adolescents Develop

The arts serve as a source of expression for many children and teenagers. Through artistic endeavors, children are encouraged to explore original

ideas and thoughts. Children are afforded the opportunity to discover their creative potential and find new and innovative methods of problem solving. During the period of adolescence, teens are trying to determine their personal identity. The arts provide a forum for exploration of the self. Creative freedom and individuality are primary tenets of artistic expression. While many adolescents may feel pressures to conform, the arts require individual expression, thus allowing teens to try on, or test, various identities in an attempt to discover which one fits best. During adolescence, teens attempt to answer the question, “Who am I?” Participation in the arts helps teens discover the answer to this difficult question. For example, when a teen performs in a drama production, she must explore the role she will play. This may involve researching the time period in which the play takes place, the setting, and the occupation of the character. Once the teen has gathered sufficient information she must work to assume the identity of the character. By acting out the role, the teenager has the opportunity to explore an alternative identity. Acting also allows the expression of emotions that may not normally be considered appropriate. For example, an angry outburst in the middle of the school day may lead to a detention. However, an angry outburst within the context of a school play may be considered an excellent performance. The arts provide a safe place for self-exploration.

Through the arts, children and teenagers learn both the value of teamwork and the importance of individual responsibility. The student who signs his name to a painting is responsible for the work. While others may help to guide the student, he is ultimately responsible for carrying out and finishing the piece of art. This responsibility promotes autonomy and independence. Teamwork is also an important component of creating art. Teachers, directors, and mentors may consult with the young artist and guide him in a certain direction. In some instances, students may even collaborate on a project. For instance, a group of students may collectively work toward producing a play. Each person is individually responsible for learning his lines, researching the character, and performing effectively; the overall success of the play, however, is not judged by the quality of only one person’s performance, but rather by the collective effort. Collaborating with others in a creative process also fosters and helps to develop social and communi-



Young children painting (Laura Dwight)

cation skills. Clearly, children and adolescents can learn a great deal by exploring the arts.

Schools and the Arts

The role of the arts in the schools varies across school districts. Some schools stress a focus on the arts, while other schools do not have any arts programs. Those schools that do include the arts in their curriculum vary in the degree of emphasis placed on the arts. For example, some schools may offer a limited range of courses in only one field (e.g., visual arts), whereas other schools may offer courses ranging from beginner to advanced in a wide range of disciplines (e.g., performing arts and fine arts). Some schools are dedicated to making the arts the primary focus of the curriculum. For example, a district with a magnet school system may devote one school to the teaching of the arts. Each school in a magnet school system has a particular focus. Parents and students generally choose the school whose program best meets their needs. Those students who wish to receive a strong arts education in the public schools may choose to attend the arts magnet school in their district.

There are several options available to those stu-

dents who wish to pursue the arts beyond their high school education. Many liberal arts universities and colleges have departments or schools in assorted arts disciplines. Another option for students who wish to pursue the arts in higher education are schools that specialize solely in the teaching of the arts. Conservatories tend to focus on the performing arts, while museum schools tend to focus on the fine arts. Even those students who do not plan on focusing on the arts later in life can benefit a great deal from an arts education.

Creativity and Intelligence

An arts education is an extremely valuable complement to a traditional academic education. The arts teach innovative and creative ways of thinking and solving problems. Students are taught to find new and interesting ways of expressing their emotions and ideas. In addition, academic skills are frequently applied in the arts. For example, knowledge of history is necessary when costuming a show, and lighting and set designers must be able to apply their knowledge of trigonometry and geometry when designing a lighting plan or a set. In addition, spatial skills are an important element

of almost all art forms. The arts provide real-life problems that students can solve using their academic knowledge.

Many schools focus on developing students' verbal and mathematical abilities. In addition, exams such as the SATs, ACTs, and GREs test students' verbal and mathematical abilities. Many psychologists believe that these tests do not accurately measure intelligence. According to these testing methods, intelligence exists exclusively in the forms of mathematical and verbal abilities. Psychologist Howard Gardner has proposed the existence of multiple intelligences. Included among the different types of intelligences he identifies are musical intelligence, bodily-kinesthetic intelligence, and spatial intelligence. Many artists rely heavily on these intellectual domains to produce their work. Musicians utilize musical intelligence, dancers and actors utilize bodily-kinesthetic intelligence, and visual artists utilize spatial intelligence. Some people may be experts in one intellectual form and novices in another. For example, a pianist may be an expert in the domain of musical intelligence, but a novice in the domain of linguistic intelligence. In the United States, verbal and mathematical intelligences are highly valued, whereas musical, bodily-kinesthetic, and spatial intelligences are considered less important.

The arts also promote the use of symbolic thought. During the period of adolescence, symbolic and logical thinking skills are developing. Prior to adolescence, individuals understand the world in a very concrete manner. As people mature, their thinking becomes more complex and abstract. A primary component of the arts is symbolic and abstract expression and interpretation of ideas and emotions. The arts allow children and adolescents to exercise their minds by promoting symbolic thought. By practicing these skills, youth learn a different way of comprehending the world.

Threats to the Arts

There are several threats to the future of arts education in the schools. Many arts programs are severely underfunded. Many school officials consider the arts to be a dispensable element of the curriculum. Traditional academics are perceived as being a more important component of an education, and therefore the arts are pushed aside in pursuit of academic knowledge. Clearly, however, an arts education promotes creative thought, and

the relevance of creative thinking can be evidenced in a variety of disciplines ranging from science to social studies. Children and adolescents should be encouraged to think creatively in all disciplines. However, without courses in the arts, students may not be able to reach their creative potential. Arts classes provide a nonevaluative atmosphere where students can freely explore and express their ideas without fear of giving the wrong answer or experiencing repercussions from nonconformity. Original, innovative thinking is the basis of any arts curriculum. The skills and confidence children and adolescents gain from an arts education can be transferred to their more traditional academic courses. In addition, by encouraging creativity, students gain valuable life skills that will help them to succeed later in life.

Pursuing the Arts as a Career

Eventually, adolescents must decide what role the arts will play in their lives. Some students will choose to pursue the arts as a full-time career. There are many different career opportunities in which the arts are incorporated. Knowledge of the arts is applied in various fields. Adolescents who are interested in both the arts and writing may wish to consider a career in art review or critique. Many major news publications include an arts section that not only reports on local arts exhibitions, but also provides reviews and critiques of artists and their work. Teaching the arts is another option. Schools, community groups, religious organizations, and private institutions often hire art teachers. Museums and schools frequently hire curators and collectors who are highly knowledgeable in a particular arts field. Art therapy is yet another option; art as therapy is now regarded as a type of clinical treatment. Visual art and dance therapies are frequently used with both children and adults. Clinicians use art as a means of exploring and interpreting their patients' thoughts and emotions.

Those adolescents who decide not to seriously pursue the arts will still benefit from an education that incorporates the arts. Students learn how to appreciate and understand artistic expression and how to think creatively (an attribute that can be applied to multiple disciplines). The arts promote a celebration of diversity and encourage an appreciation of and respect for others' views and opinions. Students learn to constructively criticize

other artists' work and are able to understand and accept others' perspectives. These sophisticated thinking skills are not simply valuable within the artistic arena; they are skills that students will carry with them throughout life and apply to their fields of interest.

Jennifer S. Brown

See also: Adolescent Identity Formation; Art Therapy; Cognitive Assessment; Music

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Crises, Family

See Family Crises

Culture and Human Development

Culture can be understood as the way of life of a people in its totality. In 1871, the anthropologist E. B. Tylor first defined culture as "that complex whole which includes knowledge, belief, art, morals, laws, customs, and any other capabilities" that humans acquire as a result of growing up and living in a society (Tylor 1871, 42). Since then, social scientists have offered many similar and often overlapping definitions, but most would still agree with Tylor: Culture includes the knowledge and behaviors that a group of people share as a result of living in the same society. The subfield of culture and human development asks how those shared beliefs and behaviors influence the development of children. Typically, the study of development is understood as the study of universal processes of growth and change, but social scientists who study culture and human development want to know more about the ways in which development is culturally shaped.

One way of understanding culture's influence on human development has been offered by social scientists Charles Super and Sara Harkness. According to Super and Harkness (1986), children grow up within a developmental niche. This niche has three major components: (1) the physical settings that shape children's lives; (2) the customs of

the parents in relation to child care; and (3) the beliefs about child rearing that parents have. For example, in America it is common to place children in adult-structured activities with other children the same age, such as Gymboree for infants or Scouts for school-aged children. In many other countries, it is more typical for children to engage in unstructured activities in mixed-age neighborhood groups. Also in America, it is common to feed infants in high chairs and to place them in walkers in between meals. In many other countries, infants might be held during mealtimes and carried on the mother's or an older sibling's back between meals. All of these differences can be understood as cultural variations in the physical settings that we create for our children.

In addition, children growing up in different cultures experience different child-care customs and practices. For example, in America children are encouraged to self-feed and to sleep in their own rooms from a very young age, but are toilet trained late in the preschool years. In many other countries these practices are reversed, with self-feeding and sleeping alone at night occurring at a later age, and toilet training at an earlier age. Many researchers believe that these different cultural practices create different sets of experiences for children, which ultimately influence their beliefs about the world. The American customs can be viewed as emphasizing the importance of the child having control over his own body.

Finally, parents in different cultures have different beliefs about child rearing and what their goals for their children are or should be. In America, a great deal of emphasis is placed on children becoming self-confident. Many other cultures place primary emphasis on other qualities, such as treating others with respect (Harwood, Miller, and Lucca Irizarry 1995). Many social scientists believe that these differences in the cultural context of childhood ultimately influence our ways of viewing ourselves, others, and the world around us, as well as our ways of behaving toward one another.

Robin Harwood

See also: Adolescence in a Cultural Context; Child Development, Cultural and Community Influences on; International Society for the Study of Behavioral Development

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Curiosity

In the study of human ecology, curiosity is of vital importance because it motivates exploratory behavior that results in learning. Curiosity has a cognitive and sensory form. Cognitive curiosity, also called inquisitiveness and information seeking, stimulates questioning, observing, experimenting, and thinking (Berlyne 1960). Sensory curiosity, or stimulation seeking, has various facets, including disinhibition, experience seeking, boredom susceptibility, and thrill-and-adventure seeking (Zuckerman 1994). Sensory curiosity motivates the seeking of varied, novel, complex, and intense sensations for the sake of experiencing them, often in the face of considerable risk.

Our earliest ancestors, driven to satisfy both their cognitive and sensory curiosity, necessarily explored the many novel and discrepant things in their surroundings, which allowed them to learn, adapt, and therefore survive. Curiosity serves modern humans equally well as a significant impetus for spiritual, social, and scientific discovery.

The knowledge acquired through curiosity-induced exploratory behaviors fosters development, particularly cognitive development. Cognitive curiosity is positively related to convergent thinking (leading to an expected end result or answer) and complex problem solving; sensory curiosity is closely associated with divergent thinking (leading to independent ideas or new perspectives on a given topic) and creativity. Nevertheless, both forms of curiosity can be problematic when in excess or inappropriately directed. Cognitive curiosity can become nosiness, meddlesomeness, or an excessive fixation on trivia; sensory curiosity is linked with hazardous risk taking, substance abuse, and fighting.



Children learning (Laura Dwight)

In both of its forms, curiosity remains an important motivator throughout the life span. Through active physical exploration of their environments, children build motor skills and new knowledge structures, or schema. Likewise, adults explore to learn, for instance, about new job-related tasks, by observing coworkers, questioning supervisors, or surfing the Internet. Although adults often avoid thrill-and-adventure seeking and other forms of sensory curiosity as they approach old age (Giambra, Camp, and Grodsky 1992), information seeking or the cognitive variety of curiosity continues to be a significant force that enables them to adapt to their ever changing environments.

In educational contexts, curiosity is a powerful motivator of academic learning (Reeve 1996). In formal classroom settings, stimulating students' curiosity fosters their engagement and interest. Once their curiosity is aroused, learners are more attentive to novel information, explore it in greater depth, use more exploratory techniques (e.g., individual and group consultation), and employ these techniques for longer periods. Thus, curiosity not only stimulates exploratory behaviors at the beginning of a learning endeavor, but throughout the process of learning as well. Significantly, this phenomenon is as prevalent in adults' classrooms as it is in children's.

Curiosity is also an important predictor of an often overlooked kind of learning, informal learning (Reio and Wiswell 2000). A considerable portion of children's learning occurs informally, outside the classroom, through activities including individual and cooperative play, interacting with parents and other adults, and observing the behavior of others. In each of these informal learning situations, the process of learning is enhanced if curiosity-induced exploratory behaviors such as asking questions, trial-and-error experimentation, and thinking are encouraged. For adults, the situation is again similar. While adults are participating in a task force, a recreational sport, or a religious retreat, to take a few examples, learning is promoted when curiosity and exploration are embraced, not discouraged.

Thomas G. Reio Jr.

See also: Achievement Motivation

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D

Dating

Dating is the romantic interaction or engagement between people of the opposite sex that typically takes place during the period between puberty and marriage. Over the course of the past century, adolescent dating evolved from a formal courtship ritual whose primary purpose was to find a life mate to a social situation focused on temporary enjoyment (Hopkins 1983; Steinberg 1993). As the average age for marriage has increased, so has the casual atmosphere of adolescent dating (Steinberg 1993). For example, common activities on dates now include not only movies and music concerts but exercise activities such as hiking and biking. Also, double dates and group dates have become common alternatives to single-couple dates for many adolescents, especially at younger ages where relationships with the opposite sex are still relatively rare.

Despite the relaxed and casual nature of dating today, high school dates tend to conform to stereotyped scripts, with clearly defined roles for boys and girls. For example, it is still typically the boy who initiates a date and makes the first sexual advances (Santrock 1996; Steinberg and Levine 1997).

At the stage when dating is just beginning, usually in middle school, a girl and boy simply talking can have connotations of romantic involvement. "If you talk with a boy," said one girl, "they [other girls] say that you're almost going with him" (Steinberg and Belsky 1991, 480). Most girls in the United States begin dating at around age 13, and most boys at age 14 (Steinberg and Levine 1997). The dating age has decreased over the last few

decades, due in part to popular culture, which has focused increasingly on sex and sexiness (Stepp 2000). By the age of 16, the vast majority of teenagers have gone on at least one date (Santrock 1996). The age at which a particular adolescent begins to date depends in part on the frequency of dating in her peer group. Although dating may be contingent on physical maturity, a physically immature 14-year-old is more likely to date at a school where it is common for 14-year-olds to date than is a physically mature 14-year-old at a school where dating does not commonly begin until age 16 (Dornbusch et al. 1981).

Dating serves many functions in addition to the traditional one of mate selection. Dating provides recreation and an opportunity to learn more about oneself and about relationships with others, it provides a context for the development and expression of intimacy, and it is often a source of status and prestige. It allows adolescents to experience and explore companionship, affection, and physicality (Hopkins 1983; Santrock 1996).

Dating typically begins as relationships within a grade or age group. Teenagers tend to keep relationships within social class or other boundaries for reasons that include social pressure and convenience (Hopkins 1983). For example, there is a tendency, although not a rule, for athletes to date other athletes. The bond of a shared activity provides conversation topics, time spent together (e.g., at club meetings and events), and mutual admiration for accomplishments, all of which contribute to forming the basis for friendly or romantic relationships.



Couple on a date (Skjold Photographs)

Early dating tends to have less emotional depth and certainly less intimacy, as well as less focus on pairing off in clearly identified couples. The dating process tends to begin with increasing interest in settings where there are likely to be members of the opposite sex, such as the local mall. This is followed by attendance at school dances and parties, and then smaller-scale mixed-sex social events such as the movies, with only limited emphasis on pairing off (Padgham and Blyth 1991). Even though middle schoolers may label a pair girlfriend and boyfriend, single-couple dates and steady relationships do not often develop until much later, commonly in high school. "High school students reported that, in retrospect, such relationships [in middle school] were quite superficial and of little lasting importance," even though middle school students describe their relationships as emotional and important (Padgham and Blyth 1991, 197). It is only in late adolescence that couples exhibit the emotional depth and maturity necessary for intimate as opposed to superficial relationships (Steinberg 1993).

There is great variety in the age range for first sexual encounters. Gender, ethnic background, and community values all influence the age of sexual initiation. The earlier the first sexual activity, the "more likely the act is to be part of a profile of high-risk behaviors, including alcohol use, drug use, and delinquent activity" (Newman and Newman 1995, 437), a circumstance that may have significant consequences for teens in the population at large. However, there is a recent trend toward more frequent and involved intimacy among younger children generally (Newman and Newman 1995). The social pressure to be intimate and sexy is evident in teenage media, which often portray "normal" teenagers engaging in sexual activity. By the time of college graduation, about 80 percent of students are sexually experienced (Steinberg and Belsky 1991, 485). However, despite the association of early sexual activity with delinquent activity, adolescents who become sexually active before their peers are usually just as self-confident and satisfied as their non-sexually active peers (Steinberg and Belsky 1991). In general, dating, when it is handled maturely, can have positive consequences for the individual.

Lea Bornstein

See also: Adolescent Identity Formation; Adolescent Pregnancy and Prevention; Sexual Abstinence; Violence in Teen Dating

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Deacon, Ruth E.

According to conceptual frameworks used in the study of human ecology, it is the family that mediates between the environment and the individual. This mediation occurs through the process of resource development and allocation, often referred to as family resource management. Dr. Ruth E. Deacon, Dean and Professor Emeritus, College of Family and Consumer Sciences, Iowa State University, working with her coauthor, Dr. Francille M. Firebaugh, Cornell University, has been at the forefront of theoretical developments in the field of family resource management that began in the 1960s (Deacon and Firebaugh 1975; 1981; 1988). Although home management had been recognized as a field of study in the early twentieth century (Gross, Crandall, and Knoll 1980), it was approached as a process that was often prescriptive (c.f. Gross 1948), with families viewed as using their resources to attain standards often derived from outside the family itself (a clean house, nutritious meals, well-behaved children). Often the emphasis was on work simplification (Cushman

1945; Steidl and Bratton 1968). Deacon and Firebaugh's work fundamentally changed the way managerial behavior was viewed and studied in the field of human ecology.

Deacon and Firebaugh began evolving their theoretical framework for the study of resource development, allocation, and management within families in the early 1960s (Maloch and Deacon 1966), when systems theory was being viewed as an important framework (perhaps the most important framework) for the study of the family (Buckley 1967; Hill 1971). In the Deacon and Firebaugh framework, resource management is viewed as a system, with inputs to the system in the form of demands and resources. The inputs are transformed by the system, through planning and implementing, into met demands and used resources.

The resource management system is seen as one of the subsystems of the family system. The other subsystem, termed the personal system, is responsible for establishing the family's value structure, from which goals emanate, and for the establishment and maintenance of healthy family relations. The family is viewed as a system imbedded in and interacting with larger systems: the community, the workplace, the school system, and the like. Consistent with general systems theory, feedback, that portion of output returning to the system as input, is viewed as the chief means of bringing about system change.

In addition to applying general systems theory to the field of resource management, Deacon and Firebaugh made important theoretical advances in the formulation of the managerial process. They suggested that transformation, the mental and physical activity that is at the core of management, includes two subprocesses, planning and implementing, terms that had been included in the literature for decades (Gross 1948; Gross and Crandall 1947; Nickell and Dorsey 1941). Their formulation of the processes is different from earlier versions, however, with planning consisting of standard setting and action sequencing, and implementing consisting of actuating, checking, and adjusting.

Two of the most important theoretical developments in their formulation are their inclusion of events as demands that must be accommodated by the managerial system, and the notion that standards are set by the family, rather than being imposed by forces external to the family. Prior to the

work of Deacon and Firebaugh, the family was viewed as setting goals and using resources to meet those goals. Reasoning that there are some things to which a family must respond that are not necessarily family goals, Deacon and Firebaugh added the idea of events as demands. Events are unexpected occurrences that require action. They may be small everyday happenings such as breaking one's glasses. They also may be life-threatening occurrences such as natural disasters. They may be positive incidents like unexpectedly encountering an old friend. A common characteristic of events is that they require a response, however small, that uses resources earmarked for other purposes.

Family resource management, then, can be viewed as a process through which the inevitable event demands are handled satisfactorily while the family continues to make progress toward its goals. Having savings or insurance for emergencies and planning for interruptions are ways of preparing to deal with events without irrevocably disrupting goal attainment.

As noted, prior to the work by Deacon and Firebaugh, standards to be attained were viewed as external to the family. Deacon and Firebaugh revolutionized management theory, research, and application by suggesting that the development of appropriate standards involves a series of conscious decisions made by those involved. Standard setting is accomplished by the family as a part of planning. It is a process of examining demands, on the one hand, and the resources available, on the other, and deciding appropriate criteria for outcomes, often in the form of goods and services, within resource constraints. The standards set are used to judge the results of the managerial system, and the standards may, of course, be changed within the process itself.

The conceptual model developed and elaborated by Deacon and Firebaugh beginning in the early 1960s continues to set the agenda for research and application in the field of family resource management within human sciences. That it is still in use at the time of this writing, more than fifteen years after the publication of the last edition of their textbook, is testament to its importance in the field.

Dr. Deacon's interest in the field of family resource management grew from her grounding in education (B.S., 1944, Ohio State University) and

family economics and home management (M.S., 1948, and Ph.D., 1954, Cornell University), and her experiences as a vocational high school teacher and county home economist in Ohio and faculty member at Cornell University and Ohio State University. In addition to her leadership in her subject-matter area, she offered solid, caring leadership to the field of human ecology through her positions as department head at Ohio State University and at Iowa State University, and as dean of the College of Home Economics, Iowa State University, from 1975 through 1987. Her contributions have been recognized by Ohio State University in 1971 and 1977 and Cornell University in 1984 and 1997 with Distinguished Alumni Awards, and by the American Association of Family and Consumer Sciences with the Commemorative Lecture Award (1987) and the Distinguished Service Award (1990).

Mary Winter

See also: Family Resource Management

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Deaf Families, Hearing Children in

An estimated 95 percent of deaf adults have married another deaf person. Of those couples, 90 percent have hearing children (Buchino 1988). The subsequent social and cognitive incongruence created by the cultural and linguistic boundaries between deaf parents and their hearing children has been found to affect the children's development. Often hearing children in deaf families are forced to take on parental roles at abnormally young ages. As a result, parent-child communication is affected, as hearing children become interpreters and decision makers for their parents. In addition, hearing children's language development is affected by the fact that visual language is used more than auditory language in the home.

Parentification

Deaf families with hearing children are forced to alter social roles in order to maintain a working family system unit. Deaf parents will often solicit their hearing children at young ages to act as family interpreters, decision makers, and supervisors of younger siblings. In order to meet such needs, young children often take on an atypically mature role in the family. Eldest hearing children in families with deaf parents often hold a greater amount of decision-making power than other hearing children equivalent in age, sex, and school grade. As a result, hearing children in deaf families tend to demonstrate more self-sufficiency and self-reliance when dealing with difficult situations without the help of others. Research on the impact effective communication has in deaf parent/hearing child families has shown that hearing children learn at an early age to adapt their communication styles to accommodate the deafness of their parents. By acting as the liaison between the deaf and hearing worlds, these children receive substantially more respect from their families.

Although the communicative boundaries between the hearing and deaf worlds can cause problems to arise, the personality development and socialization of children with well-adjusted deaf parents are often comparable to that of children with hearing parents. Beth Rienzi (1990) conducted an analysis of the psychological repercussions that occur as a result of deaf parents' reliance on their children. Although the child's role within the deaf family was recognized as adaptive, Rienzi discussed the potential for childhood depression if



Person signing to a deaf child (Elizabeth Crews)

the parents' demands on the child exceeded the child's capability. As McCay Vernon stated, "The way hearing children cope with their parents' deafness varies from healthy responses to a significant number of 'pathological' reactions such as shame and guilt" (as cited in Fine 1974). Vernon theorized that the child's socioemotional development is often a reflection of how their parents perceive their own deafness. The better adjusted to deaf society parents are, the more effectively they can rear a hearing child, and the less they rely on their children for aid with communication.

Communication Development

There is general agreement in the research literature that children use the language spoken by their parents as a model when learning to communicate. It has also been theorized that children's misrepresentations of parents' speech patterns and meanings can cause a child's speech to differ from the parental model. Research on how exposure to sign language affects the development of oral language in hearing children of deaf families has

yielded varying results. In some cases, research suggests that these children develop normal oral language; other research suggests the opposite to be true. In such cases it was hypothesized that deaf mothers with lower intelligibility and low verbal scores would have a negative impact on their hearing children's language development.

Hearing children of deaf parents tend to imitate their mothers' oral attempts at communication. Although attempts at oral speech were limited, most children understood their mothers' oral speech even when it was less than 15 percent intelligible (Schiff-Myers 1982). Despite the poor speech and language patterns of their deaf mothers, hearing children were able to learn from their mothers' example when developing oral language. In addition, deaf mothers' use of sign language has been found to positively affect their hearing child's cognition. Sign language does not always allow words to change parts of speech. As a result of the discrepancy between spoken and signed language, children with deaf parents who are bilingual utilize a larger vocabulary earlier in life than do children

with hearing parents. Overall, hearing children with deaf parents tend to develop normal language patterns if they have exposure to hearing speakers and their family life is otherwise normal.

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Death: A Family Perspective

Death is a taboo subject in American culture. Yet reporting of violence in the media and the tragic events of September 11, 2001 have brought the topic of death into everyone's home. A better understanding of death is essential in these troubling times, as well as in less difficult times.

Definitions of Death

The word death predates the twelfth century; in fact according to the Oxford English Dictionary, the first record of its use in English is from the tenth century. Merriam-Webster's Collegiate Dic-

tionary (2001) defines death as a "permanent cessation of all vital functions." Before the industrial revolution, death typically occurred within the home, with the dying individual tended to by family members and friends (Aries 1974). The death event moved from the home setting to hospitals with the advancement of modern medicine and improved technology. These improvements sustain life beyond what was previously possible, increasing the life expectancy of individuals well into the eighth decade.

As recently as 1964, the definition of death expanded to include brain death, or "a cessation of activity in the central nervous system" (Merriam-Webster's Collegiate Dictionary 2001 online). Brain death is confusing to families because the human body appears alive, sustained by ventilators and other equipment, yet the individual is technically dead.

The Death Event

Death may occur unexpectedly or suddenly, following events such as a heart attack or an accident, or because of violence. Families then have little time to prepare for the death event, the funeral, and the grieving process. Death following a terminal diagnosis may also shock the family, but typically preparation for the death then precedes the death event itself. Hospice is a resource frequently used by the terminally ill and their families. Hospice provides comfort care to the dying individual and assists the family in the decision-making processes related to the death and during bereavement following the death. Medicare and many private insurance companies provide a hospice benefit, but all individuals, regardless of ability to pay, can participate in hospice.

Families who chose to participate in hospice receive education in preparation for the death of their family member. As part of that preparation, hospice nurses review the signs and symptoms of death with the family. Although the symptoms experienced differ for each individual, the family can be given a general idea of what to expect.

Symptoms and Signs of Dying and Death

Symptoms occur as a natural function of the body preparing for death and a need to conserve energy for vital functions. Consequently, symptoms of death include a decreased need for food and water, and a loss of sensation, power, and reflexes in the



Memorial service (Skjold Photographs)

arms and legs. The individual may need frequent sleep, or experience a weakening of the voice, and difficulty swallowing. The family may notice increased confusion by the individual related to time, place, person, and the identity of family and friends. The individual may have increased restlessness, changes in the pattern of breathing, and decreased clarity in sight and hearing. The body prepares for death with increased oral secretions, which pool in the back of the throat, and decreased urine output. The family may notice a feeling of coolness in the individual's hands, arms, legs, and feet, and these appendages may take on a mottled, blue appearance. There may occur a relaxing of the lower jaw and eyelids, and a loss of control of both bowels and bladder. In addition, the dying individual may experience visions of deceased relatives and friends (Miller 2001). If the individual is part of a hospice program, the family receives instructions from hospice workers on how to provide comfort if any of these symptoms occur.

Signs of death itself include a cessation of breathing, a loss of heartbeat, a loss of bowel and bladder control, and no response to shaking or shouting. The eyelids may appear slightly opened,

the eyes appear fixed, and the jaw becomes relaxed, leaving the mouth open (Miller 2001). Although the signs of dying and death are universal, cultural differences related to death require consideration.

Cultural Considerations

Cultural myths connected with death and dying serve to control and socialize humans in behavior deemed acceptable when death occurs (Krippner 1989). Coming to terms with death is assisted through beliefs in the afterlife, elaborate funeral rituals including burials and cremations, the belief in transcendence or denial of death itself (Krippner 1989). Various cultures have various customs related to preparation of the body after death, various burial practices, and various rituals related to mourning. While belief in the afterlife forms a central component of some major religions (Christianity, Islam, and Judaism), other religions believe in reincarnation (Buddhism and Hinduism) (Badham 1989). Professionals assisting families at the time of death may want to consult spiritual leaders or cultural brokers in the appropriate customs related to death, especially if death occurs in the structured environment of a hospital.

Grief and Bereavement

During the bereavement that follows the death of a beloved family or friend, family members experience grief in a variety of ways. Normal grief, following death, involves a series of phases that are fluid in nature and experienced differently by all individuals. The first phase, characterized by disbelief, may last for hours to weeks. The second phase includes a yearning for the deceased individual. The third phase involves feelings of disorganization and wondering how to put life back in order. The fourth phase includes attempts at reorganization and the beginning of new relationships without the individual who died (Freeman and Ward 1998).

The grieving individual may experience a variety of emotions. Common experiences include a feeling of shock, an immediate emotional release followed by the inability to cry, depression, and physical symptoms of distress, including chest pain or shortness of breath. The experiences may include a feeling of anxiety, anger and hostility, and guilt and fear. Healing comes through memories followed by acceptance of the loss of the loved one (Freeman 1998).

Grief and mourning take time, with renewed experiences of depression as the family lives through the first holidays without the loved family member. Grief is normal and experienced by all who have a family member or friend who die. Unresolved or abnormal grief requires the assistance of professionals equipped to diagnose and treat the unresolved feelings.

Death and the Family

Human ecology theory and more specifically a family ecosystems perspective provide a framework for understanding the interaction of the family that experiences death with the surrounding environments. The death of a family member requires reorganization of the family system and adaptation to the new family form. This adaptation may include a reassessment of the needs of the family and a reorganization of family resources to maintain quality of life. Values, as part of the family system, help the family in the decision-making processes to solve problems, to continue to achieve goals in the face of death, and to engage in day-to-day sustenance activities (Bubolz and Sontag 1993). Individual and family attributes, within diverse sociocultural environments, help to deter-

mine the meaning of death and the process of transformation of information to achieve family goals.

Consideration of family paradigms may help the professional understand success or failure of the family adaptation to the new family form in the face of death. A family paradigm provides a floor plan for the family structure, and a grasp of that paradigm helps in understanding the strengths and weaknesses within the family structure. The regulation of boundaries, the domination of values and attitudes within the family, the forms of communication, and the exchange of information with outside resources all depend on the core values of the family (Constantine 1986). Professionals assisting families at the time of death and through the grieving process must understand family structure and function to provide appropriate assistance at a time of great loss.

Implications for Future Research

Understanding death within the family from a paradigm approach may help to individualize interventions to assist families in the grieving process following death. Future research should include approaches to make the discussion of death a topic of normal conversation, apart from a death event itself, so that families might be better prepared when death occurs. Understanding how individuals within family systems deal with personal grief and maintain family function is essential to assisting families in difficult times.

Death, seldom welcomed, is the final stage of development. Families need assistance through the dying process and bereavement with consideration for cultural and ideological differences.

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See also: Bereavement; End-of-Life Decision Making; Living Arrangements for Elders

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Dementia

See Mental Illness in Old Age

Designed Near Environment

Human ecology encompasses all the environments of families and individuals (Melson 1980). The designed near environment is composed of the most immediate and surrounding elements that have been modified and manipulated by humans. Apparel, furniture and other interior objects, interiors and exteriors of built structures, and textiles and other human-designed materials are the most frequently discussed components of the designed near environment. All individuals influence the designed near environment, and the designed near environment influences individuals and families. Both today and in the past, some sociocultural systems have individuals who are called designers, individuals trained to create near environment objects such as apparel, furniture, and so forth. In other sociocultural systems all members are designers (Eicher, Evenson, and Lutz 2000; Van der Ryn and Cowan 1996). The specific influences that determine the visual appearance and functional use of the designed near environment vary over time and across cultures.

The natural environment is one influence on the designed near environment. However, societal institutions and processes, technology, and cultural ideology have a greater influence. The societal institutions and processes that have most influence on the design and use of the designed near environment are stratification, fashion, and the

economic, political, and religious institutions of the society.

Economic status is a common influence on the design and use of the near environment in many sociocultural systems (Rapoport 1977; Snodin and Howard 1996). When an individual wears or uses an object that is made from a rare resource, such as diamonds, this item represents a high economic status. Dress, built structures, furniture, and other designed objects in the near environment have been used across time and cultures as reflectors of all types of status.

Fashion also influences the designed near environment (Rapoport 1977; Roach-Higgins, Eicher, and Johnson 1995; Trilling 2001). The word fashion has many meanings, particularly in common usage. With regard to the designed near environment, fashion is the existence of a shared taste for a particular product or object or idea among a group of people for a particular period of time (Eicher, Evenson, and Lutz 2000). The group of people who all share in a particular fashion may be relatively small or large and may live in a local region such as Dallas, Texas, or a large geographical region like Western Europe. The period of time a particular idea or object is "in fashion" may range from a few weeks to several years. Fashion is not limited to women's apparel or merely apparel in general (Trilling 2001). Where it exists it influences the entire designed near environment. Fashion exists when there is enough affluence for changes in design and the use of the near environment to be able to occur. There also needs to be a relatively open class structure and society, as one of the influences on the fashion process is the desire to copy individuals who hold different status positions in the society. Also, there needs to be means of communication so that information about new products can travel.

Since the production of the designed near environment is a major part of any economic system, clearly the economy is an influence (Eicher, Evenson, and Lutz 2000; Hamilton 1987; Roach-Higgins, Eicher, and Johnson 1995). The acquisition of raw materials, the transformation of those raw materials into the finished product, and the distribution of the raw materials to the ultimate consumers, individuals and families, are part of the economy. In the Euro-American designed near environment the degree of time and energy put into producing an item, be it a garment, piece of furni-



People designing their environment (Laura Dwight)

ture, or a building, is related to the value placed on that product. Generally, more complex objects take more time to produce, and time is usually valued economically. Economic institutions and processes may be tied to another societal or cultural component, such as the political or religious organization. Also, technology is a major influence on what types of objects may be produced and how they are produced.

Technology, an often misunderstood concept, has been a major influence on the designed near environment from early human settlements to today (Eicher, Evenson, and Lutz 2000; Hamilton 1987; Roach-Higgins, Eicher, and Johnson 1995). Technology includes skills, knowledge, and tools; whatever the nature of the technology of a socio-cultural system, it is used to design and produce the near environment. The level of technology can vary across time and cultures. Also, the value placed on technology varies. However, it should be noted that the level of technology is not the sole determinant of the complexity or refinement of a near environment object. Many contemporary technological solutions used in designing the near environment in the early twenty-first century have been borrowed from the past, including prefabrication, standardization of components, in-floor heating, and indoor plumbing. With mass production, simplification has often occurred. Thus, many of the components of the designed near environment prior to the Industrial Revolution were more complex in their structure than those found today.

In Europe, intellectual currents developing during the period known as the Renaissance (beginning in Italy during the fourteenth century and spreading throughout Western Europe) changed how individuals looked at the world and themselves. These currents of thought helped to bring about what has been called the Scientific Revolution of the seventeenth century and the Enlightenment of the eighteenth century. As a result, new ways of seeing the world and of thinking about the world and how it worked developed. All of these changes, particularly an emphasis on the material world and a belief in progress, impacted technology and through technology, the designed near environment. Probably one of the greatest influences was the discovery and then production of man-made materials, making more material choices available to designers of the near environment.

The governing institution of a sociocultural

system also has an influence on the designed near environment (Hamilton 1987; Roach-Higgins, Eicher, and Johnson 1995; Snodin and Howard 1996). Specific parts of the designed near environment such as government buildings and uniformed apparel are clear examples of this influence (Eicher, Evenson, and Lutz 2000). Additional examples include building codes and inflammability laws. In the past and in non-Euro-American cultures one's apparel often denoted one's political or governmental status. For example, rulers, beginning with the Romans, were recognized by the use of the color purple. Sometimes sumptuary laws were enacted to prohibit certain members of society from designing, making, or using various near environment products.

A sociocultural system's ideology, its overriding beliefs, attitudes, and values, also influences the designed near environment (Hamilton 1987; Rapoport 1977). Part of the ideology, the worldview, influences decisions regarding the specific types and amounts of natural resources used for near environment products. For example, when there is concern for the natural environment, the design of homes and other built structures will reflect this in both the materials used and the space conditioning and lighting systems.

Religious beliefs and practices can also influence the designed near environment (Hamilton 1987; Roach-Higgins, Eicher, and Johnson 1995; Snodin and Howard 1996; Trilling 2001). The degree of influence of religion on the near environment usually relates to how secular or religious the society is in general. There may be very deeply committed individuals in a largely secular society whose individual behavior is greatly influenced by their beliefs, but the society itself may not be influenced strongly by religion or one specific religion. In structured religious systems, individual participants will have specific status and related roles. Specific parts of the near environment may be designed to reflect those roles. There may be buildings, textiles, apparel, and furniture designed specifically with a religious function in mind.

Attitudes and definitions of what is considered beautiful and attractive have an influence on the designed near environment (Eicher, Evenson, and Lutz 2000). Particular types of design are seen as more attractive than others. Some cultures encourage more individuality in design than others (Roach-Higgins, Eicher, and Johnson 1995). Across

time and among sociocultural systems the importance of an aesthetically designed near environment may vary (Trilling 2001). In ancient Greece, for example, precise, aesthetically pleasing proportional relationships were very important to the design of built structures.

Cultural and social meanings are expressed in the design and use of the near environment (Eicher, Evenson, and Lutz 2000; Hamilton 1987; Roach-Higgins, Eicher, and Johnson 1995). Sometimes specific objects or specific uses of the objects represent something more profound than the original object (Rapoport 1977, 1990). Through symbolic meanings designers can reinforce thoughts and ideas about the culture and human life in an image. Generally, these meanings or symbols are important to members of the sociocultural system, but often these meanings are lost over time. Symbolic meanings given to buildings, interiors, apparel, motifs, and so forth usually relate to one or more of the components of the sociocultural system. For example, specific styles of buildings may be restricted to religious structures, some colors of apparel may be restricted to a particular political status, or a particular symbol might have economic meaning.

Cultural contact is also an influence on the designed near environment (Eicher, Evenson, and Lutz 2000; Snodin and Howard 1996; Trilling 2001). Cultural contact leads to exposure to new resources, new products, and new ideas. Sometimes completely new forms might evolve with the introduction of new materials and technology. There are a variety of types of cross-cultural influence: war, trade, travel, immigration, or the medium of communication. Some of these contacts bring enforced changes in the near environment. Sometimes designers look to another culture or time period for design ideas. Occasionally there is almost wholesale copying of artifacts from the past. The ancient Romans borrowed clothing and built structures from the Greeks. And since then both Euro-Americans and others have borrowed from this classical past.

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See also: Dress and Human Behavior; Functional Clothing Design

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Developmental Assets

See Search Institute

Developmental Transitions across the Life Span

After only a few weeks of kindergarten, a 5-year-old boy starts speaking in multipart sentences and becomes very attentive to social cues and how others react to him. A 12-year-old girl, in the midst of puberty, leaves behind the neighborhood elementary school and enters the city junior high school; the mix of emotions is sometimes overwhelming and she is having a difficult time concentrating on schoolwork. A 29-year-old man who has long been a heavy drinker starts dating a new woman; over the next three months he quits drinking and spends less time with his old friends, and the couple becomes engaged to marry. After retiring, a 55-year-old woman who worked in the same company for the past twenty-five years becomes more physically active and experiences greater overall enjoyment of life than ever before.

As these examples from everyday life illustrate, developmental transitions include major transformations in individuals, their contexts, and the relation between individuals and their contexts across the life span. And as these examples show, such major life transitions can contribute in important ways to individual development across the

life span. The purpose of this entry is to provide an overview of current thinking on developmental transitions and to illustrate how they can provide scientists and practitioners opportunities to understand developmental change and ways to enhance it or alter it in a more positive direction. The first step is to define developmental transitions and describe their theoretical and practical importance. The next is to consider various ways in which developmental transitions can influence individual developmental change.

Conceptualizations of Developmental Transitions

A comprehensive definition of developmental transitions is difficult to formulate, in part because the term has been used to describe different sorts of phenomena. Developmental transitions often are viewed globally as the connections between major life periods (e.g., the transition from childhood to adolescence); yet such global transitions often include other identifiable developmental transitions. In particular, there are internally based developmental transitions having to do with physical, cognitive, emotional, and identity-related change, as well as externally based developmental transitions having to do with changes in social roles and contexts (Rutter 1996). For example, the global transition from childhood to adolescence includes an array of transitions involving puberty, abstract thinking, emotional regulation, and identity, as well as transitions in social context (e.g., transition into junior high and more intensive peer relations). This entry focuses on the more specific (and less global) perspective on transitions.

Another challenge in generating a comprehensive definition of developmental transitions is the diversity of domains and life periods involved. Although most efforts to study developmental transitions focus on a single transition during a distinct period in life, there has been concern recently for conceptualizing and studying developmental transitions more generally. Robert Pianta and Daniel Walsh (1996) suggested that a developmental transition is a period when a developing system (consisting of the individual and her social and physical environment) is open to new influences. Along similar lines, John Schulenberg, Jennifer Maggs, and Klaus Hurrelmann described developmental transitions as “the paths that connect us to transformed physical, mental, and social selves”

(1997, 1). Julia Graber and Jeanne Brooks-Gunn define developmental transitions as “developmental challenges that are relatively universal” and that “require new modes of adaptation to biological, psychological, or social changes” (1996, 769). Together, these three definitions indicate that developmental transitions can be important catalysts for developmental change and opportunities for discontinuity in functioning (for better or worse) across the life span.

Other definitions of developmental transitions place more emphasis on changes in the individual’s social world and reorganization of the individual’s social roles (Elder 1998). A child entering school takes on the role of student, while an adolescent making the transition to adulthood may leave behind the student role and become a worker, parent, or spouse. Successful navigation through a developmental transition may depend, in part, on the degree to which pre-transition social roles (e.g., student) facilitate or hinder an individual’s adaptation to post-transition roles (e.g., worker). This perspective illustrates the importance of considering “ecological transitions” when defining developmental transitions. Urie Bronfenbrenner defined ecological transitions as occurring “whenever a person’s position in the ecological environment is altered as a result of a change in role, setting, or both” (1979, 26). As a result of a given transition, connections (i.e., mesosystems, to use Bronfenbrenner’s term) among new and continuing environments (i.e., microsystems) may become stronger or weaker, which in turn has implications for individual development over time.

Developmental transitions are embedded in a sociocultural context, and therefore the occurrence, timing, and meaning of transitions may vary by gender, class, culture, and historical period. Culturally based, age-related expectations, or “scripts,” shape developmental transitions by providing a normative timetable and agenda (Neugarten 1979). For example, the transition to motherhood may occur anytime in a woman’s life between menarche, typically in early adolescence, and menopause, typically in a woman’s 50s. There are, however, certain biological concerns and societal expectations that determine the optimum and most acceptable timetable for this transition, currently in one’s 20s and 30s. There may be certain personal or social circumstances that cause women to delay this transition until their 40s or

experience the transition earlier in their teen years. And of course, this timetable shifts with historical change.

It is important to distinguish developmental transitions from other related concepts, including developmental tasks, trajectories, and turning points. In general, transitions pertain more to the actual process of change, while tasks pertain to socially and biologically prescribed psychosocial events or accomplishments that typically occur during specific periods across the life span; often though, tasks and transitions overlap (e.g., the task of selecting a mate and the transition to marriage). Developmental trajectories refer to patterns of stability and change over time that can incorporate several developmental transitions (Elder 1998). For example, multiple transitions across the life span (e.g., involving school, work, marriage, family) all may contribute to an individual's ongoing trajectory of self-esteem. By viewing transitions as embedded in ongoing individual trajectories, it is possible to consider transitions as potential turning points that reflect changes in functioning (Rutter 1996). Although transitions and turning points may overlap in this way, there is a clear distinction between the two. Turning points typically involve major changes in an individual's life and developmental path, while a developmental transition may or may not engender such significant and long-term change.

How Developmental Transitions Relate to Developmental Change

Consistent with a developmental-contextual perspective, particularly with the notion of ecological transitions, developmental transitions contribute to continuity and discontinuity in developmental trajectories. In fact, issues of continuity and discontinuity across the life span are central to understanding the power of major developmental transitions on individuals' lives (Rutter 1996). The new social world may be a better or worse fit for the individual's needs or goals, thus resulting in discontinuity in his developmental path. However, it often is difficult to predict in advance who will experience discontinuous shifts during major transitions and who will not. For example, although the majority of college students mature out of their heavy drinking, some continue into adulthood with increasing heavy drinking and related problems. Differentiating these two groups prior to

the transition is difficult, suggesting that the transition itself may impact the continuity and discontinuity of alcohol-related problems into adulthood (Schulenberg et al. 2001).

Closely tied to issues of continuity and discontinuity are distal and proximal developmental influences. Specifically, transitions represent developmentally proximal influences, sometimes serving to mediate earlier, more distal influences. For example, junior high academic performance is influenced by how well one negotiates the transition to junior high (which would be a proximal influence), which itself is influenced by one's prior academic performance in elementary school (which would be a distal influence).

How can developmental transitions serve as catalysts for developmental change in general, and for discontinuity in particular? Recent research in developmental transitions has prompted several conceptual models explaining the potential influence of developmental transitions. Schulenberg and his colleagues (1997, 2001) describe several interrelated conceptual models for considering the impact of developmental transitions (see also Graber and Brooks-Gunn 1996), three of which are summarized here.

The Overload Model suggests that multiple and simultaneous transitions can sometimes overwhelm an individual's coping capacity, thus causing stress and leading to alternative ways of dealing with it. For example, the transition into retirement is often accompanied by changes in social roles and relations. An individual who has strongly identified with her role as worker not only faces losing that identity with retirement, but also may have to deal with decreases in social activity, intellectual challenge, and physical health. The multiple stressors produced by each of these transitions may lead to negative outcomes, such as social isolation or depression, or more active coping strategies, such as joining local social clubs or tour groups.

The Developmental Mismatch Model highlights how developmental transitions can alter the match between individuals and their contexts. Building on person-environment fit theory, this model views the developing individual as embedded in a changing ecological niche, bringing attention to the match between individual developmental needs and opportunities provided by the context (e.g., Eccles et al. 1993; Lerner 1982). Tran-

sitions can improve the match and thus provide opportunities for positive developmental patterns, or they can lessen the match and thus adversely affect development. For example, as the child/adult ratio increases during the transition to school (from preschool to kindergarten to elementary school), some children might start acting out to gain the teacher's attention. On the other hand, children who are ready for the greater independence and peer interaction provided by the school environment will likely have a more positive experience during early school transitions.

The Increased Heterogeneity Model suggests that challenging transitions magnify existing strengths and weaknesses, thus increasing interindividual differences in functioning and adjustment. For example, adolescents who are already running an emotional/psychological deficit (perhaps based in part on difficulties in negotiating earlier major transitions) may have a particularly difficult time negotiating the transition to college; as a result, they may increase their substance use or other ineffective forms of coping, which often spur further difficulties. In contrast, adolescents eager and ready for the new challenges of college thrive during the transition. This model represents, in part, an elaboration of the above two models; it focuses on individual differences in ongoing developmental trajectories and thus interweaves distal and more proximal influences on developmental change.

Conclusions and Implications

This entry provides a general perspective on transitions across the life span, focusing on issues such as continuity and discontinuity in development and connections between pre- and post-transition environments. It also provides several models for conceptualizing how transitions relate to developmental change. The discussion of developmental transitions highlights the importance of moving beyond static views of individuals and their contexts, focusing instead on the dynamic relationship between developing people and their changing contexts.

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See also: Bronfenbrenner, Urie; Ecodevelopmental Theory; International Society for the Study of Behavioral Development; Transition from School to Work and Adult Life

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Divorce, Children's Adjustment to

The high number of children affected by parental divorce justifies the strong public interest in the impacts of divorce on children. Despite the fact that the divorce rate in the United States has been declining from a peak of 5.3 per 1000 population in 1981 to 4.0 per 1000 population in 2001 (U.S.

Department of Health and Human Services, National Center for Health Statistics 2002), approximately one million children still experience their parents' divorce each year, and nearly 45 percent of American children witness their parents' separation before the age of 18 (Masci 2001).

The research of the past decade indicates that the effects of parental divorce are not as sweepingly detrimental as was once thought. Popular media accounts and research from earlier decades claimed that divorce causes a host of poor outcomes in children. However, popular accounts and earlier research fail to adequately explain the multifaceted effects of divorce. The initial studies on the subject were conducted at a time when divorce was considered a socially deviant outcome. Divorce therefore had different outcomes than it has now, given that it has become a normative event in American culture. The earlier negative bias toward divorce compromised the objectivity of the measures, observers, and reports. In addition, earlier studies were often confounded. That is, they did not separate the effects of divorce from other factors with which it is associated, most importantly poverty. Thus, some of the reported problems were the result not of divorce *per se* but of being poor.

In the last two decades, the methodology of divorce research has improved. Researchers have had the opportunity to study divorce as a more common pattern. In turn, they have been less biased against divorce and have attempted to control for confounding factors, using larger and more representative samples. The advances in research have made it possible to synthesize from the many different studies a clearer picture of children's reactions to divorce and of their lives after divorce. These more recent studies have not revealed the dramatic differences between children of divorced parents and those of married parents that had been reported earlier, but they have found more subtle differences. In general, the more recent and methodologically more sophisticated studies are associated with weaker effects than the earlier and less sophisticated studies (Amato and Keith 1991; Amato 2001).

A meta-analysis of ninety-two studies that compared children of divorce with children from intact families found that children of divorce, as a group, overall did less well across a variety of outcomes than children in intact families. However, the median size of the difference was only .14 of a

standard deviation (Amato and Keith 1991). Thus, although it appears that parental divorce, or factors associated with it, lowers the well being of children, the effect size is weak. The subtlety of the effects reflects the diversity in outcomes among children; it provides evidence that children whose parents divorce are at risk for negative outcomes, but not that negative outcomes are certain to occur.

These trends were corroborated in a recent update of the earlier meta-analysis with a review of sixty-seven studies that were published in the 1990s (Amato 2001). The key findings from this new study confirmed that children with divorced parents scored, as a group, lower than children with continuously married parents on measures of academic achievement, conduct, psychological adjustment, self-concept, and social relations. It also confirmed that gender differences in children's outcomes after divorce were modest in the 1990s, as they had been in earlier decades. Although boys tended to show more deficits in social adjustment, the outcomes for boys and girls were overall very similar.

In sum, these findings indicate that divorce does place children of divorce at risk for difficulties in emotional, psychological, and behavioral adjustment. However, group averages do not predict how a particular child will adjust to parental divorce, and they do not mean that all children will experience deficits as an outcome of parental divorce. In fact, some studies have documented positive outcomes in children following divorce. For example, Mavis Hetherington and Margaret Stanley-Hagan (1999) documented that some adolescent girls appeared to thrive following their parents' divorce. These girls witnessed divorce in moderately stressful environments and tended to have at least one constant, caring adult. As young adults, they set high standards for their own behavior and tended to be high achievers.

Factors That Mediate or Moderate the Impact of Divorce on Children

Not all children's reactions to divorce are equal. Instead, researchers observe a considerable diversity in children's adjustment to divorce and have sought to document the specific conditions that promote or hinder children's adjustment. They have found that the phenomenological experience of growing up as a child of divorce varies with the

particulars of the family context, including the amount and quality of contact with both parents, parents' psychological adjustment and parenting skills, the level of conflict between the parents before and after separation, changes in the family's economic situation, children's age at the time of divorce, and the number of additional stressors a child experiences after parents' separation, such as moving or changing schools. In general, the risk for maladjustment increases with the number of stressors a child experiences.

Protective factors include effective coparenting, continued supportive contact with both parents, the emotional, physical, and social support of extended family, and financial security. Children's own characteristics can make a contribution to the outcome as well. A predisposition for positive behavior such as an amiable temperament, cognitive maturity, and a sense of responsibility are associated with positive outcomes for children.

Perhaps the primary protective factor is the quality of parenting. Parents' emotional and physical availability following the divorce is critical for child outcomes. Divorce usually ends with lower levels of contact between children and both parents, as one parent leaves the home and the other is more occupied than before. Contact between children and their father typically decreases considerably, and in consequence children also experience the loss of the emotional, physical, and economic resources he provided (Hetherington, Bridges, and Insabella 1998). Parents can help their children by giving an explanation that children can understand and by reassuring children. Parents should be aware that children need extra attention and that they should provide an emotional climate that allows children to express their feelings.

Age Effects

Parents commonly ask whether they should divorce when their children are young or wait until they are older. The reported effects of children's age on child outcomes after parental divorce are neither consistent across studies nor strong. However, clinical observations and various studies suggest that age at the time of parents' separation contributes to children's expression of feelings and their immediate and long-term reactions to divorce.

Most children are young when their parents divorce because divorce is more likely to occur early

in the marriage. Nonetheless, researchers know the least about the effects of divorce on infants because of the difficulty of conducting research on infants' adjustment after a divorce.

As for preschoolers, they do not understand what "divorce" means. They conceptualize relationships in concrete terms. Physical presence is important to them, and they have difficulty understanding why parents are less available. Because preschoolers are limited in their cognitive development to focusing on their own perspective and cannot understand the spectrum of reasons that may have led to the divorce, they may feel that the divorce is their fault. As a result they may act super good to "bring Daddy back." They are most likely to be frightened at this age, afraid of being left alone or abandoned.

Young school-age children, 6–8 years of age, have a greater developmental capacity than preschool children for understanding what is happening. Many of their friends have divorced parents, but this understanding does not necessarily relieve their upset. Their first reaction is pervasive grief and sadness, longing and yearning for the absent parent and often anger directed toward the custodial parent. For older school-age children, 9–12 years of age, the primary feeling is anger, which is often expressed in oppositional behavior.

Adolescents encounter many of the same problems as the younger children and tend to be, like them, angry and upset. In addition, they are more likely to drop out of school, be involved in delinquent activities, to associate with antisocial peers, be unemployed later, and have children out of wedlock (Hetherington, Bridges, and Insabella 1998). Adolescent girls in particular have been documented as exhibiting precocious sexual behavior at a younger age, lacking self-confidence, and having lower self-esteem (Cherlin, Kiernan, and Chase-Lansdale 1995). While adolescent girls tend to internalize the negative effects of parental divorce, boys tend to externalize them, demonstrating an increase in overt negative behavioral problems (Lamb 1997).

Short-Term and Long-Term Effects of Divorce on Children

The time around parents' separation and the first year following separation is typically the most stressful for both adults and children. Not surprisingly then, researchers have documented short-

term adjustment difficulties such as depression, anxiousness, anger, noncompliance with parental requests, lower levels of success at school, behavior problems, and lower self-esteem (Hetherington and Stanley-Hagan 1998).

Potential long-term effects of parental divorce (those that occur more than two years after the divorce) include poorer mental health (Cherlin, Kiernan, and Chase-Lansdale 1995), lower life satisfaction, lower socioeconomic attainment, a greater risk of being on welfare, and double the risk of having their own marriages end in divorce (Amato and Keith 1991; Amato and DeBoer 2001). Transmission of marital quality across generations can be attributed to several factors. Children acquire most of their socialization skills from their parents. If parents display marital conflict, children are less likely to learn the social skills that are necessary to maintain a successful marriage, and they may come to hold a comparatively weak commitment to lifelong marriage (Amato and DeBoer 2001; Amato and Booth 2001).

Although the negative impacts of divorce outcomes on children's well-being are not as dramatic and inevitable as was once thought, there is consistent evidence that children of divorce, as a group, continue to fare more poorly than children from intact homes. Group comparisons and clinical observations point to the continuing importance of developing and evaluating therapeutic and educational programs for divorcing families and their children (Amato 2001).

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See also: Child Custody; Divorce Mediation; Father-Child Relationships following Divorce; Remarriage

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Divorce Mediation

Divorce mediation has become a popular alternative for divorcing couples over recent decades, amid growing dissatisfaction with the adversarial legal system's ability to produce satisfactory outcomes in family matters. Even when mediation is chosen, however, many difficult decisions must be made when parents divorce, and the couple often does not agree on a solution. Among the challenges parents face are figuring out what property (money, houses, cars, furnishings, and so on) each will keep, and deciding who (if anyone) will get to continue living in the house, how parenting responsibilities will be arranged, and how much money will be exchanged and for how long. Although parents are increasingly turning to divorce mediators to help them resolve these issues, most

divorcing spouses continue to hire lawyers to help them make these decisions.

Lawyers can be thought of as professional negotiators. They know how to debate a legal matter in court when necessary, but most disputes, including divorce, involving lawyers are settled through negotiation before the disagreement reaches a courtroom. The negotiation takes place between the lawyers; the two sides that disagree (in the case of divorce, the two sides would be the two parents) may never talk directly to one another. Each lawyer talks independently to the judge and her client (the parent) and vice versa. The two lawyers also talk to each other. The parents have no direct communication, and the lawyers are the central figures in the process. The lawyers talk more to their clients (the parents) than the clients talk to them, and the lawyers talk as much to each other as they do to the parents. The focus of this approach to settling divorce is on the lawyers. This system discourages direct communication among divorcing parents and is therefore not an effective model for parents; according to most social science research, children are better off if parents continue to coparent by interacting with each other on behalf of their children following divorce. That is, they should share decision making and each spend time with the child. Although divorcing parents are ending their relationship as husband and wife, their relationship as coparents continues.

After a decision or settlement is reached about child support, custody issues (i.e., where the child will live most of the time, and who will make decisions regarding the child's education, health care, and religious training), and the property, the parents must communicate with one another to raise their children. This is more difficult if the parents have used lawyers, however, because after a decision is reached in the legal system each parent is likely to feel that he or she "lost" the legal battle and that the other parent "won." And in some ways they are right—each parent will have less access to the child because of custody decisions, and each parent will have less money because it is much more expensive to maintain two households than one. These feelings of having lost the battle, along with the intense emotions that surround a divorce, make it very difficult for parents to work together raising their children after a conventional divorce.

Many people see divorce mediation as a less disruptive and emotionally upsetting way to divorce. The process of divorce mediation is cooperative; rather than taking the view that for one parent to win the other must lose, the mindset encouraged in mediation is that everyone can win if parents work toward a consensus, or agreement, on decisions that must be made. Divorce mediators help parents talk to each other and make their own decisions during a divorce, as opposed to leaving the decisions up to lawyers or a judge. Mediators guide the parents' discussion; they do not make decisions for the parent. Rather, it is the discussion between the parents themselves that is central to the mediation process. Through the process of mediation, parents are often able to reach agreements that satisfy them both. In fact, if one parent is not satisfied with a decision, then the mediator encourages further discussion until a mutually agreeable solution is reached. Mediators often model ways for parents to discuss issues regarding their children's well-being without becoming angry. They focus on the children and the future rather than the past, and thus they help the parents to do the same.

Robert Emery and his colleagues at the University of Virginia have conducted several studies on mediation. The results of his work suggest that children experience better outcomes following divorce if their parents use divorce mediation rather than the traditional legal system. For example, children tend to see the parent that they don't live with more often if their parents mediated the divorce. This contact is usually good for children, unless their parents fight a lot, but evidence also indicates that parents who use mediation tend to fight less often in the years following a divorce (Emery et al. 2000).

Divorce mediators are often counselors, social workers, or lawyers who have attended a forty-hour mediation-training workshop. However, divorce mediation is becoming more common, and some colleges now have master's degree programs that allow students to specialize in mediation. Ironically, completing a forty-hour mediation workshop is viewed more favorably in the field of mediation than completing a two-year master's program, but this may begin to change as more degree programs are developed and standards for curriculum are introduced. The Association for Conflict Resolution is the professional organiza-

tion for mediators, and more information can be found on their Web site at www.acresolution.org.

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See also: Child Custody; Divorce, Children's Adjustment to; Father-Child Relationships following Divorce; Remarriage

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Domestic Violence

Domestic violence is a multifaceted problem; it is defined as a pattern of coercive behaviors that involves physical abuse or the threat of physical abuse. It also may include repeated psychological abuse, sexual assault, progressive social isolation, deprivation, intimidation, or economic coercion. Domestic violence is one type of family violence, a term that refers to all types of violence that occur within a family, including violence toward adult partners, children, siblings, parents, and elders (Salber and Taliaferro 1995). Only the issue of violence between intimate partners, which includes adults or adolescents who are in current or former dating, married, or cohabiting relationships and are heterosexuals, gay men, lesbians, bisexuals, or transgender people will be discussed here. The terms domestic violence, domestic abuse, spouse abuse, woman abuse, and wife battering are often used interchangeably.

In the vast majority of cases, domestic violence is committed by a man against his female partner.

From 14 percent to 50 percent of all women will experience domestic violence by a male partner at least once in their lifetime (Straus, Gelles, and Steinmetz 1980). Nearly one in three of all female homicide victims was killed by her husband, former husband, or boyfriend. In contrast, just over 3 percent of male homicide victims are killed by their wives, former wives, or girlfriends (Bachman and Saltzman 1995). More than a third of American adults have witnessed a man beating his wife or girlfriend, and 50 percent of all emergency room visits of injured women were a result of a partner's abuse (Rand 1997). It is estimated that 13.8 percent of people who commit abuse against elderly persons are the elderly spouses of the victim (Brownell and Abelman 1998). No reliable data exist for the amount of abuse within same-sex relationships.

Why Do Men Hit Their Partners?

No one theory can explain or predict domestic violence. It is a complex problem that includes the experiences of individuals, their immediate environment, and the overall culture they live in. For example, some people believe that the overall levels of violence in American culture, including our movies, television shows, music, and sports, support the use of violence by individuals. Some people place battering within a continuum of violence against women that also includes the institutional status of women, psychological wounding, economic assaults, pornography and prostitution, sexual harassment, sexual assault, and murder of women (Stout and McPhail 1998). Feminists consider domestic violence a problem rooted in the structure of society rather than in the pathologies of individual men (Dobash and Dobash 1979). Other people believe that social learning theory (as laid out by Albert Bandura in 1973) explains domestic violence. People learn to be violent when they are directly rewarded or punished immediately after aggressive behavior takes place (reinforcement) and vicariously through watching other people's experiences (modeling). On the other hand, although there is a strong link between witnessing abusive behavior by fathers toward mothers and becoming an abusive partner, not all boys who witness abuse grow up to become batterers (O'Leary 1987).

Batterers have some shared characteristics in common. They believe they have a right to control all aspects of their partners' behavior, they mini-

mize their abuse, use alcohol or drugs, and have a history of using violence against other people. They may come from families where they witnessed their fathers beat their mothers. A batterer might also be extremely jealous of anyone or thing that takes his partner's focus off of him, including his wife's pregnancy. He might also be cruel to animals or children, and have a Jekyll-and-Hyde personality, suddenly changing from loving to abusive and back again.

In contrast to batterers, there is no one profile for a battered woman. They come from all economic backgrounds, religious affiliations, races, ethnicities, and ages. A battered woman may be a high school dropout or someone with a Ph.D. Because women are traditionally expected to keep their families together and are responsible for the emotional health of families, many women blame themselves for the abuse or deny or minimize the violence they are experiencing.

Domestic violence creates a number of psychological, physical, and financial consequences for individuals, families, and society as a whole. Women who have been battered for long periods of time may experience post-traumatic stress disorder and high levels of depression (Astin, Lawrence, and Foy 1993). Physicians and nurses see battered women with unexplained injuries, injuries in various stages of healing, chronic pelvic pain, and other physical problems (Jones and Horan 1997). A battered woman who is pregnant is less likely to get prenatal care and more likely to experience poor weight gain, stress, preterm labor, or miscarriage; the fetus she carries is more likely to experience injury or death, and the infant she bears is more likely to have a low birth weight (Jones and Horan 1997).

Children who live in violent homes are also at risk for child abuse and other problems. Research has provided strong evidence that in 30 percent to 60 percent of families where woman battering is identified, child abuse also exists (Edleson 1999). Children who are not abused themselves but who witness abuse may not do well in school because of low self-esteem, shyness, depression, self-blame, and physical problems. They may also be aggressive toward other children and be engaged in alcohol and drug abuse (Barnett, Miller-Perrin, and Perrin 1997). Adolescents who witness violence may feel shame, fear, anxiety, aggression, and rage, depression, delinquency, and may run away from

home. They are also at increased risk for dating violence (O'Keefe and Lebovics 1998). It is important to note that the impact of domestic violence on individual women and their children may vary according to their personal resiliency factors and the social support and economic resources available.

The financial consequences of domestic violence are also impressive. Estimates of the economic cost of domestic violence in the United States range from \$1.7 billion (Straus 1986) to \$67 billion (Miller, Cohen, and Wiersema 1994) when indirect costs such as pain and suffering of victims is factored in. Businesses are now being encouraged to develop policies and protocols that address exposure to domestic violence in the workplace and expand the role of employee assistance programs to identify and assist employees who are being battered (Greenwald 1996).

Why Do Women Stay in Abusive Relationships?

Many people believe that if someone abused them, they would simply get up and walk out. Women do leave abusive relationships all the time. Yet there are many complex reasons why women may stay in abusive relationships even though they do not like being abused. A woman may stay because she believes children should be brought up with their fathers. She may have little education and no employment experience and be afraid she could not economically support herself and her children. She may have been threatened that if she ever leaves, he will kill her and the children, or will never pay child support, or might commit suicide.

To help people in abusive relationships, Congress passed a Violence Against Women Act, which provides resources for local shelters for battered women and their children and a toll-free national telephone hotline. If you know someone who is being abused, give her the telephone number of the National Domestic Violence Hotline, 1-800-799-SAFE.

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See also: Child Abuse; Contemporary Men's Movement; Elder Abuse in the Family; Sexual Abuse; Violence in Teen Dating

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Dress and Human Behavior

Dress is a nonverbal communication system consisting of body modifications and body supplements to aid human interaction in space and time. Human beings as both biological organisms and social beings create modifications and supplements as they interact with their environments. The physical and sociocultural environments provide a wide variety of materials that humans use to produce artifacts of dress and knowledge about the customs associated with the artifacts and act of dressing. The physical environment may directly provide commodities for many possible articles of dress to apply to the body or to be worn or handheld, or such commodities may be imported into the immediate space and time. The sociocultural environment of human beings provides the socialization for the use considered appropriate in the cultural space and specific time.

Human beings involve all five senses to modify and supplement their bodies in socially accepted ways by manipulating the artifacts of dress. Manipulation of the artifacts involves understanding the technological, aesthetic, political, economic, and cultural influences in one's ecosystem. In addition, the artifacts of dress allow adaptation to physical, biological, and sociocultural environments. For example, garments that keep individuals warm allow existence in cold climates. Other items of apparel, such as footwear, permit individuals to walk on rough and rocky ground. Uniforms provide identification of specific occupations noted for help or assistance, as in the case of police. Often dress illustrates adaptation simultaneously to physical, biological, and sociocultural environments, such as the garb of astronauts, which allows them physically and biologically to exist in outer space, but the design of their garments and associated paraphernalia results from aesthetic and social considerations. Thus, dress can serve as a means of control over the environment and as an effective mechanism for environmental adaptation.

Dress influences human interaction by allowing a quick assessment of an individual's age, gender, occupation, religion, community, and ethnicity without interrogation. Usually prescriptions and proscriptions about proper dress exist. Although items of dress can keep bodies clean and protect individuals from hazards, individuals often choose or are compelled to wear items of dress for social protection. For example, whether



Asian community dressed up for an event (Michael Siluk)

for sacred or secular purposes, various garments encompassed by the word “veil” more frequently cover bodies of women rather than those of men.

Dress also serves to facilitate or hinder human interaction. Generally, uniforms are an aid to communication in providing ready identification. But if an individual or group believes that members of a police force are interfering rather than ensuring orderly conduct, the sight of uniforms may arouse hostility and hostile actions. Often members of a group or an association who want to indicate their membership wear complete ensembles or specific items that identify such membership. In the United States, common examples exist among members of organizations such as youth groups (Girl Scouts and Boy Scouts), fraternal groups (the Shriners), religious orders (priestly or ministerial garb), and the military. These examples illustrate clear expectations for dress of members. In other cases, expectations for members of a group to dress alike, or at least similarly, arise in more informal situations, such as gang dress, where members have selected certain colors in a particular

garment (such as a baseball cap) to identify their group and to express their cohesiveness. In many parts of sub-Saharan Africa, people in a community select a fabric for wrappers to wear in common to celebrate the birthday of a leader or note an important event such as Independence Day.

Writers from many disciplines (such as anthropology, art history, history, philosophy, economics, psychology, and sociology) have dealt with the significance of dress, but few have drawn attention to its ecological basis. In 1979 Margaret Bubolz and her colleagues used dress as an example of the intersection of three environments: natural, human-behavioral, and human-constructed. They illustrated these environments by using examples of fibers coming from plants or animals existing in the natural environment that are converted to fabrics and garments according to social norms and customs for raising plants and animals as well as for constructing garments and wearing them. In 1988, Bubolz and Suzanne Sontag presented assumptions about human ecology that underscored understanding the significance of dress in an eco-

logical system. They stated: "The uniqueness of human ecology lies in its focus on viewing humans and their near environments as integrated wholes, mutually influencing each other" (Bubolz and Sontag 1988, 3). This means that artifacts of dress, whether clothing or other items on the body, act to integrate individuals in each ecological system by indicating to others who they are and often what they intend to do.

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See also: Designed Near Environment; Functional Clothing Design

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Drug Abuse

See Community Youth Development; Cocaine and Crack

Dyslexia

Developmental dyslexia refers to a continuum of disorders of learning characterized by serious difficulties with reading acquisition and development and often accompanied by other difficulties with other aspects of written language, such as spelling and writing. The developmental syndrome is contrasted with acquired reading disorders, which involve the loss of already acquired reading as the result, for example, of head injury or brain tumor. Neurobiological, genetic, cognitive, instructional,

and environmental factors, alone or in combination, may cause or contribute to reading disabilities. Some researchers restrict the definition of dyslexia to disabilities that are neurobiological in nature and not caused by environmental and instructional factors. Others include all children who read one and a half to two years below their expected reading level. In the past decades, important advances have been made in the study of reading; as a result, many children with dyslexia respond successfully to timely and appropriate interventions. It is important to understand dyslexia from an ecological perspective—one that addresses the issue at the individual, microsystem, exosystem, and macrosystem levels, to use Urie Bronfenbrenner's terms.

Individual

Features of dyslexia change over the life span, beginning with severe problems learning to read, and evolving in adolescence to problems in spelling and writing, and slow laborious reading. Increasing research indicates that developmental dyslexia results from differences in the underlying structure of the regions in the brain involved in the processing of written language. Dyslexia is best described as a heterogeneous group of disorders, with several underlying explanations for distinct subtypes of reading-disabled students.

Over the last twenty-five years a strong consensus has emerged that one central difficulty in dyslexia is a deficit in phonological processing. According to the phonological-deficit hypothesis, children with dyslexia have difficulty developing an awareness that words, both written and spoken, can be broken down into smaller units of sounds. Recent cutting-edge research in the cognitive neurosciences demonstrated a second major area of difficulty in addition to phonological processing deficits, in what are called naming-speed deficits. That is, impaired readers are slow to retrieve the names of very familiar visual symbols like letters and numbers. A naming-speed deficit reflects difficulty in the processes underlying the rapid recognition and retrieval of names for visually presented letters.

Additional predictors for identifying young children at risk may include gross and fine motor difficulties, slow vocabulary growth, and trouble learning the names of letters. Left untreated, early reading disabilities often lead to further academic



Dyslexic children being given instruction by teacher (Elizabeth Crews)

problems, as well as accompanying social and emotional difficulties. A large portion of the cycle of learning failure may be avoidable with early diagnosis and targeted intervention.

Microsystem

Research has indicated a strong genetic component in dyslexia, with multiple members of a family having some form of learning disability across generations. In addition, a higher incidence of dyslexia is found among males. Some recent research, however, indicates that more girls than suspected have dyslexia, but have not been referred and diagnosed. A predictable and supportive family environment has been found to be a protective factor for children with learning disabilities. Parents often serve as advocates to secure appropriate diagnostic and educational services for their child.

Reading disabilities emerge within the context of the school environment. Assessment should follow a team approach and involve classroom teachers, reading and language specialists, and school psychologists who work in conjunction with the family and the individual child. A comprehensive evaluation should include a combination of tests that measure both the component skills involved

in reading and the various aspects of reading achievement, as well as cognitive abilities. No diagnosis of dyslexia can ever be based on a single test.

Individuals with dyslexia often need special programs to learn to read, write, and spell. Direct instruction in the code of written language (the letter-sound system) is critical in early years. Kindergarten phoneme awareness programs are helpful for all children, but especially for children suspected to have difficulties with oral and written language. In early grades decoding skills for dyslexic children are best taught step by step, in an explicit and incremental manner. Work on decoding rate, vocabulary, and overall reading fluency is important to enhance reading comprehension.

Explicit teaching both of rules governing written language, and of strategies for purposeful reading and writing in different content areas is specifically important for children in the older grades. It is critical to assess regularly each individual student's strengths and learning pace. Many older students with dyslexia require classroom accommodations, which may include additional time on examinations and assisted technology.

Further research on the deficits that underlie different groups of reading disabilities is rapidly

progressing and is ultimately aimed at informing educators about which interventions are best suited for each individual.

Exosystem

The National Institutes of Health estimates that approximately 15 percent of the U.S. population have learning disabilities, with 2.4 million U.S. school children affected. Every year, 120,000 additional students are found to have learning disabilities. Among students with learning disabilities who receive special education services, 80–85 percent have basic deficits in language and reading.

Traditionally, dyslexia has been diagnosed by comparing intellectual ability with achievement in reading. Bright students with an unexpected difficulty in reading are usually considered dyslexics. Consequently, IQ tests are generally used to assess dyslexia in school-aged children. In fact, eligibility for special education programs in public school is usually based on this IQ-achievement discrepancy. These tests, although useful in certain situations, may be confounded by external variables such as socioeconomic status and educational opportunities.

Recently, the usefulness of these discrepancy definitions has been called into question. Whether there should be a distinction between dyslexic readers and poor readers whose impaired reading level is commensurate with their intellectual aptitude levels is a topic of heated debate and one that requires further research. A related issue concerns the disproportionate diagnosis of reading disabilities in particular groups of children. For example, children who speak African American Vernacular English may experience more difficulty in learning phonological aspects in English written lan-

guage compared to children who speak Standard English.

Macrosystem

No community or culture is immune to dyslexia. One of the most important directions in recent research involves the study of reading failure in other writing systems. Although dyslexia exists in all writing systems, it may be manifested differently, depending on the specific characteristics of the language. For example, in highly regular languages like Italian and German, deficits in reading fluency are the major areas of difficulty. Understanding group strengths and weaknesses of children with dyslexia in different orthographies will help illuminate the more universal aspects of reading disabilities, as well as their unique language-specific attributes.

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See also: Bronfenbrenner, Urie; Cognitive Assessment; Early Childhood Assessment; Intelligence

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E

Early Childhood Assessment

Assessment is a process of collecting data to compare children of the same age (peers) to each other, and to assist caregivers to create environments in which learning can take place. Early childhood refers to the period from birth to five years of age. The terms “assessment” and “testing” are often used synonymously, even though testing is only one aspect of assessment.

There can be different aspects to an assessment: *Observations* of children will provide information on how children function and interact with others. *Testing* may be used with individuals or groups, using standardized tests that contain “age norms.” *Criterion-referenced tests* can provide information about a child’s acquisition of specific skills. Holistic reviews of a child will include health and developmental records, previous test results and changes, and any other relevant data collected. Assessment from a human ecological perspective focuses more specifically on how children’s performance and behaviors are influenced by the social, economic and political influences on the environment in which they develop.

Assessment is therefore an evaluation and interpretation of a child’s current performance in a variety of settings and conditions. The methodology can consist of observations, testing, and comparisons to other children of the same age that take into account ecological factors.

Purpose of Assessments

The purpose of early childhood assessment is to determine if a child’s development and learning is

on target compared to other children of the same age, and if any negative levels or areas are found during assessment, to develop a remedial program to assist the child to make appropriate developmental progress. Many areas within a child’s repertoire can be examined: language/communication skills, gross and fine motor skills, perceptual and cognitive skills, social and self-help skills, memory, motivational aspects. At all times the purpose of an assessment should be to develop and define the learning needs of a child, in order to permit parents (and extended families) and professional caregivers and educators to enhance a child’s developmental learning.

The Value of Assessments

Early childhood assessments are used to track children’s predictable development so as to assure the child’s caregivers or professional people, such as pediatricians, that all is well. All significant people in a child’s life should be involved in the collection of such information. Assessments can be used to screen for problems, determine individual progress, design and implement a child’s individual educational experiences., or determine placement with a service provider. Ongoing assessments are used to evaluate any programs provided. Assessments are the evidence parents and educators require in advocating for a child to receive services guaranteed under the law in many countries.

Types of Assessments

Many assessment scales are in everyday use to determine what developmental learning stages chil-



Child undergoing a test (Elizabeth Crews)

dren have reached, both for diagnostic purposes and to determine how to assist children to move forward or to overcome difficulties. For example the work published in *Bayley Scales of Infant Development* (Bayley 1968), the *Denver Developmental Screening Test* (Frankenberg and Dodds 1966), and *The NeoNatal Behavioral Assessment Scale* (Brazelton and Nugent 1995), among many others, are all a continuation of the recording and description of the sequences of skills learned by all children. Early intervention for children with learning disabilities became a focus in many OECD countries during the 1970s.

Assessment tools to define early childhood are used everywhere and by all professionals who work with children, because observation and measurement of progress will assist greatly in understanding children's progress.

Child Development Inventories rely on child observations and child achievements in different developmental areas, for example, gross and fine motor, social skills, self-help skills, cognitive-adaptive skills, language and communications

skills, and specific sub-areas in literacy and numeracy, as well as more general development. These types of assessments generally focus on comparing one child to her peers on specific competencies.

Naturalistic Assessment is favored as an alternative to standardized or norm-referenced testing. Many preschool teachers believe that "child watching" (observation) is the most important tool for them. Child watching is regarded as superior because it occurs within the natural environment and natural routines of the child, allowing teachers to observe children in an unbiased, repeated, and planned manner, to assist in designing further learning opportunities.

Portfolio Assessment is sometimes used in early childhood learning environments (kindergartens, day care, and so on). Observation and samples of a child's work are collected into a portfolio. This portfolio provides a record of a child's process of learning, of how they go about their play and learning, how they ask questions, how they create, how they appear to think, and how they interact

with others, intellectually, emotionally, and socially. In early childhood, the portfolio method should clearly have intent (a collection of a child's work that encapsulates his or her efforts or achievements in one or more areas), and should involve the children, the parents, and preschool teachers. This shared process is used to make decisions on the ongoing learning and development of a child.

Functional Behavioral Assessment is often used to analyze the nature and causes of a child's problem behavior(s). This is done through observation and documentation of how a child interacts within the family and with his peers, and of how a child responds to his environment over a period of time. After analyzing the observations, interventions can be designed to assist the child to reduce and change the problem behavior.

Criticism

Just as the nineteenth-century theories and ideologies about early childhood were replaced with the enormous influence of Gesell, he was gradually made less important by the followers of Piaget. Even though Piaget's theories are still influential now, other theories also became prominent in the 1990s. Information-processing models are important in the early twenty-first century, and most important, the emphasis has shifted from the normative standards of the earlier developmentalists to individual differences. IQ tests and SATs have always been criticized as not being fair measurement tools. Indeed, critics charge that such tests are often discriminatory toward minorities and females. A National Academy of Sciences Report in 1998 stated that "educational decisions should not be made on the basis of a single test score, but should also take other relevant information into account."

David Hoff summarized the point of view of the critics of standardized testing thus: "Standardized tests are the tools of the state and federal governments, directing what is taught and how it is taught" (1999). The critics Hoff was summarizing were not in the early childhood area, but his words nevertheless sum up anti-testing sentiments in that field very well.

Many tests do allocate rankings and classifications that create artificial separation of children into groups of "slow learners," "gifted children," and the like. No doubt the field of child watching,

which attempts to avoid this kind of classification, will continue to gain strength, and the debate about an appropriate value base for child assessment will continue to evolve, particularly as more recently human ecology, which studies the interrelationship between humans and their economic, social, and political environments and organizations, has refocused scientific research in the area of human development. Nevertheless, testing can have positive effects by making it possible to provide appropriate services. The 1975 Education for All Handicapped Children Act in the United States in fact requires schools to test slow learners to determine what additional individualized support such children should receive. Many OECD countries have created similar laws.

Conclusion

A child's development, the way she learns how to think and form relationships and the extent to which she develops to her full potential, is based both on the effects of her inherited ability (her genetic inheritance) and the environmental influence of good health, nutrition, appropriate stimulation to learn, and appropriate social interaction with others. The more fully those who nurture and educate her understand her abilities and needs, the better they can assist her to develop her full potential. Thus, assessing children's functioning is an essential part of child care and education. (Mindes, Ireton, and Mardell-Czudnoski 1996). The ways in which assessments are performed have changed and will continue to change, but the basic need for them has not changed.

There are now and probably will be for many years to come shifts and changes in the assessment scene. Developmentally appropriate practice has been one of the buzzwords in recent years. However, many different types of assessments are used and recommended. Assessments in the form of empirical measurement of learning remain a sought after tool by many governments and education providers.

To lay out the argument for assessment a little more fully, although there are a variety of psychoeducational schools of thought, there appears to be some level of agreement that, irrespective of genetic inheritance and social/economic circumstance, (1) development is predictable; (2) development follows an orderly sequence; (3) learning a new skill depends on what the child can do now;

(4) all skills are interrelated; and (5) children's ongoing development is dependent on physical maturation. Accordingly, there is agreement that assessment will remain an evolving tool to assist in determining how to help children to successfully complete their early childhood development, in determining their level of school readiness, and in defining any special needs they may have.

Parents and professionals will continue to work together to share assessments to learn about a child, taking into account many factors of a child's life, including inherited genetic potential, health, temperament of the child, family circumstances, life routines, experiences inside and outside of the family, the values, beliefs and traditions as well as the economic and political aspects of the society in which a child is reared. A human ecological perspective would suggest that such a holistic interpretation of assessments would help in developing the foundation for healthy cognitive and social-emotional development, which will enhance the future economic and social position of individuals within their society.

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See also: Child Development, Cultural and Community Influences on; Cognitive Assessment; Early Childhood Education; Early Intervention and the Individuals with Disabilities Education Act (IDEA); Erikson, Erik Homburger; Freud, Anna; Gesell, Arnold Lucius; Intelligence

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Early Childhood Education

Early childhood education, generally defined as education for children between the ages of 3 and 6 years, in the United States occurs in a range of educational settings. Young children attend preschool, nursery school, pre-kindergarten, kindergarten, and day-care programs. Children participate in these programs from fewer than ten to more than forty hours a week. Thus, the range of early childhood programs is broad, and the extent to which they focus on children's educational needs is variable. Programs also vary in terms of ecological factors such as parent involvement and links to the community.

Early childhood education has three major historical roots (Hauser-Cram and Bronson 2000). The first kindergarten in the United States was opened in the mid-1800s by a student of Friedrich Froebel, the father of the kindergarten movement in Germany. Froebel developed a curriculum based on "gifts" and "occupations" that children could explore through play. The gifts were intended to create self-expression and stimulate observation, and included manipulable objects such as a set of size-sequenced colored balls constructed to give a sense of an ordered reality. The occupations were art and craft activities, such as drawing and sewing, designed to train the hand, eye, and mind. Play was considered to be a spiritual activity that children (*Kinder*) enjoyed in the "garden" (*Garten*), which was the classroom. By 1873, the kindergarten movement had become popular enough to support



Children, 3 to 6 years of age, attend nursery schools, pre-kindergarten, or kindergarten (Laura Dwight)

the opening of the first public-school based kindergarten in St. Louis.

Kindergartens generally were not designed for children much under the age of five years. In the late nineteenth century some pre-kindergarten-aged children were provided programs in day nurseries. These were largely developed by philanthropic groups to serve working mothers who lived in poverty. Although children received basic care in terms of health and hygiene, the day nurseries largely lacked a focus on children's social and preacademic skills.

In contrast, the nursery school movement explicitly focused on children's development, not just their custodial care. This movement was stimulated by the work of two British social activists, Margaret and Rachel McMillan. Taking up the cause of improving health-care conditions of children, they founded an open-air school, built so that one side could be opened to the sunshine and fresh air. Children were encouraged to play in the fresh air and were given baths, clean clothing, healthy meals, and medical and dental treatment. Although some focus on cognitive development occurred, more attention was given to children's social and emotional development. Americans who visited the school took the ideas to the United States in the early part of the twentieth century and first opened such schools for children living in poverty. Middle-class parents soon desired similar schools, and in the 1920s, nursery schools, as they came to be called, rapidly increased in number. Many of those schools were affiliated with universities or colleges (Braun and Edwards 1972).

Unlike kindergartens, nursery schools were not integrated into public education, and therefore they were largely tuition-funded and, despite their origins, generally not available to children from low-income families. As part of the War on Poverty in the 1960s, Head Start programs were initiated as early childhood education programs for preschool children from low-income families (Zigler and Valentine 1979). Although Head Start programs continue to benefit children and families, their quality varies (National Research Council and Institute of Medicine 2000). Furthermore, such programs serve only 60 percent of eligible children (Children's Defense Fund 2001).

Many nursery schools are designed to provide half-day programs. Given the large influx of mothers with young children into the workforce begin-

ning in the 1970s, extended-day nursery schools and center-based day-care programs have become a popular option for working parents of preschoolers. These programs generally offer full-day services, and many have an educational component.

Research has focused on questions about the possible benefits and drawbacks of attending day care and other full-day early education programs during the early years of life. Studies in the 1970s focused on whether damage occurred to infants and young children due to separation from their mother. Such research indicated that infants and toddlers display more suitable social behaviors in stable care arrangements where the child spends a majority of the time with a knowledgeable, responsible, and consistent caregiver, regardless of whether the caregiver is the child's parent (Scarr 1998). According to a report sponsored by the National Institute of Child Health and Human Development (NICHD), current research indicates that preschool-aged children in day care are just as attached to their mothers as other children, except in situations where a child's mother is low in sensitivity (NICHD Early Child Care Research Network 2001). The emotional qualities of those providing child care has been found to be important. Children in day care whose caregivers were rated as being more sensitive and responsive were found to have more positive relationships with their peers (NICHD Early Child Care Research Network 2001). Therefore, quality of care is critical in determining children's outcomes.

An important question for early childhood educators is how best to serve children with special needs. In response to federal legislation, the Individuals with Disabilities Education Act (IDEA) (reauthorized in 1997–1998 as Public Law 105–107) and its mandate to provide educational services to children from the age of 3 years in the “least restrictive setting,” many children with special needs are attending early education programs with their typically developing peers. Evidence indicates that children with special needs as well as typically developing children benefit socially in inclusive settings (Odom and Diamond 1998). From an ecological perspective, inclusive settings are generally the most natural environments in which young children can receive services. Practices such as the integration of therapies; adaptation of the classroom environment, including appropriate use of technology and adaptive equipment; and staff

training and support are critical to the provision of quality inclusive early childhood programs (Buysse, Skinner, and Grant 2001).

Early education programs vary in quality. The National Association for the Education of Young Children has established guidelines for program quality (Bredenkamp and Copple 1997). These include practices derived from developmental theory that focus on many dimensions of children's development. Didactic approaches to early childhood education generally are inconsistent with developmentally appropriate practices and have been shown to have negative effects on children's motivation to achieve (Stipek et al. 1995). Determination of program quality is not based solely on approaches to learning, however; it also includes an array of ecological factors. For example, one hallmark of high quality programs is their sensitivity to the linguistic and cultural traditions of the family. Another important characteristic of quality programs is their ability to create partnerships with all parents. Additionally, early childhood programs that integrate their services with those of other community agencies, including schools and health-promoting agencies, are ecologically based and have demonstrated beneficial results (Hauser-Cram et al. 1991).

Several researchers have studied the long-term benefits of quality early education programs for children from low-income families. As adolescents, those who attended such programs are less likely to drop out of school (Temple, Reynolds, and Miedel 2000). As adults, they have higher levels of education, higher salaries, and a lower arrest rate than similar adults growing up in the same circumstances (Campbell et al. 2001; Schweinhart, Barnes, and Weikart 1993).

Given the evidence of long-term benefits of early education programs, one of the current concerns of educators is their lack of availability to all children under kindergarten age. Currently, approximately 60 percent of preschool-aged children attend a day-care center, Head Start, or a nursery school program, but children living in poverty are still less likely than other children to attend any early childhood education program (National Center for Education Statistics 2001). Some states (e.g., New York) have state-funded programs that do not charge tuition, but they serve fewer than half of eligible children (Gilliam and Zigler 2001). Therefore, the need for publicly supported high-

quality early childhood programs surpasses their availability.

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See also: Attachment; Child Care: Issues for Infants and Children; Child Development, Cultural and Community Influences on; Community Schools; Full-Service Schools; Head Start; Maternal Education; National Association for the Education of Young Children (NAEYC)

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Early Intervention and the Individuals with Disabilities Education Act (IDEA)

In 1986, the United States Congress amended the Individuals with Disabilities Education Act (IDEA) to include services for children ages 0–3. Typically, these services are referred to as early intervention, and states are now mandated to provide these services under Part C of IDEA. The children who must receive these services are those who: (1) need early intervention because of developmental delays in one or more areas of cognitive, gross motor, fine motor, adaptive, social or emotional development; or (2) who have been diagnosed with a physical or mental condition that increases their risk for developmental delay. Additionally, states can opt to provide early intervention services for children at risk for developmental delay (Turnbull et al. 1999).

Early intervention services must be provided by qualified personnel, be provided in a natural environment to the fullest extent possible or appropriate, conform with the individualized family service plan (IFSP), and meet the six principles of the IDEA. The five principles are as follows: no child can be excluded from receiving services (zero rejection); the child and/or family must receive individually tailored services based on the child's assessment (appropriate education); they must be educated, as far as possible, with children without disabilities (least restrictive environ-

ment); there must be a process for safeguarding the children against the actions of the school or agency involved if necessary (procedural due process); and parents must collaborate in the design and implementation of the individualized family service plan (parental participation) (National Council on Disability 1995).

For all children receiving early intervention services, individualized family service plans (IFSPs) are created within a reasonable time after a multidisciplinary assessment is conducted. The IFSP is based on the assessment, as well as on the family's concerns and needs. Included in the IFSP are the child's current levels of functioning in all domains (cognitive, gross motor, fine motor, adaptive, social, and emotional); the family's concerns; goals and objectives; the services that will be provided; how those services will be provided in natural environments; the start and end dates of services; the name of the family's service coordinator; and a plan for assessing progress. All IFSPs must be reviewed every six months, and outcomes must be reviewed annually. Additionally for children who will turn 3 years old, transition plans are required that specify how the child and family will move from early intervention to special education preschool services, if those services are still required (Turnbull et al. 1999).

Foundations of Early Intervention Programs

Early intervention programs typically address one or more of the following three areas: educational readiness, improvement of child health, and supporting parents. Most programs address more than one of these areas, and it has been found that broad-based, comprehensive programs produce a wider range of positive outcomes and are most cost-effective (Zigler and Hall 2000).

Three theoretical orientations have especially influenced early intervention's development. First, most early intervention programs take an ecological perspective. Early intervention is founded on the fact that the child exists within a system of reciprocal relationships. Secondly, the program is based on the widely accepted and strongly supported theory that a child's early years lay the foundation for subsequent cognitive, social, and emotional growth. Therefore, it is important to intervene early in a child's life in order to maximize the child's chances to develop as a healthy, productive adult (Zigler and Hall 2000).

Third, research suggests that genetic and/or biological problems can be remediated and overcome if services are provided in the child's first few years of life. The theory is that these early years represent what is called a critical period, a time when the child's brain and physiology are more plastic and resilient, thus strengthening the chances that interventions will improve the child's outcomes (Bricker and Veltman 1995).

Impact of Early Intervention Programs

More research is needed to understand the long-term benefits of early intervention services. The results of current research concerning the efficacy of early intervention are varied. Though some research has not found any benefits for children involved in early intervention, other research suggests that children enrolled in these programs make positive gains.

The gains that have been found include higher academic achievement (Campbell and Ramey 1994; Reynolds 2000; Schweinhart, Barnes, and Weikart 1993); lower levels of special education placements (Campbell and Ramey 1994); lower grade retention (Campbell and Ramey 1994); and higher rates of school completion (Schweinhart et al. 1993). In addition, Arthur Reynolds (2000) found that the duration and intensity of the services are also associated with outcomes.

Kofi Marfo and Thomas Dinero (1991) claim that it is time to move away from the general question of whether early intervention works to more complex questions that assess the types and quantities of services that provide the most benefits for children with special needs. They advocate for a minimum of five classes of early intervention variables to be used when doing research and program evaluations: the entry-level characteristics of the child, family demography, family ecology, program characteristics, and non-program, or auxiliary, variables. In addition, they suggest a minimum of two outcome variables: parent/family and child outcomes. Their previous work suggests that child outcomes are influenced by parental involvement, location of the program, the program's structure, the duration and intensity of the program, and the timing of the implementation (Marfo and Dinero 1991). Due to the heightened interest in child and family outcomes, a major challenge facing early intervention programs is to provide meaningful services for the child and family, while still re-

specting the family's right to privacy and parental autonomy.

While more research is needed to understand the efficacy of early intervention, work with Head Start has revealed that it is naive to believe that simply providing services during one period in a child's life will be sufficient in fostering long-term developmental gains. Rather, children who receive early intervention services, whatever gains they may have made during their early intervention enrollment, will be much more likely to maintain those gains if they participate in continued "booster programs" that continue to provide periodic reinforcements of the skills and knowledge gained (Zigler and Hall 2000).

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See also: Head Start; Mental Retardation

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Ecodevelopmental Theory

An ecodevelopmental theory of child and adolescent development has been proposed to explain how various environmental risks for and protections against drug abuse and other problem behaviors are interrelated in young people and their families (Szapocznik and Coatsworth 1999). Ecodevelopmental theory explains how risk and protection in different parts of children's and adolescents' social environments affect each other across life areas and across time. This theory is built on three important foundations: (1) a social-ecological perspective that emphasizes the many spheres and levels of influence on child development, (2) an approach based on developmental science, one that is concerned with the changing nature of individuals and their social environments over time, and (3) a social interactional approach that defines person-environment interactions as the primary social vehicle of development.

Ecodevelopmental theory proposes that, when risk and protection from different spheres of influence (e.g., family, peers, school) are viewed as connected with each other across time, clear paths toward health or dysfunction can be identified. For example, over time parents and children may develop a relationship characterized by emotional distance or conflict. As children mature into adolescence and peers become a more prominent aspect of their social world, parents who are not close to their adolescents may not supervise the adolescents' peers, activities, and whereabouts as carefully as may parents who are closer to their adolescents (Liddle et al. 1998). In turn, lack of parental supervision may lead adolescents to associate with deviant peers. In this example, an early risk factor within the family domain, parent-child distance, leads to a disconnection between family and peer influence and to risk in the peer domain, in the form of association with deviant peers.

Levels of Context in Ecodevelopmental Theory

The social-contextual (i.e., ecological) dimension of ecodevelopmental theory is based on Urie Bronfenbrenner's ecological perspective, which proposes four primary and nested levels of the social environment (1979). *Microsystems* are the social domains in which the child participates directly,

such as family, peers, and school. Within each domain, the child maintains relationships with a network of people who shape her development toward either health or dysfunction. For example, within the school environment, classmates, teachers, and administrative personnel shape a child's or adolescent's academic performance and self-worth through teaching, encouragement, criticism, and other forms of feedback.

Although all microsystems are important, ecodevelopmental theory proposes that the family has the greatest degree of influence over children and adolescents. Factors such as family cohesion, conflict, and communication are some of the most powerful predictors of both positive and negative development in childhood and adolescence. A cohesive, harmonious, and well-communicating family is likely to produce competent and agreeable youngsters, whereas distant, conflicted, and poorly communicating families are likely to produce children and adolescents with behavior problems (Clark et al. 1998). Furthermore, the way a child or adolescent functions within peer and school worlds is largely determined by the nature of the relationship skills that he has learned within the family (Steinberg, Fletcher, and Darling 1994). As a consequence, peer selection is largely a function of the quality of relationships within the family. For example, children and adolescents from distant and conflicted families may be predisposed toward selecting negative peers (Pettit, Bates, and Dodge 1997).

Mesosystems comprise the connections between the adolescent's individual worlds, such as parental involvement in school activities and supervision of the adolescent's peers. Active parental involvement in adolescents' school and peer worlds protects adolescents against risks for drug abuse and other problem behaviors (Steinberg, Fletcher, and Darling 1994). The stronger, more positive, and more numerous the connections between an adolescent's worlds, particularly between the family and peers and between the family and school, the lower that adolescent's risk for drug abuse and other problem behaviors.

Exosystems are composed of the structures and effects within the social ecology that do not have direct influence on the child but rather influence other people who, in turn, influence the child. For example, aspects of a parent's life, such as quality of social support or level of work-related stress, enhance or hinder the parent's ability to effectively

communicate with, encourage, discipline, and manage her adolescent (Dishion and Patterson 1997). Parents with access to sufficient resources are more likely to interact positively with their children, whereas parents with few or no resources (with little in the way of social support or financial comfort, for example) are more likely to be impaired in their parenting skills. Exosystems also involve individuals other than the parents; for example, events occurring in peers' or teachers' lives are likely to affect the degree to which those peers or teachers are supportive or encouraging toward the child. An example of an effect at the level of the exosystem is the impact of the delinquent gang to which a sibling may belong. The gang influences the sibling to behave in an antisocial manner, and in turn the sibling may conduct herself aggressively within the family.

The *macrosystem* is made up of the web of social, political, and philosophical ideals and practices that define a particular culture, ethnic group, or society. The macrosystem defines what behaviors, interactions, and relationships are acceptable and unacceptable within a given cultural context. For example, a 25-year-old living at home with his parents would be viewed as normative within many Hispanic families but as developmentally inappropriate in mainstream American culture. At a broader level, the ways in which governments, the legal system, and the business community institute policies regarding maternal leave has a strong influence on families' lives. Individuals adhering to macrosystemic cultural ideals are more likely to receive support at the other systemic levels than are those whose lifestyles, beliefs, or social status isolates them from the dominant macrosystem (cf. Côté 1993).

Changes in Person-Environment Interactions Over Time

Ecodevelopmental theory borrows from scientific views of development (e.g., Cairns, Elder, and Costello 1996) in describing how changes in individuals over time are closely related to changes in their social ecologies. It proposes that the organization, structure, and functioning of the person and that of her social ecology are indistinguishable and inseparable over time. Ecodevelopmental theory focuses on how different spheres of influence become more or less important at different points during the life span. It also focuses on how the relationships

between different spheres of influence (e.g., family, peers) change over time. These changes in the organization and structure of the child's social environment have the potential to influence the child's development in a number of ways. For example, the effects of negative peers on a child's social development evolve and expand markedly between grade school and middle school. In grade school, negative peers sponsor aggressive and disrespectful behavior; in middle school, negative peers sponsor not only these behaviors but also delinquency, drug use, and risky sexual involvement.

Changes in how the social environment affects child development might best be described by tracing normative development from infancy to adolescence. In infancy, the ecodesvelopmental context lies almost exclusively within the family microsystem. As a consequence, mesosystems (e.g., parent-school and parent-peer connections) are only minimally operative. However, the exosystem (e.g., parental social-support network) can be critically important to the social ecology of an infant (Cole et al. 1998). Support for new parents as they adjust to caring for an infant helps them to provide an environment conducive to the child's long-term adjustment (Szapocznik and Coatsworth 1999). In early and middle childhood, the school domain attains greater significance. The child's interactions with schoolmates and teachers (i.e., the school microsystem), and the parents' interactions with teachers and other school personnel (i.e., the parent-school mesosystem), become increasingly important influences on risk and protection in the child's development. Subsequently, adolescence is associated with greater importance of the peer microsystem and, consequently increased importance and complexity of risk and protective processes in the family-peer mesosystem (e.g., parental management and supervision of the teen's peers, parents knowing the parents of their teens' friends). As the child matures into adolescence and begins to spend more unsupervised time outside the home, the neighborhood also becomes more important, both as a microsystem in itself and in its mesosystemic relations with the family.

Changes in the Individual and the Environment Over Time

Finally, ecodesvelopmental theory focuses on the patterns of relationships and direct interactions

between individuals and different levels of their environment over time (Kurtines and Szapocznik 1996). These relationships and direct interactions drive individual development and change. In particular, ecodevelopmental theory is concerned with how health and dysfunction are related to patterns operating at the mesosystem level. For example, overt hostility and conflict between parents and teachers over values, styles, and interests will steer a child's development toward dysfunction, whereas parents and teachers who work together and support each other will steer a child's development toward well-being.

Another feature of ecodevelopmental theory that warrants discussion is that environmental problems originating at any social environmental level may spill over into the other levels. For example, in inner-city families marginalized by neighborhood-level micro- and macrosystemic problems such as crime, parents are likely to be isolated from other families in the neighborhood, thereby creating exosystemic risks. In turn, parental stressors and lack of social support may decrease the likelihood that parents will be actively involved in their adolescents' peer and school worlds (Szapocznik and Coatsworth 1999). These macrosystemic and exosystemic problems result in (1) lack of parental involvement in their children's school and peer microsystems (a mesosystemic problem); and (2) problems within the child's microsystems (e.g., distance and conflict with the family, spending time with bad peers, and poor grades and lack of interest in school).

Because of these kinds of spillover effects, ecodevelopmental theory holds that, in order to protect the child or adolescent from dysfunction, health-promoting mechanisms need to be put into place at all levels of the social ecology (e.g., Coatsworth et al. in press). At the macrosystem level, for example, programs to promote community involvement in youth, along with increased funding for education, may help to offset the effects of macrosystemic problems associated with poverty and limited opportunities. At the exosystemic level, creating social-support networks for isolated and overwhelmed parents can help to relieve parental stress. At the mesosystemic level, training teachers to work with parent and helping parents to become more involved with their children's school and peers may help to increase interest in school and to reduce children's associations

with problem peers. At the microsystemic level, interventions to improve family functioning can assist families in moderating the negative impact of external social environmental challenges, for example by improving within-family communication and support to prevent children from selecting antisocial peers in the first place.

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See also: Bronfenbrenner, Urie; Child Development, Cultural and Community Influences on; Temperament

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Education, Professional

Professionals are people who master and maintain state-of-the-art specialized knowledge through academic education, proficiency in technical skills, and conformity to ethical standards. The field of human ecology, which involves professionals from many disciplines, addresses the interdependence of human development in the broader environment, including complex and dynamic factors such as the natural and built environments, the economy, faith and cultural communities, the media, legal and political frameworks, and technology. Each profession brings its unique paradigms and perspectives to the collaborative work that aims to enhance or sustain ecological systems. Comprehensive and effective change occurs through deliberate and clear communication across professional boundaries. Without such collaboration, the professions could work on the parts of the proverbial elephant, the trunk, the leg, the side, the tail, without ever affecting the whole elephant. Interdisciplinary professional education prepares practitioners for effective collaboration and holistic intervention.

Professionals in the field of human ecology arrive at their positions through a variety of venues. Some train in one of the university-based schools of human ecology, where faculty from such fields as family and consumer sciences, agriculture,

human development, and physical environmental design may be linked in comprehensive programs. Many professionals in human ecology are grounded in the more traditional disciplines, such as education, law, psychology, health sciences, or social work, that have infused ecological theory and practice into their foundational curricula. Regardless of the approach, competence in one's own discipline will generally be insufficient without knowledge and skill about how to build and maintain effective interdisciplinary relations.

Interdisciplinary collaboration occurs when different professionals, possessing unique knowledge, skills, organizational perspectives, and personal attributes, engage in coordinated problem solving for a common purpose. The collaboration is interorganizational when these professionals are affiliated with different organizations and act on behalf of them. The advantages of well-managed collaboration are that diverse perspectives produce better problem analysis, access to more resources, more creative solutions, improved likelihood that participants will act on what they plan, and greater satisfaction by participants. Disadvantages of poorly managed collaboration include a tendency toward groupthink, inefficient time use, role confusion or conflict, diffusion of responsibility, and lack of accountability. Thus effective collaboration relies on participant knowledge and skills about how to engage in and manage the collaboration.

The collaborative process can be enhanced when particular attention is given to such factors as the following:

- Defining and evaluating goals of the collaborative effort. When various professionals work together, they need a sound grasp of why they are doing this and what they hope to accomplish; these aims should be periodically reassessed.

- Defining participant roles. Participants should have a clear understanding of their own and one another's skills and resources and the specific roles they are expected to play in the collaboration; these roles should be adapted as change occurs. For example, a team that aims to build a community of support for a family with a child who has severe disabilities should have a solid understanding of what the nurse, social worker, teacher, and physician will each do.

Assessing and strengthening knowledge and skills Collaborators may encounter problems if they work together without first checking assumptions about each other's knowledge and skills. For example, psychologists and architects working on a community design should take time to learn about one another's perspectives. In addition, communication problems can be averted if collaborators devote time to common training and group development. This can be informal, such as sharing reading material or discussing different theoretical perspectives on an issue, or quite formal, such as participating in certified training together.

Clarifying leadership and facilitation roles. Every professional is expected to practice independently and thus demonstrate leadership, but the interactive process itself needs leadership, which can be shared among participants or delegated. In broad community or policy action, the facilitation tends to be supported by specialists who arrive at their positions through a variety of professions, such as public or business administration or planning.

Developing functional guidelines. A clear statement of philosophy and procedures to guide collaborators tends to strengthen the effort because it encourages personal commitment, common values, mutual responsibility, and conflict management. Formal approaches include written memoranda of understanding, bylaws, or policy manuals; in informal settings, simple discussion may suffice.

In summary, professional practice to sustain or enhance human ecological systems involves parallel processes: the practice of the profession and the practice of collaborative relations. Professionals should be trained in both practices.

As knowledge of human ecology has blossomed, institutions of higher education and professional development have developed innovative approaches to pre-service and in-service interprofessional education to equip professionals with relevant knowledge and skills. Such approaches include infusion of a common knowledge base into various professional curricula, cross-disciplinary

academic courses, joint degree programs, interdisciplinary studies programs, multidisciplinary internships, team teaching involving faculty from diverse disciplines, and cooperative learning exercises or field experiences. Some scholars have advocated the use of creative teaching and learning approaches that break with academic traditions but model the type of practice graduates will follow in the community. These innovations generally build on systems theory, creating learning environments that are dynamic, interactive, and holistic, rather than fragmented as in traditional discipline-focused education. They blend perspectives of the academy with those of the community, aiming for knowledge integration that more adequately reflects the broader environment of which each is a part. Skilled leaders who know how to stimulate broad ecological change emerge from training programs where they have practiced and mastered such interventions. Active participants in interdisciplinary professional associations such as the Society for Human Ecology are also able to gain the skills and knowledge needed for such leadership, thus continuing their professional education long after they leave school.

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Ego Development

Ego development refers to the life-span individuation and differentiation of the ego, which; in turn, results in adaptation of the individual across the life span. The ego is a core construct of personality

development that theoretically mediates between developmental and social demands placed on an individual. The origin of the concept of ego development is attributed to Sigmund Freud, who suggested that the basic function of the ego was to interpret reality, allowing the individual to meet the demands placed on her, which increases an individual's chances of survival. In *The Ego and the Id*, Freud claimed that each individual is ruled by a coherent organization of mental processes, the ego, that serves as a filter of stimuli into and out of conscious awareness. The ego, therefore, functions to encourage self-preservation and adaptation by interpreting, filtering, and distorting stimuli to maximize the survival of the individual.

In regard to ego formation, or ego development, Freud claimed that the ego is present at birth and that ego development increases as the ego gains abilities to mediate demands placed on the individual, minimize threat to survival, and maximize likelihood of adaptation. Despite Freud's initial conceptualization of ego development, the ego was not the focus of his major works because he proposed that ego development reached full maturation by puberty. Anna Freud and Erik Erikson, Freud's students, elaborated on the development of the ego.

The work of Anna Freud, Erikson, and others (e.g., Heinz Hartmann, Ernst Kris, R. Lowenstein) led to an independent field of psychoanalytic theory known as ego psychology. It has been the work of such ego psychologists that has led to a more detailed and complete portrait of ego development across the life span. Anna Freud, like Sigmund Freud, conceived of the ego as a mediating structure that served to meet the demands placed on the developing individual brought about both by biological maturation and social experience. Anna Freud (1936/1937) expanded upon Sigmund Freud's view of ego development by outlining specific strategies that individuals develop across the life span in order to mediate the demands of survival.

Originally, the ego was conceived of as a mental structure with a mediational function. Anna Freud suggested that ego functions mature with age: Observational findings indicated that ego functions employed by adults are more elaborate and adaptive than ego functions employed by children and adolescents. In addition, Heinz Hartmann (1958) proposed that individuals have an innate biologi-

cal tendency to internalize coping processes and to transform defenses into personality components. Secondly, Hartmann emended Freudian theory with the proposition that ego development was less an intrapsychic process than a complementary process between developmental and environmental demands. These themes remain the central elements of contemporary theories of ego development: Ego development unfolds across the life span, ego structures are the building blocks of personality, and ego development involves negotiations between intrapsychic and social experiences. In all theories of ego development, the term "ego" is used for the aspect of the mind that organizes experiences (McCrae and Costa 1990).

The most well-established theory of ego development is Erikson's stage theory of psychosocial development. Erikson's theory of ego development considers ego maturation a life-span process. Erikson suggested that the ego is not only a mediator of conflicts between internal and external demands placed on the individual but a source of strength that supports future maturation and adaptation. As Erikson explained his theory in *Childhood and Society*, ego development serves not only to promote growth, but also to organize an individual's experiences with the environment. Erikson proposed that ego development unfolds according to the epigenetic principle: Development occurs as a function of successive accretions and modifications brought about through an individual's interactions with the environment, so that each stage of ego development builds upon previous ego crisis resolutions, strengths, and weaknesses.

Contemporary study of ego development has followed two paths. George Vaillant (1977) and Norma Haan (1977) have posited hierarchies of more and less mature defense strategies that theoretically and empirically relate to adaptation across the life span (see also Vaillant 1989, 1993). In contrast to the hierarchies of defense strategies that Vaillant and Haan have offered, Jane Lovinger (1976; Hauser 1976; 1993) focused on the organization of the ego rather than the tendency to use more and less mature defense strategies. According to this theoretical perspective on ego development, ego development is the master trait that describes the psychological disposition of individuals, cognitive and perceptive coherence, and agency (Hauser 1993). This framework has been consistently used to link higher stages of ego de-

velopment to adjustment across the life span (Westenberg, Blasi, and Cohn 1998).

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See also: Adolescence in a Cultural Context; Epigenetic Principle; Erikson, Erik Homburger; Erikson's Theory of Psychosocial Development; Freud, Anna; Freud, Sigmund

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Elder Abuse in the Family

Elder abuse in families has increased for several reasons, including an increasing proportion of older adults in the total population, a related increase in chronic disabling diseases, and an increasing involvement of families in caregiving relationships with elders. Population trends indicate a continued increase in the number of older adults and, therefore, the likelihood of increased demand

for family caregiving. In turn, such caregiving, together with the multiplicity of demands on contemporary families, may contribute to the accumulation of family stress and the increased likelihood of elder abuse. This entry will focus on elder abuse as a set of contextually based risk factors—an ecological perspective (Schiamberg and Gans 1999, 2000).

Background to the Problem

Demographic changes may affect the incidence of elder abuse in families as well as the changing character of that abuse. Projections to the year 2030 suggest that the proportion of older adults will not only continue to increase to as much as 20 percent of the total population but, as well, the growth in numbers of the "oldest old," as people over the age of 75 are called, at greater risk for health problems and with increased needs for support, will be even more dramatic (Zarit and Reid 1994). The proportion of this group of the oldest old has been increasing faster than any other group in the aging population, with consequences for those who care for older adults in institutional and family settings. Furthermore, with women living longer than men by seven years on average, the responsibility for caregiving, together with the risk of abuse, shifts from the spouse of the older adult to the adult children. Because chronic disabling diseases become more prevalent at older ages, the need for family care and other forms of assistance to the elderly has increased, as well as the accompanying caregiver stress and pressures. Although the majority of older adults can live independently or with minimal assistance, substantial numbers of older adults have disabilities and therefore require care. Families continue to be the primary source of long-term care and support for older adult family members.

The Nature of Elder Abuse

Although researchers have varied widely in their definitions of elder abuse (Lachs and Pillemer 1995), there seems to be a consensus that elder abuse includes adverse acts of omission or commission against the elderly person (Kosberg and Nahmiash 1996). The focus in this entry is on domestic elder abuse by family members, as opposed to abuse that occurs in institutions. While definitions and legal terminology vary from state to state in regards to the types of domestic elder

abuse, the following types of abuse are commonly recognized (National Center on Elder Abuse 1998): physical and sexual abuse, emotional or psychological abuse, neglect, financial or material exploitation, and self-neglect. This entry will not address financial exploitation and self-neglect, as each of these two types of abuse has a separate set of risk factors and causes different from the set of risk factors of the other forms of abuse (Callahan 2000).

- **Physical Abuse:** The use of physical force that may result in bodily injury, physical pain, or impairment. Physical abuse may include but is not limited to such acts of violence as striking, hitting, beating, pushing, shoving, shaking, slapping, kicking, pinching, and burning, as well as inappropriate use of drugs and physical restraints, force-feeding, and physical punishment.
- **Emotional/Psychological Abuse:** The infliction of anguish, pain, or distress through verbal or nonverbal acts. Emotional/psychological abuse includes but is not limited to verbal assaults, insults, threats, intimidation, humiliation, and harassment. Some other examples of this form of abuse are treating an older person like an infant; isolating an elderly person from his family, friends, or regular activities; giving an older person the silent treatment; and enforced social isolation.
- **Neglect:** The refusal or failure to fulfill any part of a person's obligations or duties to an elder. Neglect may also include failure of a person who has fiduciary responsibilities to provide care for an elder (e.g., pay for necessary home care services) or the failure on the part of an in-home service provider to provide necessary care. Neglect typically means the refusal or failure to provide an elderly person with such life necessities as food, water, clothing, shelter, personal hygiene, medicine, comfort, personal safety, and other essentials included in an implied or agreed-upon responsibility to an elder.

Incidence of Elder Abuse

Results of the National Elder Abuse Incidence Study (NEAIS) indicated that approximately

450,000 elderly persons in domestic settings were abused or neglected during 1996. It was found that female elders were abused at a higher rate than males, even after statistically adjusting for their larger numbers in the aging population. As well, the oldest elders (80 years and over) were abused and neglected at a rate two to three times their proportion of the elderly population. In almost 90 percent of the elder abuse and neglect incidents, the perpetrator was a family member, and two-thirds of the perpetrators were adult children or spouses (Administration on Aging 1998). Such findings support attention to domestic elder abuse by family members.

Key Risk Factors

Risk factors for elder abuse in the home care setting are related to individuals (e.g., adult child as caregiver and older adult as care recipient), their immediate context (family) and social/cultural contexts, and the interactions between persons and contexts. Such an ecological perspective on risk factors also provides a framework for understanding the dynamics of the problem in the family setting and guidance for the development of effective interventions. Although the family may be a context of elder abuse, family members nonetheless often bring to that home setting experiences in other contexts, which, in turn, have a significant influence on the caregiving relationship. For example, caregiver burden may emerge from trying to balance the demands of caring for an older adult with the needs of a spouse or work responsibilities.

The Immediate Context

Some Characteristics of Elderly Victims

- **Gender.** As indicated, there is evidence that women are more likely than men to be abused. One explanation for the difference is that women are more vulnerable to sexual molestation (Kosberg 1988). On the other hand, other evidence suggests that the risk of abuse is higher for men than for women, perhaps because they are more likely in old age to be living with family (and therefore with a potential abuser) than women (Pillemer and Finkelhor 1988).
- **Chronological age and health.** Since advanced age is frequently associated with

health problems and since such problems may complicate the caregiving relationship, increasing age puts elders at higher risk for an abusive situation (Kosberg and Nahmias 1996).

- Dementia and Alzheimer's Disease Abuse. Prevalence of dementia patients is estimated to be higher than that in other groups (Paveza et al. 1992). This might be related to the provocative behavior factor of dementia patients, who often manifest some form of aggressive behavior (e.g., verbal outbursts, physical threats, or violence).
- Psychological factors and social isolation.

Depression is a risk factor of abuse, sometimes leading an aging parent to accept her troubles without seeking relief (Kosberg and Nahmias 1996). Social isolation of the abused older person has been suggested as one of the reasons that victims of elder abuse are rarely detected.

The Adult Child: Characteristics of the Abusive Caregiver

- Substance abuse. Alcoholism is associated with family violence, particularly violence against aging people (Anetzberger, Korbin, and Austin 1994).
- Caregiver experience and burden. Family members who are reluctant to assume the caregiving role might fail to provide adequate care to the aging parent (Kosberg and Nahmias 1996). Stressed and overburdened caregivers are more likely to abuse their relatives than are caregivers who are able to handle their stress. Caregiver perception of the stress (i.e., the subjective burden) is likely a more salient factor in abuse than any measure of presumed objective stress, such as total number of responsibilities (i.e., the objective burden) (Zarit and Reid 1994).
- Personality traits. Personality traits associated with abusive behavior include hypercritical and impatient behavior, a tendency to blame the older person for caregiving problems, and unrealistic caregiving expectations (Kosberg and Nahmias 1996).
- Absence of social support. A caregiver who is not linked with informal or formal contacts such as family, friends, and coworkers is at greater risk because of lack of support.

Family Factors Related to Elder Abuse by Adult Children

- Dependency relationships. A common assumption is that abused elders are often powerless, dependent, and vulnerable in their relationship with their family caregivers and, in addition, have no viable options other than continuing their current family caregiving arrangement. On the other hand, there is not consistent empirical evidence for a higher incidence of abuse in cases of a dependent elder than in cases of an independent elder (Pillemer and Finkelhor 1988). In fact, the reverse may be true, in that some abusers are actually more dependent on the aging relative than vice versa, especially with regard to finance and housing. If in fact the abuser is dependent on the victim, abuse arises out of the abuser's resentment over his powerlessness, leading to the use of control techniques and violence (Pillemer and Finkelhor 1989).
- Living arrangements. Overcrowded living spaces and lack of privacy are associated with intrafamily conflict (Kosberg 1988; Kosberg and Nahmias 1996).
- Intergenerational transmission of abuse in the family. Elder abuse is more common in families with established lifelong patterns of violent behavior (Kosberg and Nahmias 1996). Although it has been suggested that there may be a direct cycle of abuse when a formerly abused child strikes out at her own abuser parent when this parent is aging, there are no direct data to confirm that observation (Biggs, Phillipson, and Kingston 1995). In fact, it has been suggested that intergenerational transmission of family violence is more useful in explaining child abuse by parents than aging parent abuse by adult offspring (Korbin, Antezberger, and Austin 1995).
- Demands of multiple generations. Responsibility for the care of older adults has frequently fallen on the shoulders of adult female children, typically middle-aged women. In turn, such women have sometimes been labeled the sandwich generation because of their generational position of family responsibility between their children on the one hand and their own parent(s) on the other. Such demands are thought to affect their

well-being and increase their stress and subjective burden, which might increase the risk of abuse. That said, the evidence for a relationship between the burden of taking care of both children and parents, and abuse is not consistent (Loomis and Booth 1995).

Contextual Influences beyond the Immediate Setting

Some Adult Child Life Contexts

Related to Elder Abuse

- Employment status and financial resources. Economic pressures and lack of financial resources to care for a dependent elder family member may foster resentment. This resentment may not only affect the quality of care but also lead to abuse (Kosberg and Nahmias 1996).
- Social isolation and lack of formal support. The lack of social support from family members, friends, and associates has been linked with abusive behavior toward older adults in the context of caregiving (Kosberg and Nahmias 1996). Since caregivers may be stressed and burdened as a result of caregiving activities, some investigators believe that one effective way to prevent elder abuse is to prevent caregiver stress. As a consequence, a wide range of programs aimed at providing support for families has been developed. Such programs include in-home respite, support groups, and household help.

Older Adult Life Contexts Related to Abuse

- Social isolation and lack of formal support. As already indicated, abused elders tend to be more socially isolated than nonabused elders (Gelles 1997). Lack of formal contacts with representatives of community agencies or organizations might delay or even prevent the detection of an abusive situation.

The Culture, Public Policy, and Elder Abuse

- Cultural norms. Cultural attitudes and values may influence family caregivers to engage in, or may deter them from engaging in, elder abuse (Kosberg and Nahmias 1996). For example, ageism, the view of older adults as a less worthy group, may

result in a climate that is favorable to elder abuse.

- Public policy. The 1987 amendments to the Older Americans Act created a separate provision entitled Elder Abuse Prevention Activities. This authority mandates that states develop public education and outreach to identify abuse, neglect, and exploitation, as well as procedures for the receipt and investigation of such reports (Neale et al. 1996). By 1988, every state in the United States had some form of adult abuse and protection laws (Biggs, Phillipson, and Kingston 1995). At the state level, elder abuse legislation has sometimes included mandatory reporting laws, requiring that certain professionals must report suspected elder abuse. Those professionals vary by state and include health professionals, human service professionals, clergy, law enforcement professionals, financial professionals, and long-term care professionals. Moreover, sixteen states mandate that any person who suspects abuse must report it. These laws further vary by state in their definitions of elder abuse and the types of abuse (i.e., physical, psychological, and financial abuse, neglect, and self-neglect) that should be reported. Although all fifty states and the District of Columbia have some form of elder abuse policy, eight states do not have any form of mandatory reporting (Payne 2000).

Home Care and Community-Based Interventions for Elder Abuse

Mandatory Reporting

Elder abuse is certainly not an easy problem to address for a variety of reasons, including the veil of secrecy that surrounds the problem, secrecy on the part of the victims as well as of the abusers. Because many states have policies that mandate the reporting of suspected elder abuse incidents, there is frequently a tension between treating the problem at a family level as a family problem, on the one hand, and as legally required, government-mandated issue, on the other. Mandatory reporting laws (where they exist), should be part of a comprehensive elder abuse action policy, which, in turn, should include three phases of case discovery process: reporting, investigation, and service delivery. Reporting requirements alone are insuffi-

cient. To be effective, elder abuse reports must be investigated by a well-organized investigating agency. Furthermore, sufficient and adequate funding for supportive social service agencies is essential.

Interventions and Services

In general, the specific services available to address elder abuse in communities are coordinated or available through several primary sources, including state and local offices of Adult and Protective Services, Area Agencies on Aging, and local community centers, which provide services or coordinate service delivery. Such services may represent a much more effective strategy for addressing elder abuse than mandated reporting laws, taken by themselves (Payne 2000). Although research on interventions for elder abuse has not evolved to the point that it can be said that specific interventions are appropriate and therefore recommended, there is some limited evidence about the broad categories of services that have been included in elder abuse programs (Nahmiash and Reis 2000).

Medical assistance/nursing. These services may include occupational therapy, geriatric evaluation of older adult physical and mental status, and specific nursing care.

Abuse prevention directed at caregivers. These interventions are particularly helpful for improving the circumstances of the caregiver, including lessening perceived caregiver burden. Services in this category include the availability of respite care, family support/family counseling, peer support groups for caregivers, and education/training programs for caregivers.

Abuse prevention directed at the care receiver. These services could include older adult education sessions in self-care skills and access to information via the Internet, individual counseling, temporary shelter, information on legal rights, and information on how to take advantage of available resources.

Increasing the social participation of the older adult. Given that one of the major risk factors associated with elder abuse is the social isolation of the victim, these interventions are designed to bring the older adult in contact with a variety of social liaisons that might promote his adaptive skills and independent functioning. These services would include making the older adult aware of the

availability of community activities at day centers, encouraging her to participate in volunteer programs (in particular, and where feasible, in active volunteering programs such as RSVP—the Retired Senior Volunteer Program), and transportation to and from activities.

Nutrition programs. These programs are essential to the health and active functioning of older adults, as well as providing some measure of relief for the caregiver. Meals-on-Wheels programs are available in most communities for older adults whose status might not permit their easily dining outside the home. Through such programs, opportunities are available to provide dietary advice.

Housing services for the older adult. Adaptations to existing housing may allow for greater mobility of the older adult within the home and, in so doing, promote independence and reduce frustration. Depending on the physical limitations of the older adult and the current domicile, a wide variety of adaptive designs are possible, including wheelchair ramps or self-contained rooms with bathroom facilities.

Legal strategies. Where necessary a guardian may be appointed.

Conclusion

Elder abuse is a complex problem requiring the development of community-based interventions that incorporate the needs and resources of families in facing a problem whose magnitude will likely increase. A contextually framed understanding of elder abuse is important to the development of effective programs that can address the array of factors associated with the abuse of elders in family settings. The contributions of family members, physicians, nurses, social workers, and other practitioners in home care settings remain a vital component of any effective intervention. Professional help and collaboration with families is relevant for both program interventions and all levels of prevention, including the identification of at-risk families and provision of services before abuse occurs, and mandatory reporting requirements with referral to services. An improvement in the nature and quality of community-based programs is essential to both the prevention and reduction of elder abuse.

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See also: Domestic Violence; Housing and Older Adults; Living Arrangements for Elders; Mental Illness in Old Age; Older Adults: Preparation for Future Care

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The Elderly

See Elder Abuse in the Family; Housing and Older Adults; Mental Illness in Old Age; Nutrition in the Elderly; Old Age, Social Relationships in; Older Adults: Preparation for Future Care; Outdoor Mobility in Old Age; Suicide in Older Adults; Teaching Older Adults to Use New Technologies

Empathy

Empathy is a basic human ability that promotes mutual understanding and allows human beings to share the experience of others, even across cultural boundaries. Psychologists have defined empathy in several different ways, but in general it is possible to distinguish two broad categories. The first involves an emphasis on the cognitive ability to understand others' mental and emotional states. Empathy may be described as an ability that involves "perspective-taking" (e.g., Borke 1971), "role-taking" (e.g., Mead 1934), or "everyday mind reading" (e.g., Ickes 1997). The term is also used in clinical research, in which context it usually refers to a therapist's ability to "think oneself in another's place," that is, to perceive the internal frame of reference of another with accuracy, including understanding emotional compo-

nents and meanings as if one were the person (e.g., Toombs 2001).

The second way of looking at empathy conceives of it as primarily an emotion (e.g., Lazarus 1991). Empathy is defined as an affective response that stems from the perception (apprehension) of another's emotional state or condition and is very similar to what the other person is feeling. Empathy is seen here as the vicarious experience of another's emotional states. An inborn capacity to infer others' emotional states from the expression or situation and a minimal degree of differentiation between self and other are assumed as necessary conditions for this emotional reaction. Recent developmental and neuropsychological studies support this second way of understanding empathy, although, as the development of empathy is affected by cognitive development, the cognitive processes emphasized in the first way are of considerable significance.

Empathy as a specific emotional reaction to another's emotional states has importance for human life in several ways. It creates an important connection between individuals, and therefore concepts of empathy are crucial for a better understanding of social behavior. It has particular functional importance for prosocial motivation and behavior, (that is, motivation and behavior that support or makes a positive, valued contribution to the social order or society). Furthermore, it has consequences for emotional development itself and can plausibly be seen as an important component of emotional competence (Saarni 1999). The development of empathy, the process that results in the individual's ability to empathize, depends less on genetic conditions than on socialization. Despite the lack of studies on cultural variation and on effects of socialization agents outside of the family, such as peers, for example, presently available research offers at least a general view of how empathy develops in Western culture.

Development of Empathy

The development of empathy can be seen as taking place in four stages. The stages laid out here are similar to those in Martin Hoffman's developmental model (1982), which relates empathy to changes in sociocognitive development, especially the development of sense of the other.

Emotional Contagion as Antecedent

The emotional reaction to others' distress in the first year of life is known as emotional contagion—an inborn or early learned capacity to react in an affective way to others' emotional expressions. Infants express distress through one or more simple mechanisms (such as crying) and since they cannot differentiate between their own distress and that of the other, they experience global distress when others express distress through a similar mechanism. Already three-day-old babies start crying on hearing the crying of other babies (Sagi and Hoffman 1976). The assumption that emotional contagion is an inborn capacity is supported in recent studies about mirror neurons in primates. Even the perception of actions of a being of the same species evokes part of the same neuronal activity pattern as the experience of one's own actions—a kind of simulated action (as if one were going through the same experience) (e.g., Gallese 2001).

Beginning of Empathy

A necessary condition for empathy is the development of a first global self-concept, which occurs between eighteen and twenty-four months (e.g., Bischof-Köhler 1991). The child experiences its own affective reaction as vicarious; that is, the child recognizes that the affective reaction mirrors the other's state more than its own situation. This capacity is also recognized in Hoffman's second developmental level, called egocentric empathy. Children have developed a global sense of others but cannot yet differentiate between their own and another's internal state in a complete way. They experience a mixture of empathy and distress and still have difficulty responding sensitively to another's emotions and needs. Like empathy, distress is defined as an affective response that stems from the perception of another's emotional state or condition; unlike empathy, however, it involves self-oriented feelings of tension, insecurity, and anxiety.

Empathy at the Interpersonal Level with Concrete Targets

Due to increased sociocognitive development, which involves, among other things, the development of self-concept, perspective-taking skills, and coping strategies, children can experience empathy for a wider range of emotions and in the ab-

sence of the person empathized with. At the same time they also can ignore other's distress and react with avoidance or even aggression. The cause of empathy may be the other's emotional expression or the situation, and the ability to take someone else's perspective is an important factor that may elicit an empathetic reaction.

Empathy at the Group Level with Abstract Targets

With greater maturity and an awareness that people continue to exist over time and in various contexts, children can experience empathy in regard to others' general conditions. In early adolescence individuals can react empathetically to the plight of a group or class of people, such as the impoverished or politically oppressed.

Measuring Empathy

Empathy can be studied by using physiological parameters, facial expression, or self-reported experience. Observational studies are mostly used in childhood, whereas questionnaires are often used in adolescence.

Individual Differences

Individual differences in empathy-related responsiveness can already be observed in 2-year-olds. Results of observational studies with young children are not, however, necessarily stable over contexts and over longer time periods (Friedlmeier and Trommsdorff in prep.). Therefore, the observed empathetic reaction should not be interpreted too quickly as a disposition. There is evidence that dispositional empathy develops from early adolescence into early adulthood (Eisenberg et al. 1995).

Challenges in Determining Intensity of Empathy

The use of the three different means mentioned of determining whether someone is experiencing empathy, and if so how strongly, creates difficulties; the individual cannot affect his own physiological parameters, but he can control his facial expression to some degree, and if he is reporting his own experience, he can control the account completely. Age-related significant increase of empathy is reported when facial expression is observed and when the individual reports his own experience and less for nonverbal or other-report measures. The ability to mask or to exaggerate the forms of expression leads to dissociation of emotional ex-

pression and feeling. Therefore, facial and gestural indices are unrelated or even inversely related to self-report in early school age.

Gender Differences

The effect of the different degrees of control over the various indices of empathy can clearly be seen in regard to gender differences. Despite the stereotype that women and girls are more empathetic than men and boys, the state of research shows a more complex picture. The expected gender differences were found for self-report studies, but less difference was found in observational studies, in which a combination of behavioral and facial reactions was generally used, and no differences were found in studies using nonverbal facial and physiological measures (Eisenberg and Miller 1987). The sex differences in self-reported empathy increased with mean age of the sample and when the targets of the empathic response were unspecified/unknown individuals. These differences may be the consequence of internalized sex role stereotypes into the self-images.

Empathy and Social Behavior

When one experiences the positive emotional states of another person, empathy may lead to a shared positive feeling with the other, but this phenomenon has rarely been studied. In fact, Kim Chisholm and Janet Strayer (1995) report that happiness was the easiest and safest emotion to share, when compared with fear, anger, and sadness, but most research has concentrated on studying the experience of negative emotional states of another person, and it is here that the effect of empathy on social behavior has been observed. Here, empathy leads to sympathy (feeling of sorrow and concern for the other) or gets mixed with it, an experience that may elicit prosocial motivation and behavior, as the desire to change the other's situation comes into play.

Empathy plays a crucial role for prosocial development because already in early childhood, when moral standards have not yet been developed, empathy has functional meaning. Children between 18 and 24 months are particularly likely to display prosocial behavior as a consequence of experiencing empathy (e.g., Friedlmeier and Trommsdorff in press). In the beginning and even at the age of two and three years, the resulting actions may be somewhat inappropriate and egois-

tic, as when children take an unhappy child to their own, rather than to the other's mother.

Empathy does not always lead to sympathy; it can also lead to personal distress. Whereas sympathy, because of its intrinsic other-oriented motivation, is likely to lead to altruistic helping behavior, personal distress involves the egoistic motivation of desiring to alleviate one's own distress (Batson 1998). Prosocial behavior only occurs when reducing another's negative emotion or circumstances is the easiest way to alleviate one's own distress. If direct contact with the person suffering can easily be avoided, the person experiencing vicarious distress will not assist. When children experience a playmate's misfortune in a real situation (in contrast to watching a film), two forms of distress can be observed in real situations: distress with gaze aversion and distress with focus on the concerned person (Trommsdorff 1995). The gaze-aversion distress seems to have a less blocking function for prosocial behavior. It has been shown that the induction of an egoistic motivation as a means of distracting attention led to an unblocking of prosocial behavior in case of distress in 5-year-olds (Trommsdorff and Friedlmeier 1999). In general, strong positive relations between empathy and prosocial behavior and negative relations between distress and prosocial behavior decrease during childhood. Sociocognitive development leads to more evaluation processes as the child asks, for example, whether she can really help this person, and the internalized standards that come with moral development contribute to this change (Hoffman 2000).

Alongside the specific functional importance of empathy for prosocial behavior, children's empathy is related to socially competent behavior and low levels of problem behavior in general (Eisenberg and Miller 1987; Eisenberg et al. 1996). However, empathy can also lead to outcomes that, from a Western perspective, are socially undesirable. People induced to feel empathy and sympathy were likely to allocate resources preferentially to the individual for whom sympathy was felt, even if such an action violated principles of justice (Batson et al. 1995).

Empathy and Emotional Development

Alongside the development of specific emotions, recent research focuses on the development of emotion regulation abilities as well as of emotional responsiveness in general as important processes

for emotional development (e.g., Friedlmeier 1999). These abilities develop within the interactive processes between caregiver and child in the first years of life before the child acquires self-regulating capacities. Empathy is the affective part of perceiving others' emotional states. All these processes are interrelated: On the one hand, empathy serves as a condition for development of specific emotions, and on the other hand, emotional expression and regulation abilities affect the empathetic experience.

Empathy as a Condition for Specific Emotions

Guilt develops on the basis of empathy. The experience of empathy and the recognition that one is the unintended cause of the other's state lead to the feeling of guilt (Hoffman 2000). The clear unidirectional relationship changes in later developmental stages, and the feeling of guilt can come to evoke empathy. The feeling of guilt leads to taking the perspective of the person one has wronged, which may evoke empathy. Since the maintenance of empathetic experience depends on further evaluation processes, empathy can also lead to negative emotional reactions. Envy can be seen as the outcome of sharing someone else's positive feeling and then deciding that he does not deserve it or then developing the wish to be in his situation. Or if the empathic reaction to another's misfortune is combined with a positive evaluation of that misfortune, based for example on a negative relationship with the person or on negative personality attributions, gloating over the other's misfortune (often referred to as *schadenfreude*, from the German for "joy in damage") may be the consequence.

Emotional Expression Affects the Development of Empathy

The restriction of emotional expression by the caregiver in relation to her own negative experiences may lead to less experience of empathy on the part of the child, whereas if the caregiver's reaction to someone else's emotional experience is weak, but she does not express that weak reaction, the child's empathy may even be heightened. Boys who had experienced a high restriction of emotional expression in their home environment did not recognize their distress or denied it compared to their facial and physiological markers, even when their facial expressions and physiological responses gave clear evidence of distress (Eisenberg

et al. 1991). At the same time, when caregivers firmly restricted emotional expressions of a kind hurtful to others, children developed more empathy and sympathy.

*The Ability to Regulate Emotion
Affects the Development of Empathy*

The experience of another's emotional state evokes physiological arousal as part of the empathic process. It seems that an optimal level of empathic arousal, neither too high nor too low, is necessary in order to lead to sympathy. If arousal is high, distress may be the outcome, except for individuals who are relatively skilled in regulating and coping with their own emotional arousal (Eisenberg and Fabes 1990). The ability to use problem-focused coping, that is, to actually try to change the factors in the environment that are causing the suffering, tends to lead to the kind of empathy that involves sympathy rather than to distress, as well as to better regulation of the vicarious negative emotion.

Furthermore, individual differences in emotional arousability and in the ability to regulate one's emotional reaction are important aspects for understanding individual differences of empathy. And this ability develops in relation to the caregivers' support. Parental practices that support children dealing constructively with their own negative emotions seem to foster sympathy rather than personal distress (Eisenberg 2000). Children who cannot adequately regulate their own emotions may tend to become overaroused and experience an aversive response to others' distress.

The Influence of Socialization

Although empathy (including sympathy) probably has a biological basis, as discussed above, it is likely that children's experience in the home and other social contexts affect the development of empathy. (Indeed, the influence of the caregiver has already been discussed to some extent in the previous section.) Socialization influences are complex, and not all relevant aspects are studied yet. Two gaps in the research are apparent: First, social contexts beyond the family have been neglected. Once research on empathy takes into account that peer relations, especially friendships, are important to the development of reciprocal interpersonal understanding (Youniss 1992), peer interactions may turn out to play a prominent role in empathy development. Second, the research has

not given enough attention to the way socialization processes vary, depending on cultural values and related parental beliefs.

On the second area, however, some research has been done that indicates how useful more would be. Due to the focus on relatedness and maintenance of harmony in Japan, mothers build a stronger bond to their young children than is usual in Western countries and thus create the feeling of oneness. When Japanese toddlers were compared with German, they reacted with more distress toward another's misfortune, and despite their mothers' stronger sensitive support, they were less able to regulate their distress reaction (Friedlmeier and Trommsdorff 1999; Trommsdorff 1995). The results of this study can be interpreted by referring to culture-specific interpersonal patterns, and more studies outside Western countries are necessary to better understand the impact of culture on empathy and its development.

Most research on the influence of socialization on empathy has focused on parents in Western cultures, where it has been shown that the caregivers may serve as models in a direct way. Studies have also indicated that the quality of relationship between caregiver and child, the caregiver's disciplinary practices, and the treatment of emotions within the family all influence the individual developmental path of empathy.

Caregivers as Models

Whereas the results of studies about the relationship between parents' empathy and children's empathy are inconsistent, the evidence that parents' sympathy serves as a model for children seems to be more robust. Mothers' sympathy has been positively correlated with daughters' sympathy and negatively with daughters' distress. Fathers' sympathy has been linked to boys' sympathy (Fabes, Eisenberg, and Miller 1990).

Quality of Relationship

Warm and affectionate parenting seems to foster children's empathy (e.g., Trommsdorff 1991). Especially when children are under stress, such parental behavior may foster empathy more than the overall level of maternal warmth. There is also evidence that attachment quality affects the development of empathy. Securely attached children have been found to display more sympathy with peers at 3 years of age (Waters, Wippman, and

Sroufe 1979) and to show higher levels of empathy and prosocial behavior in preschool (Kestenbaum, Farber, and Sroufe 1989).

Disciplinary Practices

Discipline that involves the use of reasoning is related to children's empathy in a positive way. Especially if caregivers turn children's focus of attention to the other's situation so that they may feel and understand the other's distress, children display more sympathy (e.g., Eisenberg et al. 1992). This approach, often termed an induction strategy, seems to be an important tool for fostering the child's feeling of empathy and sympathy directly at the emotional level. Preschool children whose mothers used nonphysical power assertion (including negative appraisals of the children) rarely showed more sympathy than the norm (Miller et al. 1989). At the same time, children whose parents are demanding and limit-setting displayed more empathy than children whose parents were more indulgent.

Treatment of Emotions within the Family

When parents openly communicate emotional states that are not harmful or hostile, children are encouraged to experience others' emotions (Eisenberg et al. 1991). Expression of strong negative emotions by parents leads to stronger personal distress reactions in children (Eisenberg et al. 1992). Parents' discussions of emotions foster perspective-taking and an understanding of emotion in everyday interaction rather than in problematic situations (Dunn, Brown, and Beardsall 1991). In the latter, parents foster their children's ability to take another person's perspective and to understand the role of emotion in their everyday interactions. In problematic situations, on the other hand, direct support and regulation strategies are more helpful as means of encouraging children's empathy.

Although the data are still limited, there is some convincing evidence (for Western cultures) that parents who set high standards for their children, who use reasoning (induction) as a discipline technique, who expect mature behavior without overcontrolling or punishing, and who express their emotional states openly, without overemphasizing negative or even hostile emotions, are relatively likely to rear empathic children. These char-

acteristics taken together constitute what has been called authoritative parenting.

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See also: Moral Development; Parent-Child Synchrony; Parenting Styles

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End-of-Life Decision Making

Current discussions of death within American culture include the topic of the end-of-life period and the decisions that must be made during that period. Decisions about wills and funerals have always had to be made during this period, if not before. Recent advances in technology, including the improvement of life-prolonging equipment and improvements in medications, require that individuals and families make even more difficult personal choices related to death. Families faced with end-of-life decision making need assistance in making all these choices.

Background

The end-of-life period is typically analogous with the time preceding death for individuals with a terminal diagnosis. Hospice programs, which provide comfort care to terminal patients and their families, consider a patient terminally ill if a physician states that she has six months or less to live (Gwinn 2000). Patients during the end-of-life period experience similar symptoms (pain, shortness of breath, confusion, loss of appetite, nausea, fatigue, and depression) (National Institutes of Health 1997). These symptoms significantly affect the quality of life of patients and their families, as

well as the costs, in financial terms, and the other burdens of the medical care needed for symptom management (National Institutes of Health 1997). Due to these symptoms, typical end-of-life discussions focus on how to determine the quality of life of the dying patient and on the meaning of the term, 'death with dignity' (Kaufman 1999/2000).

The end-of-life period as a developmental stage seldom receives attention, yet older individuals without a terminal diagnosis face end-of-life decision making also. These decisions concern long-term care when independent living is no longer possible, the making of wills, and funeral arrangements. Any discussion of the end-of-life period as a developmental stage must also consider the questions that arise about quality of life and death with dignity.

Legal Context

The end-of-life period gained media attention in 1974 with the Supreme Court decision in the Karen Quinlan case, which established four legal precedents: The patient has the right to refuse treatment; if the patient is mentally incompetent, someone else has the right to decide to terminate treatment; the family has that right rather than the hospital; end-of-life decisions should consider the invasiveness of the treatment and the likelihood of patient recovery with that prescribed treatment (Webb 1997).

In 1990, the U.S. Congress passed the Patient Self-Determination Act (PSDA) to support state laws governing individual rights in decision making related to medical treatments (Pietsch 2000). In the same year, the U.S. Supreme Court issued the first right-to-die decision, in the Nancy Cruzan case, reaffirming the right of the patient (or the patient surrogate) to refuse treatment (Webb 1997). Undoubtedly, the actions of Dr. Jack Kevorkian made the discussion of the right to die even more controversial when he publicly participated in assisted suicides in the state of Michigan in the 1990s. Because of these controversial cases, groups concerned with the care of individuals at the end of their lives struggle to reach a consensus regarding appropriate care during this period.

Advanced Directives

Advanced directives, covered under the Patient Self-Determination Act, facilitate the control pa-

tients have during the final days of their lives. Through advanced directives, one can provide directions, in advance of impairment, specifically to guide a physician in making medical decisions (Pietsch 2000). Influenced by improved medical technologies in the 1950s, the advent of advanced directives came when a push to make it legal for medical personnel to withhold unwanted treatments resulted in states passing laws regulating end-of-life medical decisions (Lens and Pollack 2000). The primary mechanisms of translating the concept of self-determination into these laws are advanced directives, including living wills and durable powers of attorney.

Activated when individuals become incompetent to make medical decisions, a living will and a durable power of attorney protect the patient's wishes about life-prolonging measures. When designated in a will, family members can make health-care decisions for individuals who fail to execute a living will or a durable power of attorney (Lens and Pollack 2000)

Funerals

Lavish in Victorian times, funerals in the twentieth century, especially after World War II, have taken on a simpler form (Pleck 2000). Designed to show love and respect to the dead, the ritual of funerals is specific to each culture. Planning for a funeral before death is difficult, but it eases the burden experienced by families after death. A wide range of options in funeral arrangements is available, and an early discussion of the arrangements ensures that the ceremony will meet the needs of the family and carry out the wish of the individual who dies. Because funerals can be costly, early planning is also needed to reduce the burden experienced by the family after death.

Wills

Early planning for the disposition of property and estates also reduces anxiety for family. A will is a legal document that contains a statement of how someone wants his or her property dispersed upon death (Prudential Planning 2001). Provisions for consideration in wills include guardianship of children, the creation of trusts (to fund education or long-term care), and the naming of an executor (personal representative after death). Without a will, estate settlement can be costly for the beneficiaries of the estate (Prudential Planning 2001).

Challenges Facing the Family

Few individuals discuss death and the end-of-life period, making it difficult or impossible for family members to know the wishes of their loved ones at life's end and to know what types of assistance they need as family caregivers. Obtaining advanced directives of the kinds discussed above is certainly helpful, but there are still challenges that need to be taken into account.

Cultural Considerations

The placement of modern death within the context of a medical model hinders the consideration of factors associated with the vast differences among cultural groups and, within these groups, the prescribed structure that gives death meaning for the group and makes it more difficult to take into account the prescribed structure that gives death meaning for each group (Braun et al. 2000). Therefore, families and patients may find it difficult to make their needs and wishes understood, yet communication to gain an understanding of the meaning of death for the people involved is key to improving quality at the end of life. Educational limitations of physicians in end-of-life care affect their ability to discuss the end-of-life period with patients and families, to understand cultural differences among populations, and to learn to listen to patient and family preferences (Glaser 2000). Obtaining assistance from spiritual and lay leaders within the culture of the people involved is an essential component in end-of-life decision making. The use of these community resources also helps the family in the process of caregiving.

Some Challenges in Caregiving

Family caregivers may or may not be prepared to meet the needs of caring for a dying family member. Hospice is one choice to assist family caregivers at this difficult time. However, a patient must receive a written diagnosis from a physician stating that she has six months or fewer to live in order to qualify for a hospice benefit from Medicare (Gwinn 2000). It is of course difficult to be certain that the patient will die within six months (Finucane 1999), and chronic diseases often have life expectancies of longer than six months; such problems often inhibit physician referral to hospice (Gwinn 2000). If the physician defers providing the required diagnosis, patients are unable to take advantage of the full hospice

benefit from Medicare. Even when patients are able to get referrals, barriers to hospice use may involve families with knowledge deficits and misconceptions about the use of hospice (Johnson 1999) and who associate hospice with giving up hope. Even with hospice, the transition to death is difficult, because of an overwhelming desire on the part of the patient and family for death not to occur (Finucane 1999). It is essential for professionals to assist families during this transitional period.

Professional Implications

Professionals must be prepared to discuss death and the end-of-life period with patients and families to ease the transition into death. Difficult decisions related to death and dying require that professionals assess their own bias toward death and work toward becoming more able to facilitate the decision-making process. Use of an ecological framework is one option for easing the burden associated with the decision-making process and with discussions of death in general.

Human Ecology

Family ecology theory, as a subset of the human ecology model, provides a framework for understanding the needs of families facing end-of-life decisions. The family ecosystem structure acknowledges the diverse characteristics of families in respect to structure, ethnic origin, life stage, and socioeconomic status, and the attributes unique to individuals and family members. If these attributes, including needs, values, goals, and resources, are considered during end-of-life decision making, a professional can help families make use of information in such a way that the end-of-life period will see the patient's quality of life maintained and that death will come with dignity (Bubolz and Sontag 1993).

Professional awareness of family paradigms and an understanding of boundary regulation within families, of the dominant attitudes and values within families, and of the process for exchange and management of information are essential when helping families during the final days of one of their members (Constantine 1986). Although invisible, paradigms provide a template for understanding the expressed behaviors and characteristics in a family's way of dealing with life (Constantine 1986).

Educational Needs

Professionals working with families as they cope with the end-of-life period need education related to death, cultural perspectives on death, policies related to the end-of-life period, and ecological approaches and family paradigms. Understanding the interaction of families with their environments is an essential component in assessing the educational needs of families as they make decisions at the end of life.

Policy development must include definitions of family in a cultural context that recognize the influence of ethnicity, religion, and family and regional differences in end-of-life decision making. Identification of gaps in family policy, such as a focus on the needs of children but not on the needs of the aging adults within the same family, may ease some of the burdens associated with end-of-life decisions. As advocates, family professionals must promote the use of an ecological perspective in the development of end-of-life policy; that perspective recognizes the heterogeneity of family forms and the full range of interaction of the family within the community and nation (Monroe 1995).

The aging of America will place all families in the position of making end-of-life decisions. Future research in this area should focus on qualitative studies that describe the cultural differences as well as the similarities in what families experience when a member is dying and disseminate the knowledge to professionals who care for families and legislators who design family policy. The use of ecological models and family-related theories will benefit those individuals at the end of life, their families, and the communities in which they live through an understanding of family diversity and all the interactive relationships involved.

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See also: Bereavement; Death: A Family Perspective; Living Arrangements for Elders; Suicide in Older Adults

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Energy: Standards, Codes, and Labels

As individuals and families interact with their environment, they are faced with rules and policies that govern or guide their behavior. Home energy codes and standards, incorporated to ensure safety and performance levels, are among these guidelines. To assist consumers with their decision-making behavior regarding energy-related products, energy labels have been devel-

Based on standard U.S. Government tests

ENERGYGUIDE



REFRIGERATOR-FREEZER
WITH AUTOMATIC DEFROST
WITH BOTTOM-MOUNTED FREEZER
WITHOUT THROUGH-THE-DOOR-ICE SERVICE

AMANA APPLIANCES

ARB2217C*
CAPACITY: 21.9 CUBIC FEET

Compare the Energy Use of this Refrigerator with Others Before You Buy

This Model Uses

520 KWH/YEAR



ENERGY STAR
A symbol of
energy efficiency

Energy use (kWh/year) range of all similar models

**Uses Least
Energy**

511

**Uses Most
Energy**

572

kWh/year (kilowatt-hours per year) is a measure of energy (electricity) use.
Your utility company uses it to compute your bill. Only models with 20.5 TO 22.4
cubic ft and the above features are used in this scale.

**Refrigerators using more energy cost more to operate.
This model's estimated yearly operating cost is:**

\$ 43

BASED ON A 2001 U.S. GOVERNMENT NATIONAL AVERAGE COST OF 8.29¢ PER KW
FOR ELECTRICITY. YOUR ACTUAL OPERATING COST WILL VARY DEPENDING ON YOUR
LOCAL UTILITY RATES AND YOUR USE OF THE PRODUCT.

Important: Removal of this label before consumer purchase is a violation of Federal law (42 U.S.C. 6302).

Part No. 12710005

oped that identify the most energy-efficient products available.

Residential energy standards, codes, and labels are established guidelines for energy performance used in the production and purchase of a home and its equipment. Energy standards are documents prepared by recognized standard-setting organizations that prescribe methods and materials for energy efficiency. Standards act as a technical base for codes. Codes are legal instruments adopted within a political jurisdiction that prescribe acceptable features of structural design and/or performance for energy usage. Energy codes are adopted by state and local governing bodies to designate level of efficiency desired for homes in that locality. Energy labels are placed on homes and home equipment to assist consumers in their purchasing decisions. EnergyGuide and Energy Star are two such labels.

Appliance and Equipment Energy Standards

The first appliance standards to establish minimum energy efficiency were introduced by many states in the late 1970s and early 1980s. Appliance manufacturers, facing the burden of complying with differing state standards, supported the development of federal energy standards. In the late 1970s, the Energy Policy and Conservation Act (EPCA) required the U.S. Department of Energy (DOE) to develop test procedures for residential appliances that would indicate maximum improvements in energy efficiency that were technologically feasible and economically justified. The National Appliance Energy Conservation Act set the first national efficiency standards for appliances in 1987. The act called for improvements in water use, insulation, and motor efficiency, and the incorporation of electronic ignition for gas appliances to replace the standing pilot light. The act also established a schedule for regular updates to these standards that would reflect new product designs or technologies (Energy Efficiency and Renewable Energy Network 2001b). Current standards have already saved consumers \$1.9 billion and will ultimately save \$58 billion in energy costs over the lifetime of appliances installed between 1990 and 2015 (Energy Efficiency and Renewable Energy Network 2001a, 3).

Model Energy Code

The Model Energy Code (MEC), as of 1998, is published and maintained by the International Code

Council (ICC) as the International Energy Conservation Code (IECC). It lists energy efficiency criteria for new residential and commercial buildings, as well as additions to existing buildings. The MEC was first published in 1983 and has been amended periodically, with the latest edition appearing in 1998. Different states adopt different versions of the code because they have different schedules for code updates (Office of Building Technology, State and Community Programs 2002). States may also add their own amendments.

EnergyGuide Labels

The EnergyGuide label is a bright yellow label with black lettering found affixed to certain types of new home appliances where large differences in energy use exist between similar products on the market. The Federal Trade Commission's Appliance Labeling Rule of 1980 is a mandatory program that requires that the label be placed on all new refrigerators, freezers, water heaters, dishwashers, and clothes washers. The EnergyGuide label is not required on microwave ovens, electric ranges, clothes dryers, on-demand water heaters, and portable space heaters, but labels could be required in the future (Energy Efficiency and Renewable Energy Network 2001c).

The EnergyGuide label will not tell you which appliances are the most efficient, but it will allow you to compare annual energy consumption and operating costs. In the center of the label is the estimated yearly electricity consumption shown in kilowatt-hours (kWhs), along with a scale designating the operating costs of similar products from the least to most energy used. The kWh figure is based on average usage assumptions, and actual energy consumption may vary depending on the appliance usage and consumer habits. The labeled model is indicated by an arrow pointing to its position among similar models on the scale. This allows the consumer to see how this product compares to similar products on the market or products in the store (Energy Efficiency and Renewable Energy Network 2001c). Labels for appliances that may use either gas or electricity to heat water for operation, like clothes washers and dishwashers, also provide a comparison of estimated cost of operation between the two fuels. This estimated cost is based on national average energy costs.

Air conditioners, heat pumps, furnaces, and boilers are also required to carry an EnergyGuide

label to help consumers compare one model to another, but these labels differ somewhat from the appliance labels. Because the operating costs for these products vary greatly from one home to another depending upon the climate, family size, and other factors, energy use cannot be estimated (Wilson, Thorne, and Morrill 1999). Instead, these labels include an energy efficiency rating, and the type of rating varies by product. Some of the ratings used are as follows:

AFUE: Annual Fuel Utilization Efficiency. Used to compare gas furnaces. Represents the percentage of heat going into the house out of the total burned.

HSPF: Heating Season Performance Factor. The heating system performance of an electric heat pump based on standard heating load and outdoor climate over a season.

EER: Energy Efficiency Ratio. Energy efficiency of electric air conditioning equipment based on laboratory tests.

SEER: Seasonal Energy Efficiency Ratio. Seasonal cooling efficiency of a heat pump in its cooling mode, based on a standard cooling load and outdoor climate during a cooling season.

COP: Coefficient of Performance. Ratio of a heat pump's BTU heat output to the BTU electric input based on laboratory tests.

Energy Star Labels

The Energy Star labeling program was introduced in 1992 by the United States Environmental Protection Agency (EPA) to identify and promote energy-efficient products in an effort to reduce carbon dioxide emissions. The Energy Star label is not mandatory, so EPA relies on the voluntary cooperation of manufacturers in having their products tested and retailers in displaying the labels in stores.

The use of more energy-efficient products means less electric production and reduced levels of carbon dioxide and other emissions from power plants. EPA partnered with the Department of Energy (DOE) in 1996 to promote the Energy Star label, with each agency being responsible for particular product categories. Energy Star covers new homes, many building products, residential heating and cooling equipment, major appliances, office equipment, lighting, consumer electronics,

and more (Environmental Protection Agency 2001).

Consumer products that carry the Energy Star label are among the most energy-efficient products in their category, with energy performances that exceed current standards established for that product. These products also have lower standby energy losses. Energy Star homes are houses constructed with energy-efficient features and equipment that make the structure at least 30 percent (Wilson, Thorne, and Morrill 1999, 4) more efficient than the current International Energy Conservation Code (formally known as the Model Energy Code) or state energy codes (Kibert 1999).

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See also: Consumption, Ethical; Energy Efficiency in the Home

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Energy and Home Usage

The home serves as a microenvironment for individuals and families, and the use of energy helps these households heat and cool their surroundings, prepare food, and conduct numerous other day-to-day activities. Adopting effective energy

management and sustainability practices, as well as incorporating renewable energy sources, can help families curb household energy costs while reducing natural resource use and the polluting effects of fossil fuels.

Homes have improved in energy efficiency over the years, but today's homes contain more energy intensive equipment than homes of the past. The largest portion of home energy is used for home heating and cooling, followed by appliances. Use of renewable energy sources and sustainability strategies are helping to lessen the impact of energy use on the environment and preserve energy resources future generations. Consumer energy decisions at home are critical to the success of a long-term energy use strategy.

History

U.S. homes constructed prior to the mid-1890s lacked many energy features found in homes today. They were not tightly sealed, lacked insulation, and contained very simple, inefficient equipment. Most homes were heated by wood and coal. The first oil well in the United States was drilled in 1859, but oil remained unused by American homes for many years, due to a lack of technology to employ and distribute it. Because of this, American households continued to use wood and coal as their main energy sources, well into the twentieth century (Florida Power and Light 2001). Today, natural gas is the primary fuel for home heating.

In 1907, only 8 percent of the nation's homes had electricity. By 1925, over half were electrified, although many rural farmhouses were not connected to the grid until after World War II (Florida Power and Light 2001). The introduction of the Rural Electric Cooperatives was greatly responsible for bringing electricity to the rural areas.

Household Usage

Households in the United States spend an estimated \$110 billion each year to power home equipment such as lights, appliances, water heaters, furnaces, air conditioners, and lights (Energy Efficiency and Renewable Energy Network 2001b, 1). That equates to about \$1,329 per household. The average home's energy consumption can be divided as follows: 46 percent—heating and cooling; 24 percent—lighting, cooking, and other appliances; 15 percent—water heating; and 15 percent—refrigerators and freezers (Energy Effi-

ciency and Renewable Energy Network 2001a, 1). These proportions have changed over the past two decades. More energy-efficient homes and heating equipment have decreased the percentage of energy used for space heating. Air conditioning percentages have also dropped slightly. (Energy Information Administration 2001a). Despite the fact water heaters and appliances have steadily increased in efficiency, the proportion of the home energy budget they use has increased, because households today use more appliances and electric devices.

The primary heating fuel of over half the households in the late 1990s was natural gas; its use remained fairly constant during the 1980s and 1990s at 55–52 percent. Electric heating has nearly doubled during those same decades, from 16 to 30 percent; however, liquefied petroleum (LP) gas (4 percent) and wood (2 percent) usage remained the same. Oil and kerosene use decreased from 22 to 10 percent (Energy Information Administration 2001a).

Slightly over half (55 percent) of U.S. homes use forced-air furnaces for heating, and their use has increased only slightly (from 50 percent) over the past two decades. Steam or hot-water systems have decreased in popularity from 18 to 13 percent, while heat pump use has increased from 2 percent to 10 percent (Energy Information Administration 2001a).

Renewable Energy

Much of the energy used for our homes originates from fossil fuels such as coal, oil, and natural gas. Fossil fuels are nonrenewable, drawing on finite resources that will eventually be depleted. These fuels are known to contribute to environmental problems. Renewable energy resources, like wind and solar, will never run out and provide a cleaner source of energy.

The use of sunlight, or solar energy, to heat homes is not a new development in our nation. Early Native Americans of the West built their homes and villages on the south sides of cliffs to take advantage of the warm winter sun and to protect from the cold northern winds. Today we can also heat our homes with the sun, using active or passive solar heating methods. The sun can also be used for solar cooling, hot water heating, and electricity generation (called photovoltaics).

Other renewable sources available to consumers are geothermal, hydro, and wind energy.



Solar panels on a home (Michael Siluk)

Homes can use geothermal energy, heat from the Earth's interior, to heat their homes or to provide a heat source for geothermal heat pumps. Although most wind energy is used commercially to produce electricity, some residential structures use wind as their electric generation source. Small, private hydro (water) generation systems could also provide electricity for a home.

Energy and the Environment

Many energy use decisions impact the environment. Some of the biggest environmental problems linked to energy are acid rain, oil spills, and global warming, all of which develop from the transport and burning of fossil fuels. Carbon dioxide is the main contributor to global warming, and scientists warn that global warming will increase our earth's temperature. The United States is responsible for one-fourth of the world's carbon dioxide emissions (Wilson, Thorne, and Morrill 1999, 1–2).

Energy use can also impact the environment inside the home. As wood and fossil fuels are burned by home heating systems, indoor air can be depleted, and harmful pollutants can be released. Toxins like carbon monoxide, nitrogen

dioxide, sulfur dioxide, and respirable particles can leak into the home if the heating device is not drafting properly, the chimney is blocked, or the flue is cracked. Carbon monoxide detectors are highly recommended in all homes using combustion equipment.

Molds and mildew can also become a problem. Tighter or better-sealed homes make it more important to use ventilation equipment to remove excess moisture.

Consumers can reduce energy use significantly through their energy product purchasing decisions and the management of energy in their homes. The efficient use of energy in the home and automobile is the most valuable strategy to ensure the economic well-being and future energy supplies of our nation, as well as a cleaner environment (Florida Power and Light 2001). For every kilowatt-hour (kWh) of electricity not used, over two pounds of carbon dioxide would be saved from going into the atmosphere (Wilson, Thorne, and Morrill 1999, 1).

Sustainability

A comprehensive approach to managing and conserving our resources and protecting our natural

environment is called sustainability. The aim of sustainability is to live within the limits of the goods and resources provided by the ecosystem without depleting these elements for future generations (Kibert 1999).

The goal of sustainable building design, also called green building, is to design a building that is resource and energy efficient, comfortable, healthy, functional, and long-lived, one that promotes the well-being of its occupants and the earth (Barnett and Browning 1995, 13). Such buildings minimize energy consumption through their design, structure, and equipment.

Consumer Energy Management

Consumer decisions can greatly impact home energy usage. Energy management involves designing strategies to maximize efficiency in energy use. A comprehensive plan begins with building in energy efficiency through the design, structure, and equipment in a home and incorporating energy-efficient landscaping. Without proper energy management, however, these homes cannot perform at maximum efficiency. Energy management can also include conservation or cutting back energy use. Consumers can use the following steps to manage home energy efficiently.

Heating

- Set the thermostat at the lowest temperature comfortable to you. A setting of 68 degrees is recommended for the winter.
- Caulk and weather strip where needed.
- Use programmable thermostats to help manage temperature changes.
- Keep heating equipment maintained and filters clean for efficiency and safety.
- Cut the temperature levels in unused rooms.
- Install storm windows.
- Use heavy window coverings on cold windows at night.
- Allow the winter sun in during the day.

Cooling

- Use blinds and draperies to block unwanted sun in the summer.
- Open windows to take advantage of natural breezes.
- Use ceiling and other fans to provide comfort on warm days.
- Keep cooling equipment maintained.

Set the thermostat at a comfortable, but not overly cool temperature.

Appliances

- Keep refrigerator condenser coils clean.
- Don't keep the refrigerator door open longer than necessary.
- Opening the oven door during cooking can lower the temperature 25 degrees.
- Wash full loads of dishes and clothes, or use the appropriate water level for smaller loads.
- Don't rinse dishes before placing them in the dishwasher.
- Keep refrigerator temperatures at 35–38 degrees for fresh food and 1–4 degrees for frozen food.

Lighting

- Turn out lights when you leave a room or area.
- Use natural light when possible.
- Only turn on the lights that are needed.
- Replace bulbs when they become darkened.
- Replace incandescent lights with fluorescent when possible.

Hot Water

- Take short showers instead of baths, and install low-flow shower heads.
- Do not rinse dishes under continually running hot water.
- Insulate the water heater and hot water pipes in unheated areas.
- Lower the water heater temperature to 120 degrees unless your dishwasher does not have a booster heater when 140 degrees is needed.
- Use cold water for washing clothes when appropriate and always use a cold-water rinse.

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See also: Air Quality; Consumption, Ethical; Energy Efficiency in the Home; Energy: Standards, Codes, and Labels; Household Appliances, Shopping for; Indoor Air Pollution; Sustainable Development

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Energy Efficiency in the Home

The state of the earth’s environment and its natural resources are impacted by how households and families use energy in the home. This environmental impact, along with home comfort and manageable energy costs for a family, depends to a large extent on the decisions consumers make related to the energy efficiency incorporated into their homes through design, construction, and equipment.

The best way to reduce home energy use is to build energy efficiency into the structure and its equipment. Energy efficiency means more than energy conservation. An energy-efficient home is built with materials, construction methods, lighting, and equipment that help the home function at minimal levels of energy intensity, while managing natural elements, such as the sun and wind.

Energy-efficient homes are more comfortable because of even temperatures and fewer drafts. Energy conservation and energy management, on the other hand, mean saving energy by either cutting back on the amount of energy used or following usage patterns that help promote efficiency.

When evaluating energy efficiency, you must consider life-cycle cost, which is the sum of the purchase price and the cost of energy over its lifetime. While some energy-efficient products and materials cost more initially, the amount of money they save over their lifetime, because of reduced operating costs, will more than make up for the higher initial cost. The actual energy use of a home, however, is controlled by the actions and decisions of the occupants.

Incorporating energy efficiency requires an understanding of heat transfer. The goal is to keep heat in during the winter and out in the summer. Heat can be transferred in four ways:

- Conduction—heat moving through a material (wall or window)
- Convection—heat moving by currents in the air (furnace fan)
- Radiation—heat radiated by warm objects to colder objects (wood stove)
- Infiltration—heat moving through cracks and openings (leaky windows)

The energy efficiency of a home can be evaluated through an energy audit. These audits include a complete inspection by an energy management professional and may also involve the use of a blower-door test or infrared camera. The blower-door test will identify air leaks, and the infrared camera can detect heat loss from inadequate insulation. Energy Star and other home energy-rating programs certify homes that exceed the efficiency set by the Model Energy Codes (minimum requirements for energy-related features of new buildings).

Orientation and Landscaping

Proper house orientation is essential for controlling the thermal effects of the sun and wind. Position the house on the land such that the long sides of the structure face north and south and the narrow ends face east and west. Windows on the southern exposure will capture the low winter sun to help warm the home. Overhangs will keep out

the high summer sun for more efficient cooling. Fewer windows on the north side will lessen the effects of cold north winds. Minimizing the number of east and west windows will limit heat gain on these sides during the summer. Design the landscaping around the house to block cold winter winds and allow summer breezes. Landscaping helps shade the home in the summer and provides a cool surface around the home to cut heat absorption into the earth and heat reflection onto the house.

House Envelope

Energy codes require building contractors to construct homes with a combination of design features, structural features, and equipment that makes homes energy efficient. The house envelope, which includes the foundation, walls, and roof, can be made more energy efficient by sealing leaks and improving insulation. It is much easier to incorporate these measures at the time of construction, but the efficiency of older homes can be improved through retrofits.

Sealing the home can stop air leakage in and out of the house. Older homes may have air coming in and out at a rate of 1.0 air changes per hour, whereas newer, more energy-efficient homes may have 0.3–.5 air changes per hour (Elder 2000, 33). Caulking and weather stripping can be used to seal leaks (infiltration) at the foundation and around all openings in the walls, including doors and windows.

Walls, roof, foundation, and floors above unheated basements or crawl spaces should be insulated to optimum levels to cut conductive heat transfer. Insulation is rated in R-value, which measures resistance to heat flow. The higher the R-value, the more insulating the material. As an example, the recommended insulating levels for a home may be: attic, R38, walls, R11, and floor, R19. These recommendations will vary by climate. In addition, proper attic ventilation is essential to remove extra moisture and heat in this area.

Windows and doors are important factors in the overall efficiency of a home; one-third of the heat loss in older homes is through these openings (Wilson, Thorne, and Morrill 1999, 17). Insulated exterior doors are recommended. New super windows with low-emissivity (low-e) coatings, with either argon gas or Krypton gas have superior R-values (R 4.5–12) compared to the standard dou-

ble-paned (R 1.9) or older single paned (R .84) window (Barnett and Browning 1995, 47). Low-coatings involving silver or tin oxide are placed on one or more panes of glass (many times called glazing) or film. This coating allows short-wave visible light to enter, but prevents long-wave radiation (infrared radiation, or heat) from entering or leaving. Wood and vinyl frames, or insulated metal frames with a thermal break have the best thermal properties. The overall window efficiency is usually rated in U-values, which is the amount of heat allowed through. The lower the U-value the better. Adding storm windows will increase insulating value.

House wraps and vapor barriers also contribute to energy efficiency. A house wrap is a special sheeting material that completely covers the exterior of the structure just beneath the exterior finishing material or siding and serves as an air barrier to keep unwanted wind from penetrating the wall, while still letting the house breathe. A vapor barrier is a continuous plastic sheeting placed on the warm side of the insulation in the walls and ceiling to keep indoor moisture away from insulation.

Lighting

An efficient lighting plan begins with incorporating as much natural light, or daylighting, as possible, adding artificial light only when needed. The efficiency of electric light sources is measured in lumens per watts of energy. A lumen is a measure of light output. Incandescent lamps (also called bulbs), the most common light source used in homes today, are very popular because of their low cost, versatility, and warm light output. Standard incandescent lamps, however, are inefficient, using 90 percent of their energy to produce heat and 10 percent to produce light. Halogen and reflector lamps are more efficient types of incandescent bulbs, but halogen lamps are extremely hot and can be dangerous. Fluorescent tubes and compact fluorescent lamps (CFL) are among the most efficient light sources. The compact fluorescent lamp is shaped into a compact form and attached to a base that can be screwed into a standard lamp socket. Fluorescent light sources, compared to incandescent bulbs, use a quarter to a third as much energy, last 10–50 times longer, and produce less heat (Wilson, Thorne, and Morrill 1999, 169–177).

Appliances and Equipment

When purchasing home appliances and equipment, consumers should use the EnergyGuide and Energy Star labels to help find energy-efficient models. EnergyGuide labels for kitchen appliances and water heaters provide an estimated annual kilowatt-hour usage. Heating and cooling equipment labels will include a rating, such as the Annual Fuel Utilization Efficiency (AFUE) and the Heating Seasonal Performance Factor (HSPF), to indicate the degree of efficiency for comparison purposes. The higher the rating, the more energy efficient the system. Appliance energy standards have mandated that manufacturers produce more energy-efficient products.

The efficiency of kitchen appliances has improved greatly in recent years. Refrigerators and freezers today are three times more efficient than those produced thirty years ago because of more efficient compressors and increased insulation. Clothes washers and dishwashers use less water because of improved motors and design (Wilson, Thorne, and Morrill 1999, 137).

Heating and cooling systems vary from over 100 percent efficient to a negative efficiency. The type of system and fuel make the difference. For example, electric resistance heating, such as baseboard heating, is said to be 100 percent efficient because all the electricity is transformed into useful heat. An electric heat pump that serve as both a heating and cooling system, can be over 100 percent efficient in the heating mode because it draws heat from other sources, such as the outside air or the ground.

In the production of electricity, however, two-thirds of the input energy is lost during the process (Mills 2001). This loss explains why electricity is more expensive to use than direct fuels like natural gas.

Standard fireplaces have a negative efficiency; when air heated by the central heating system is drawn up the chimney, more heat is lost than is produced by the fire. Fireplace efficiency can be improved with the use of outside air intakes, recirculating devices, fireplace doors, tight dampers, and woodstove inserts. Woodstoves and pellet stoves (stoves that use compressed cellulose pellets) are more efficient wood-burning devices. With all wood-burning devices, it is essential they be installed properly and maintained appropriately so that toxic gases do not come back into the home.

Gas furnaces have been improving in efficiency and will vary from 55–65 percent efficient (AFUE) for older models to 82–97 percent for new models. Present energy codes require a minimum of 78 percent efficiency, and the minimum Energy Star efficiency is 90 percent (Alliance to Save Energy 2002).

In addition to the type of unit and fuel, proper installation and maintenance are critical for maximum efficiency and safety of a heating or cooling system. Ductwork that delivers the heated and cooled air must be sealed to prevent leakage. It is estimated many homes lose as much as 15–20 percent of the conditioned air through openings in the ductwork (Wilson, Thorne, and Morrill 1999, 84). Filters should be changed regularly to protect the equipment and clean the indoor air. A periodic maintenance check by a qualified professional will keep equipment operating safely and efficiently. Improperly maintained gas systems, like wood systems, could put toxic substances into the indoor air.

A little-known factor that impacts the efficiency of some home electronic equipment and small appliances is standby loss. Standby loss is created because these devices draw electricity not only when they are in use, but also when they are turned off. Equipment such as televisions, video recorders, cable boxes, and cordless products use standby electricity to support instant on capacity, remote controls, digital clock displays, and other features. It is estimated the average household leaks 50 watts of power continually, equating to about 440 kilowatt-hours per year. Nationwide, this loss amounts to about \$3 billion per year (Wilson, Thorne, and Morrill 1999, 190). The hope is that the same kind of regulation that has increased the efficiency of appliances will be put in place to curb this loss.

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See also: Consumption, Ethical; Energy and Home Usage; Energy: Standards, Codes, and Labels; Household Appliances, Shopping for; Sustainable Development

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Environmental Justice

Although issues of environmental justice can be traced back to ancient Roman laws and codes, the 1970s began a resurgence of movements related to environmental conditions and their impact on humans. This revival has continued throughout the 1990s and into the twenty-first century. Interestingly, the issues of environmental justice addressed vary according to the involvement of a particular interest group. The primary interest groups involved with environmental justice issues are activists, researchers, and lawyers. Corporate leaders and politicians also have exerted considerable influence on environmental problems and decisions about how to deal with them (Cable, Hastings, and Mix 2002; Simon 2000).

Operational Definitions

What is environmental justice? In the most general sense, environmental justice is defined as the broad conceptual framework used by organizations and groups that seek and promote social justice and equity in the face of the social inequities implicit in environmental policies (Rios 2000). More specific terms are environmental racism and environmental equity. (Fritz 1999; Rios 2000). Environmental racism is operationally defined as deliberate or intentional decisions that have been made to place hazardous waste sites, incinerators, landfills and industries producing air pollutants in poor communities (Rios 2000). Environmental equity is a term frequently used by regulatory agencies which accept the proposition that procedural equity exists in the current system and that it is

impossible to make environmental decisions that involve no risk to anyone. According to this way of thinking, each interest group must lobby for what it wants, and the result will be equity (Rios 2000).

Movements and Legislation Addressing Environmental Justice

Environmental justice issues and movements are rooted in environmental protection and civil rights. The United Church of Christ's Commission for Racial Justice is an example of a civil rights initiative that has focused on uncovering and connecting racial disparities in the location of hazardous waste sites. And in 1991, the first National People of Color Environmental Leadership Summit, organized by the Commission for Racial Justice, was held. Issues of the movement broadened from a specific focus on antitoxins to public health, worker safety, land use, transportation, housing, resource allocation, and community empowerment. The U.S. Office of Environmental Equity was created in 1992, the result of a discussion of environmental racism by representatives of the U.S. Department of Health and Human Services, the head of the Environmental Protection Agency, and a group of academics (Cable, Hastings and Mix 2002; Perhac 2000; Williams 1999).

In 1994, President Clinton signed Executive Order 12898, addressing environmental justice for low-income and minority populations and reinforcing Title IV of the Civil Rights Act of 1964. Title IV prohibits racial discrimination in the practices of programs receiving federal funding and in federal agencies, and ensures that people will not be denied participation or benefits because of race, color, or national origin. This executive order also was created to develop methodologies for better data collection and to encourage affected populations to participate in impact assessment. Another outcome of this action was the formation of the National Environmental Advisory Council to serve in an advisory capacity to the Environmental Protection Agency on methods of achieving environmental justice (Cable, Hastings, and Mix 2002; Perhac 2000).

Later in 1994, one of the members of the National Environmental Advisory Council established the Environmental Resource Center at Clark Atlanta University for the purpose of bringing together community activists and academic researchers. The center acts as a clearinghouse, shar-

ing information on research and policy on a broad range of issues central to environmental problem solving and decision making, and provides education to support the expansion of knowledge related to environmental issues (Cable, Hastings, and Mix 2002).

Environmental Justice within a Human Ecological Framework

A common human ecological thread is woven throughout the environmental justice literature, which focuses on analysis of the interaction and interdependence of human and social systems with ecological systems. Shirley Zimmerman (2001) gives a good account of the elements that must be considered in any understanding of the problems associated with achieving environmental justice:

The institutional perspective, based on the structure of government, the values and norms that underlie this structure, and the legitimacy, authority, and universality of policy decisions

Political-cultural theory, dealing with values, attitudes, and habitual behaviors constrained and influenced by the perceptions that people hold toward government and each other

Interest-group theory, focused on the balance and imbalance of different groups in influencing government action

Elite theory, focused on the importance of hierarchy, and the position, influence, and power of the elite

Systems theory, focused on outputs, links, interactions, and interdependencies among individuals, families, and aspects of the environment such as climate, natural resources, cultural norms, values, economy, technology, and so on

Keeping the elements Zimmerman lays out in mind, it's possible to make a meaningful comparison between those involved in mainstream environmental movements and those who are affected by environmental degradation. Demographically, the former group is predominantly White, upper middle class, well educated, politically involved and astute, and focused on the national level of environmental problems. Frequently, this orientation

does not adequately address the social, political, and economic consequences for the poor of environmental decisions by which they are most affected. The poor typically include people of color, poor Whites, or members of female-headed households, who are characterized by political and economic weakness, as well as by exposure to high environmental risks. The use of protest is a primary strategy for influencing the political process, yet those who are most apt to suffer from environmental decisions have the least ability to engage in effective protest (Clay 1999; Fritz 1999; Cable, Hastings, and Mix 2002; Rios 2000).

Major functions of the family involve valuing, goal setting, decision making, acting, and interacting. Environmental inputs to the system are matter/energy and information. Environmental outputs include human capital, goods, and services. Outputs that are influenced by the manner in which inputs are translated and transformed within the system. Information, feedback, and responses are a necessary part of the system. They aid in the self-regulation and self-direction of individual, family, and community behaviors.

Hampered at the outset, individuals, families, and communities that are the victims of environmental injustice are typically unsuccessful in addressing issues of environmental justice; they operate from a base of powerlessness, suffering from economic, social, and political disparities that confine their effectiveness within established, narrow boundaries. Further, they often hold a basic mistrust of government. That is, their understanding of the value of the political process differs from those in the mainstream of the environmental movement and other community-based interest groups, and thus they tend to be skeptical about the efficacy of environmental actions.

The voices of the disenfranchised have not been heard and have not often succeeded in influencing political decision making. For the disenfranchised, the negative impact of environmental degradation and environmental health outcomes continues, while knowledge of laws, rules, and organizational structures—which is contained in documents filled with technical, culturally insensitive language—remains limited. The results of these inputs into family and community environments are not positive, disabling the potentially constructive interaction and feedback between human society and the larger ecosystem.

Although environmental interest groups are mobilized, the elite—often representing corporations—hold a position of influence, power, and an economic base that have impeded equitable participation in environmental decision making for marginalized social groups (Simon 2000). If the transformation of individuals, families, and communities, and the growth of human capital and an improved quality of life are expected from environmental inputs, a holistic or systems approach is crucial.

The future of political actions, locally, nationally, and globally, depends on the clarity of collective voices (Cable, Hastings, and Mix 2002). Lawyers, activists, researchers,, corporate leaders, government officials and all stakeholders must unite in a coherent manner. Furthermore, the dominance of a largely capitalistic, profit-driven agenda, implemented at the expense of environmental justice, must end or be significantly minimized in order to successfully deal with the moral and critical health dilemmas created by environmental degradation and injustices. By doing this, advocates for environmental justice can turn the many environmental challenges now facing our most vulnerable communities into promising futures.

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See also: Bubolz, Margaret M.; Consumption, Ethical; Environmental Movement in the United States and People of Color; Environments of Children; Social Justice; Sustainable Development

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Environmental Movement in the United States and People of Color

Until just a few years ago, the literature describing the environmental movement focused exclusively on the ideas and work of White men. Careful investigation has revealed, however, that all segments of U.S. society, people of color, poor and working class people, and White women, have been affected by environmental problems and have been involved in addressing them. The human ecology approach values a holistic understanding of significant social issues, taking into account human relationships with other humans as well as with the natural environment. This entry draws on recent research to begin to fill in information gaps regarding human roles in environmental history, critical in assessing the continuing evolution of the human-environment interface.

From its inception until near the end of the twentieth century, the story of the environmental movement in the United States centered on the preservation of nature, understood to mean wild, untrammeled, outdoor spaces, and more recently, nonhuman, endangered species of animals such as the rhinoceros and the spotted owl. The histories of these efforts chronicle the philosophies and actions of a number of well-known middle- and upper-class White men such as Henry David Thoreau, President Theodore Roosevelt, John Muir, and Aldo Leopold. As Europeans swept across the United States in the rush to settle the "vacant" land, such men sought to protect uninhabited wilderness from the depredations of human use and occupation. Furthermore, rapid industrialization and urbanization beginning in the mid-1800s, primarily in the East, gave additional impetus to impassioned pleas for such protection and fears that all would be lost if action to protect wilderness was not taken.

Divided early on, the movement encompassed two camps: the preservationists, who sought to safeguard pristine wilderness, and the conserva-



Cesar Chavez leading a march (Bob Parent/Getty Images)

tionists, who, with a more utilitarian perspective, argued for more limited protection that would allow reasonable human exploitation of nature (such as hunting and logging). Hunters who desired to preserve game animals, waterfowl, and their habitat were among the first conservationists. Theodore Roosevelt and George Grinnell organized the Boone and Crockett Club, an organization devoted to “hunting big game in the wilderness” (Grinnell 1893, 14). This account is interesting and accurate as far as it goes, but it omits much of the story. Virtually every other segment of the growing nation, including men and women who were American Indian, African American, Asian or Latino, working class, and poor, as well as White upper- and middle-class women, were affected by growing, human-induced environmental change and responses to those changes. Their stories are only beginning to be told and incorporated into the history of American environmentalism.

From the earliest days of thought and action associated with environmental conservation in the early 1800s, limited political and economic power made it nearly impossible for the voices of those not involved in the mainstream movement to be heard on the environmental threats that were victimizing them. Threatened with loss of housing

and employment, for example, persons regarded as fungible, second-class citizens by virtue of their skin color or socioeconomic status would risk a great deal by making complaints. Even in the twentieth century when some had the time and money, minorities typically did not participate in “mainstream” environmental groups and causes, because these were viewed as White peoples’ issues with little connection to the lives of people of color (Taylor 1997a). As a consequence, few minority people were active in mainstream environmental groups. Nor did these environmental groups seek to incorporate in their agenda issues relevant to people of color, White women, and Whites of lower socioeconomic status. Thus, it is easy to see why minority women and men living in the United States were not drawn to the environmental movement epitomized by John Muir and Aldo Leopold. People of color confronted many environmental threats, to be sure, but theirs were different from and seemingly invisible to the mainstream environmental movement. They cared deeply about the environment, but it was the one in which they and their families lived and worked. Today, many people of color are engaged in a new branch of environmental activism, called environmental justice. The emergence of this new and vibrant offshoot is

sketched below. In discussing events of the modern era, it may be useful to consider the changing meaning of the term “environment,” since the range of issues brought under the environmental protection umbrella depend on it. Also, the traditional definition reflects a narrow view, focusing primarily on the outdoors and wilderness areas, omitting much that is “habitat” today. As used by many in the field, its definition has been expanded considerably from the early understandings to include indoor spaces and urban spaces. In other words, the environment is everywhere: inside, outside, in the industrial workplace or office, in the city, on the farm, in the home, in the school, on the playground, as well as in national parks and other protected or “natural” areas. Once the definition of environment is extended in this way, the list of problems on the environmental agenda increases significantly, as do the populations of persons affected by them and involved in exposing and solving them.

U.S. Environmental History: A Tapestry of Many Different Colored Strands

The vast tracts of land for which protection was sought beginning in the mid-1800s were inhabited by numerous indigenous groups who had lived in those areas for thousands of years. The relatively mobile and low-impact lifestyle of many of the hundreds of American Indian groups who occupied virtually every habitable place may have created the illusion in the minds of some European Americans that these spaces were uninhabited; by others, their presence was dismissed as illegitimate or insignificant. The government devised and launched a variety of programs to remove or relocate them as the settlers pushed westward to open lands for settlement and, subsequently, environmentalists aspired to preserve wilderness. Hundreds of treaties were made (and later broken) promising lands further west (or limiting the rights and space of groups located in the West). Some years later, many of those reserved lands were deemed necessary for the creation of national parks, and other uses, and the Indians were moved again, or, in “civilizing” programs, they were forced to disperse themselves into White communities, where they typically clung to society’s bottom rung.

As each of today’s other marginalized groups arrived in the United States, they faced different circumstances, but a common thread could be

found; like the American Indians, they were treated as second-class citizens who could be used to help build the young and expanding economy in low-paid employment, in jobs seen as hazardous and otherwise undesirable to Whites. Accordingly, for example, Black slaves worked as forced agricultural and household labor. After the Civil War, about half remained in agricultural employment but many migrated to the North, seeking work (Taylor 1997a, 26). What they often secured were dangerous, unskilled positions in factories. As racial prejudice and segregation continued to stand as mainstays of U.S. society, these were the only jobs open to them. Hazards on the job were not the only environmental challenge they encountered. Their low wages likely would purchase only dirty, vermin-infested, unsanitary tenement accommodations.

Regarded at that time as an unfortunate yet necessary product of a growing industrial economy in the end of the nineteenth and beginning of the twentieth centuries, many poor migrant and immigrant urban neighborhoods were continuously battered with land, air, and water pollution from adjacent factories. Zoning had yet to be implemented as a way of organizing and rationalizing communities. In the absence of zoning, thousands of adults and children resided in close proximity to toxic industrial processes. Waste management had not yet taken hold, and sanitary facilities were rarely available in these neighborhoods. In Boston in 1860, for example, there were only 5,000 flush toilets in a community of 178,000 (Boyer et al. 2000, 304). In addition, piles of rotting garbage could be seen and smelled, as well as trash and slag heaps at nearby factories. Worker and resident health was constantly threatened, and high rates of occupational disease and industrial accidents were recorded. A variety of new technologies greatly increased the productivity of these endeavors, simultaneously giving rise to these life-threatening conditions both at work sites as well as in homes located near production operations. The age of dust-borne lung disease had begun with the spread of silicosis from mining and brown lung from textile manufacturing. Between 1880 and 1900, 35,000 workers died and 536,000 were injured on the job annually (Taylor 1997a, 19). Government records kept during the period did not reveal the race of the thousands killed and injured each year, but one must assume that a disproport-

tionate share were poor, immigrant, and minority in light of the positions they held.

In the Progressive Era (1880–1920s) in many cities, middle- and upper-class White women, appalled by the inhumane conditions in poor communities, created and worked in institutions with tenement dwellers to improve the horrendous conditions in their immediate environment. Although they did not consider themselves environmentalists at that time, these women spent considerable energy ameliorating the urban and built environment. Hull House in Chicago is an often cited as an example of this work. Opened in 1888, its leaders attacked a host of critical problems, such as the city's failure to track and respond to a typhoid epidemic in poor areas and the lack of garbage collection. They also advocated for workplace safety and higher pay. Building upon successful responses to their sanitation efforts, they moved on to the problem of reducing industrial waste located in residential areas, nearly a hundred years before the “reduce, reuse, recycle” environmental slogan was commonly heard.

Further west, in the 1870s, desperate Chinese immigrants assumed extremely dangerous positions in railroad construction, and because the work was extraordinarily hazardous, many of them died extending the line across the Sierras. In the agricultural sector, throughout the 1800s and 1900s, Mexicans (many of whom had been deprived of their land after the United States gained control over California and the Southwest in 1848) had no choice but to take positions as migrant and other agricultural field labor. Men, women, and children worked long hours in fields with no sanitary facilities, and were housed, if they were lucky, in shacks with no plumbing in or near the fields where they worked. As agricultural practices evolved after World War II, and substantial amounts of chemical inputs were commonly employed, laborers worked in constant contact with them, without protective gear or instructions about how to protect themselves. As a result, these workers experienced disproportionately high rates of conditions commonly associated with toxic exposure, such as cancer and birth defects (Chavez 1993, 164).

Recognizing that political power for people of color was essential to making positive social change for their communities, their leaders began to focus attention on securing rights to political

and economic participation, a truly enormous undertaking. Early efforts included Blacks organizing the California Colored Conventions between 1852 and 1863, aimed at repealing discriminatory legislation and improving education for African Americans. In the 1890s, Jim Crow laws were enacted in many states to maintain separate treatment and to limit minority rights after the Civil War. The National Association for the Advancement of Colored People (NAACP) was founded in 1909 to develop a legal strategy to repeal Jim Crow laws. Racial discrimination was powerful and deeply embedded, and it continued to prevent non-Whites from union membership in industries with high-paying jobs. In the 1940s, 75 percent of Blacks still worked in low-paying jobs (Taylor 1997a, 37). As unions made progress in improving things for their members, Blacks and other minorities received benefits only coincidentally, since they were rarely unionized. In 1941, the threat of a strike by African American members of the Brotherhood of Sleeping Car Porters inspired the creation of the Congress on Racial Equality (CORE), which called for mass demonstrations against the Jim Crow laws. President Roosevelt responded by banning discrimination in defense-related industries and creating a federal agency to monitor employment discrimination. The employment discrimination provisions of the 1964 U.S. Civil Rights Act provided another tool for the fight to end disparate treatment.

With an estimated 10 to 20 percent of their original population remaining in 1860 (Taylor 1997a, 24), Native American communities were reeling from the demands of the settlers and government. As wave after wave of new approaches to address the “Indian Problem” were foisted on them, attempting to destroy their languages and cultures, an organized protest movement began during World War II. In the 1950s, the government attempted to end the reservation and tribal systems, giving rise to additional political organizing by Indians to form organizations like the American Indian Movement (AIM). Expanding activism resulted in “fish-ins” in the 1960s, through which they asserted claims to natural resource exploitation rights, resulting in numerous conflicts with state government agencies and White resource users. In 1973, increasingly hostile confrontations with the federal government (mostly over failure to uphold treaties) led to violence between AIM

members and federal agents at Wounded Knee. On the policy front, throughout the 1970s and 1980s, court battles between states and various tribal groups resulted in a series of state Supreme Court and U.S. Supreme Court decisions recognizing tribal natural resources exploitation rights.

After World War II, the United States underwent a significant industrial resurgence. Along with economic growth came an extraordinary increase in the number and quantity of synthetic chemicals used in industry and farming. Developed for their beneficial uses, they also had great potential to hurt the environment. In her 1962 landmark book, *Silent Spring*, Rachel Carson documented the unprecedented harm they caused, primarily to non-human nature. Humans were not spared, however. One example is the highly toxic contamination of land and water from mining uranium on Indian reservations. The postwar energy and defense strategies placed great emphasis on nuclear energy. All U.S. uranium mining (and much outside of the United States) took place on Indian reservations, and significant environmental damage occurred throughout the mining process. For instance, reports show that in the arid Navajo Southwest reservation, enormous quantities of subsurface water were extracted for use in mining (2.8 billion gallons per year, 1972–1986, in the Churchrock area, Robinson 1992, 157). At the same time, a great number of small and large accidental spills polluted the remaining surface and subsurface waters with highly toxic material. In response, local residents formed the Puerco Valley Navajo Clean Water Association. The association organized public education and pressure on the government to clean up the contamination. This was just one of many significant toxic threats introduced into the U.S. environment in the postwar period.

The Latino/Chicano communities also struggled to achieve human rights and a clean working environment. In the 1960s, Cesar Chavez, the famous California Chicano farm worker, organized migrant workers. With almost no political clout or visibility, previous unionizing efforts had produced little lasting change. Chavez devised a new strategy, which proved to be a winner. He invited consumers to assist the farmworkers in their efforts to bring the growers to the bargaining table. In 1965, he asked consumers to boycott table grapes. They did as he asked. His plan was a spectacular success. In 1967, the Delano area growers

finally recognized the new union and signed contracts with it promising protection against pesticides (Chavez 1993, 165). A 1984 report on pesticide harm to minorities estimated, however, that between 800 and 1,000 workers died each year from pesticide exposure (Perfecto 1992, 180), indicating that additional attention should be directed to this problem.

People of Color and Environmental Justice in Recent Decades

People of color's active participation in the new branch of environmental movement could be seen in urban communities in the 1970s, 1980s, and 1990s under the rubric of "environmental justice" or "environmental racism." Appearance of the widely publicized 1987 United Church of Christ study, *Toxic Waste and Race*, increased visibility for the issues and sparked additional community activism. The study showed that the single most significant factor determining whether a community would be near toxic dumps was the racial composition of the community. (A 1983 General Accounting Office report, much narrower in scope, reached similar conclusions.) It is a simple formula: more minority residents, more dumps. For example, communities with two or more facilities contain more than three times as many minority residents as comparable communities without toxic facilities (Lee 1992, 15). Across the nation, people of color have joined forces to protect their communities from environmental degradation. Latinos have organized against toxics and highways that would pollute and partition their neighborhoods in Los Angeles. African Americans have investigated and contested toxics in their Chicago communities. Poor Blacks and Whites took action against the country's largest hazardous-waste landfill in Sumter County, Alabama, in the southern Black Belt. Through these examples and many others, people of color have demonstrated their fierce commitment to protecting their environment.

As the number of environmental justice groups have grown, connections between groups have been made and strengthened. The first national People of Color Environmental Leadership Summit was convened in Washington, D.C., in 1991. In contrast to a similar 1988 survey, a 1992 survey of mainstream environmental advocacy organizations showed some adoption of environmental justice issues (Taylor 1997b, 50–51). The 1994–1995

People of Color Environmental Groups Directory lists over 200 organizations in North America focused on environmental justice issues. In 1994, President Clinton created the Office of Environmental Justice in the Environmental Protection Agency. It offers information, education, and a small grants program.

Tracy Dobson

See also: Environmental Justice; Environments of Children; Gender and Environment; Social Justice; Sustainable Development

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Environments of Children

The traditional classification of what are called special populations in the housing and environmental design literature identifies the elderly, disabled, and children as groups that are highly impacted by the near environment. This life-cycle perspective characterizes user groups as passing through stages on a developmental continuum. Children are especially vulnerable to the influences of the near environment because, given their place on the developmental continuum, children are in the process of building skills and abilities.

Play is the work of the child. It is through play that children explore adult roles, discover physical processes and spatial relationships, and develop a sense of identity and environmental competence. The housing, neighborhood, and school environments are the primary settings for play; the quality and quantity of play are directly affected by the attributes of the setting.

Poverty and Children's Environments

Children in families with few economic resources are at increased risk for poor developmental outcomes and low educational attainment. Their families are unlikely to reside in neighborhoods with abundant social services, the best schools, and well-equipped playgrounds. Children in families who move frequently due to eviction or attempts to find more affordable housing are likely to be harmed by residential mobility. Bartlett (1998) found that children who move often are at increased risk for depression and behavioral disturbances. Low-resource families dealing with multiple family stressors may lack social supports to help them cope with the disruptions in social and



Children on playground equipment (Laura Dwight)

physical environments associated with residential moves (Buerkle and Christenson 1999; Cox 1983).

The provision of safe, easily accessible outdoor play space is one of the most important elements of children's environments. Children who are not afforded the opportunity to play outdoors are less independent, less competent in interacting with other children, and less able to perform routine motor activities (Bartlett 1998).

Parental fear of children being harmed or getting into trouble in the neighborhood environment leads to social isolation, as parents confine themselves and their children to the housing unit. The home and neighborhood environments are supposed to provide safe opportunities for children to practice autonomy. Independent activities help the child develop a sense of confidence and encourage parents to develop trust in their child's abilities (Zimring and Barnes 1987). Parents and children isolated in unsafe housing and neighborhoods miss important developmental opportunities.

Children living in urban apartment buildings have frequently been the focus of research. A negative correlation exists between the floor a child lives on and a child's access to the outdoors. Ease of supervision for parents becomes a major issue

in such situations. Both young children and parents prefer and require settings where eye and voice contact can be maintained. Without a direct physical connection between outdoors and indoors, parents must choose to keep children inside, stay outdoors with them to supervise, or allow them to be outside unsupervised. These options discourage outdoor play (Marcus and Francis 1995; Bartlett 1997).

Indoor Environments and Toys

Indoor play is also vital for healthy growth and development. Adequate indoor play space and the provision of stimulating toys may be especially crucial for children in multifamily buildings. In other words children in dense, multifamily housing make greater demands on indoor space for play. Adequate floor space encourages play and exploration; knowledge about objects and competency is achieved through exploration (Wohlwill and Heft 1987). A lack of barriers in the home environment encourages children to explore. Poor-quality, crowded housing conditions can severely restrict a child's opportunities for exploration and play.

The availability of focal objects (toys) in the environment is an important dimension of play. Ac-

cess to diverse, responsive, and appropriately complex play materials influences cognitive and motor development (Wohlwill and Heft 1987). Variety in play materials, and the social and physical environment directly affects the cognitive and social development of young children (Wohlwill and Heft 1987).

Noise

Two distinct types of noise, background noise and noise generated by children during play, can have adverse consequences for children's development. Background noise in the home is inversely related to early language development in infants. Both interior and exterior noise have been shown to impair information processing and language achievement in older children (Wohlwill and Heft 1987).

The noise children generate in the process of playing can be problematic when it disturbs neighbors. Renters in high-density, multifamily units often worry about complaints to the landlords about their children's behavior. Under these conditions, parents may be forced to limit the play activities of children. Many parents rely on the television as a device to quietly occupy children for long periods of time (Bartlett 1997).

Healthy Home Environments

The housing also affects children's health and safety in a number of ways. Exposure to environmental toxins such as lead presents a serious threat to children's health. Lead poisoning causes significant cognitive impairment in children. Close to 1 million preschoolers have elevated blood lead levels. Older housing units are the principle source of lead exposure for children; other exposure pathways include contaminated soil in outdoor spaces and water from plumbing systems that contain lead pipes or lead solder.

Asthma, a chronic disease characterized by a constriction of the airway, is now the most common chronic disease among children. Asthma has many links to children's housing environments; 4.8 million children under age 18 have asthma. Common triggers for asthma attacks include house-dust mites, mold spores, and cockroaches. During the 1990s, the incidence of asthma increased 50 percent, with the most marked increases occurring within population groups of lower socioeconomic status. African-American children living in large urban areas in the United

States have a rate of hospitalization and death from asthma three times as high as children living in the suburbs (Platts-Mills and Carter 1997).

Unintentional injury is the leading cause of death among children 14 and under in all developed nations. Injuries account for almost 40 percent of deaths in the age group 1 to 14 years (Adamson, Micklewright, and Wright 2001). A large proportion of these injuries occur in and around the home. Fires and burns, drowning, suffocation, and poisoning most frequently cause home injury deaths. Young children are at the greatest risk from injuries in the home, partly because it is where they spend most of their time, but also because of their propensity to explore, their small physical size, and an inability to respond appropriately to danger.

Taken together, it is clear then the housing environment presents great potential and great risks for the healthy growth and development of children. The housing environment can encourage or inhibit play, the cornerstone of development; it can pose opportunities for exploration or exposure to environmental hazards. It is incumbent upon adults who are charged with making decisions about the organization and quality of children's environments to work toward providing safe, quality housing for all children so they might achieve their full potential.

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See also: Child and Family Poverty; Environmental Justice; Environmental Movement in the United States and People of Color; Gender and Environment; Lead Poisoning

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Epigenetic Principle

Epigenesis, a concept that originated in biology and has been adopted and adapted by psychology, refers to interactions of organisms with their environments such that both are changed by that interaction. It is among the oldest concepts in the study of human biological and behavioral development. The principle of epigenesis is central to the understanding and appreciation of the relative role of genes and environment—of nature and nurture—in human ecology. There are two variants of the concept: deterministic epigenesis and probabilistic epigenesis. Deterministic epigenesis suggests a direct one-to-one linkage between biology, genes for example, and structure or behavior. In this formulation, biology is destiny. Having a gene for breast cancer or phenylketonuria (PKU), for example, results in the development of the disease in the lifetime of the individual. Probabilistic epigenesis, on the other hand, speaks of a probabilistic linkage between biology and both physiological structure and behavior. One may thus have a breast cancer or PKU gene, but as a result of diet, or other lifestyle factors, that gene may or may not express itself. Biology, therefore, is not necessarily destiny.

As articulated by Inge Bretherton and Mary Ainsworth, deterministic epigenesis "implies that an organism has some basic ground plan of development in which different issues gain ascendancy at particular stages in development" (1980, 316). The maturational model of child development proposed early by Arnold Gesell (1928) exemplifies one of the purest adoptions of strict deterministic epigenesis. In later formulations the strict determinism was relaxed to a small degree. It was replaced by a quasi-determinism, according to

which the basic ground plan could be impinged upon in some finite number of restrictive environments. Psychoanalytic approaches to development drew heavily on this version of deterministic epigenesis. For example, both Erik Erikson and Sigmund Freud viewed psychological development as an epigenetic process driven by the resolution of critical tasks at each stage of development. Although the stages outlined by Freud and Erickson differed, they shared this underlying deterministic epigenetic perspective.

Deterministic epigenetic approaches share the common feature that the process of development proceeds from a relatively simple and uniform state to a more complex and varied state through a series of transformations and reorganizations. Furthermore, these transformations and reorganizations are thought to be governed by a specific set of rules, which are localized and independent of the developmental process. For example, the behavioral complexity of infants is relatively simple—they only do a few things, and they do them frequently. However, as the infant becomes a toddler, and the toddler becomes a school child, and the school child becomes an adolescent, behavior becomes more and more complex—the child becomes capable of doing more things and engages in specific behaviors in a much more selective manner. According to deterministic epigenesis there are rules, probably genetic, that serve to instruct the organism on how to change from an infant with simple behaviors to an adolescent with more complicated behaviors. If one knew how to read these genetically encoded rules, the developmental course would be quite clear.

Despite its widespread influence in the history of developmental study, the deterministic definition of epigenesis is currently seen as untenable. Perhaps the last bastion of deterministic epigenesis receiving any serious consideration currently is behavior genetics, especially as interpreted by contemporary evolutionary psychologists. Among contemporary developmental and comparative psychologists, it has become widely accepted that the course of development is probabilistic, not strictly determined. Neuroscientists also take this position with respect to the embryonic origins and later development of the nervous system as well as other biological systems (Benno 1990). In this formulation of epigenesis, genes do not predict the outcome of development in an unvarying manner.

At each stage of development the future path is understood to be the result of the dynamic interplay of a complex array of biological and environmental factors. According to this view, while development occurs within an environment, that environment is not benign, but is rather the source of important influences on the course of development.

Every biological and behavioral feature, then, at every point in development, is a functional product of the dynamic relationship between the organism and all features of its environment. Thus, in contrast to the deterministic version of epigenesis, the “rules” governing the process of change from low complexity to high complexity are neither “stored” in a specific place such as the genome, nor are they independent of the developmental process. Rather, the “rules” of development are diffusely spread across the entire developmental system and are a product of the developmental process itself. In other words, the “cause” of development is the action of developing. This idea was explored fully in *Individuals as Producers of Their Development*, by Richard Lerner and Nancy Busch-Rossnagel (1981).

We noted earlier that the concept of epigenesis originated in biology; however, with respect to behavioral development, the usefulness of probabilistic epigenesis was recognized and promoted throughout the twentieth century by psychologists such as Zing-Yang Kuo (1967), Gilbert Gottlieb (2000), Susan Oyama (2000), and T. C. Schneirla (Aronson, Tobach, Rosenblatt and Lehrman 1972) (though Schneirla never specifically employed the term “epigenesis” in his writing). Probabilistic epigenesis is gaining support from an exciting set of developments in contemporary science subsumed under the rubric of dynamic systems theory, in which complex developmental processes are understood to be the result of the dynamic interplay of numerous factors. With respect to behavior, this theory is fully developed by George Michel and Celia Moore in their book, *Developmental Psychobiology* (1995). The implication of this position is that in a dynamic and changing environment, rather than genes specifying a particular outcome, be it structural or behavioral, every outcome is an emergent result.

This view of epigenesis is epitomized by recent discoveries in biology that even identical genomes in extremely similar environments do not always

follow the same developmental pathways. In 1994 Elizabeth Kuo and her colleagues, studying enzyme activity in bacteria, found that despite identical genomes and extremely uniform culture conditions, individual cells developed different levels of enzyme activity and grew into colonies of different size. Kuo’s studies showed that cell state in bacteria is not determined only by genotype and environment. Rather, “Changes of state can occur spontaneously, without any defined internal or external cause. By definition, these changes are epigenetic phenomena: dynamic processes that arise from the complex interplay of all the factors involved in cellular activities, including the genes” (Solé and Goodwin 2000, 63). As complex processes are better understood, understanding of epigenesis is undergoing change, and now includes emergent properties. Indeed, evolutionary psychologists may still posit that the brain is compartmentalized into so many cognitive modules, each triggered by specific stimuli, but it seems more and more likely that human tendencies and behaviors emerge as a result of a lifetime of individual experiences.

It is important to note that the idea of new properties emerging from the interplay of various components in a probabilistic rather than deterministic manner applies to systems larger than individual organisms, to community agencies and organizations for example. Thus, recent cooperative research efforts in several leading universities that link diverse research programs may bear unexpected and unpredictable, though highly useful results. One such effort is the University of North Carolina’s Carolina Center for Genome Research, which pools the expertise of faculty from a half-dozen professional schools, including dentistry, medicine, nursing, pharmacy, and public health. A similar consortium is that of Case Western Reserve’s Physician-Engineer Training Program, which combines medical and engineering training. Finally, Loyola University of Chicago has developed a Joint Social Work/Law Program (Mangan 2001). Each of these three innovative programs hopes that the establishment of a novel working environment will generate new ideas in much the same way that environmental changes affect individual organismic biological and behavioral growth. It is hoped that the synergy among these institutional components will result in the emergence of novel, and unpredictable, outcomes to address larger social issues.

Probabilistic epigenesis, then, appears to be not only an extremely useful concept for aiding our understanding of biology and behavior; but also a guide or map for understanding how biology, individual behavior, and the larger psychosocial ecology develop together. The concept provides a cornerstone for a new integrative approach to knowledge that spans the human experience.

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See also: Erikson, Erik Homburger; Erikson's Theory of Psychosocial Development; Freud, Sigmund; Gesell, Arnold Lucius; Schneirla, T. C.; Twins

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Erikson, Erik Homburger

Erik Erikson (1902–1994) was a man both of his times and ahead of his times. His life spanned much of the twentieth century, coinciding with the ascendancy of the social sciences. Accordingly, his

biography helps us understand both the growth of the social sciences and his unique contribution to them. Blessed with a share of good fortune, Erikson repeatedly found himself in the company of the most influential social scientists of the twentieth century. But rather than being a mere follower, he transformed the best of their ideas into his own, profoundly shaping the views we now have of human development, especially of children and adolescents ("Psychoanalyst coined identity crisis," 1994, E8). In many ways he anticipated the new paradigm of human ecology, by stressing the interplay between people's development and their social environments. Indeed, his own life is an exemplary case of the way social environments can fundamentally shape a person's personality, values, and achievements.

Erikson's unique biography begins with his birth in 1902 to non-Jewish Danish parents, but upbringing with a Jewish stepfather in Germany (Roazen 1976). Reared as a Jew, he was taunted by German schoolmates, but rejected by Jewish playmates because of his Nordic appearance. These experiences likely affected his scientific interests by making him especially sensitive to both identity problems and intergroup prejudice. Thus, we can see in much of his later work a concern with the moral-ethical significance of the way human self-definition is affected by relations with others, especially when those relations involve hatred and bigotry.

After graduating from secondary school, Erikson spent some time backpacking around Europe, looking for himself (Erikson 1975), the custom then, as it was again later in the 1960s. This search fortuitously took him to two centers of cultural influence: Florence and Vienna. In Florence he experimented with his creative artistic skills, specializing in portraits of children. In Vienna, he developed his analytic observation skills, while at the same time teaching children at a progressive private school.

Erikson later reflected on the fact that these experiences coincided with his own identity crisis and the way they affected his later approach to social science writing, when he attempted to draw pictures for readers with prose: "I came to psychology from art, which may explain, if not justify the fact that at times the reader will find me painting contexts and backgrounds where he would rather have me point to facts and concepts" (Erikson 1950, 17).

His experiences in Vienna were to be pivotal in his own life and in the history of the social sciences. He went there in 1927 for a summer job to paint pictures of the children of wealthy parents. This job led to introductions to Sigmund Freud and Freud's daughter Anna, a scholar in her own right. Anna enticed Erik to become a psychoanalyst (analyzing him herself almost every day from 1930 to 1933), by suggesting that he synthesize his artistic talents with analytic insights to help people "see" the validity of psychoanalytic theory. Indeed, he was soon to discover "that clinical writing lent itself to artistic as well as theoretical expression" (Erikson 1975, 30).

The merging of these influences had a double-edged impact on Erikson's influence, however. Although Erikson was able to take his insights to the public through a series of best-sellers, including a prize-winning book, *Gandhi's Truth* (1969), his scientific imprecision created problems for those attempting to investigate those insights. Nevertheless, as an obituary in the *Toronto Globe and Mail*, May 13, 1994, put it, Erikson was a "psychoanalyst who profoundly reshaped views of human development," with his popular recognition peaking during the 1970s from his coining of the term "identity crisis" ("Psychoanalyst coined identity crisis," 1994, E8). Indeed, virtually all formulations of the concept of identity in both psychology and sociology have been influenced by Erikson (Weigert, Teitge, and Teitge 1986), and it was through his writings that social scientists in a variety of disciplines took an increasing interest in the concept of identity, beginning in the 1970s and continuing to the present.

Erikson's sensitivity to the ethics of intergroup relations can be further traced to his emigration to the United States in 1933, in part to escape the rising tyranny of the Nazi movement in Germany. Once again blessed by circumstance, he took a position at Harvard Medical School and later taught at Berkeley and Yale University, although he had no advanced academic training. In the American academic world of the 1930s and 1940s, Erikson found himself in the company of pioneering scholars concerned with the large questions of the impact of culture on human existence, such as Margaret Mead. These relationships steered his work into the emerging areas of cross-cultural studies, culture and character, and psychohistorical analysis.

As Erikson assembled these influences into a

new theory, he emerged as an influential figure himself. His first, and best-known book, *Childhood and Society* (1950), laid out a map of the influence of culture on human development that is still widely cited today. This book also set out his theory of the life cycle, which proposed that people potentially pass through eight stages of development from infancy through old age. This theory constituted a significant variation on the ideas of his Freudian mentors, because it sounded a more optimistic note about the potential of human development, both in terms of escaping possible childhood problems and of engaging in active and independent courses of action as adults.

Erikson's writing career was impressive, especially in light of the fact that he had few formal academic credentials. Several of his books spoke to the importance—and precariousness—of identity in modern society: *Young Man Luther* (1958), *Identity: Youth and Crisis* (1968), and *Life History and the Historical Moment* (1975). *Gandhi's Truth* (1969) earned him a Pulitzer Prize and the National Book Award.

Erikson's life was influenced by other major world events of the twentieth century. In 1939, coinciding with outbreak of World War II, he changed his name from simply Erik Homburger to Erik Homburger Erikson, rejecting his residual German identity for a more positive Nordic American one (Roazen 1976). His clinical treatment of people traumatized by wartime experiences led to his insights regarding ego identity problems experienced by many young people. In 1950, he left his position at Berkeley, refusing to sign a loyalty oath required as part of the reaction to the McCarthy Red Scare. He then spent ten years in clinical work at the Austin Riggs Center in Massachusetts, then returned to Harvard until 1970, where he wrote extensively about the youth unrest of the 1960s. In these writings, he drew from insights about his own youth, putting an optimistic spin on the identity crises that seemed to grip youth in America.

Beyond his concern with the vitality of children and adolescents, Erikson was deeply concerned that as the human species has solved certain problems of survival with technological advancements, new unanticipated identity problems associated with the meaning of existence have emerged, including how to deal ethically with the greater latitude of choice that life-sustaining technology has given us. The issue of how to deal with technolog-

ical advancements in terms of a set of humanistic ethics weighed heavily on Erikson, and his deliberations on this thorny issue can be found in his later writings (e.g., 1975).

James E. Côté

See also: Erikson's Theory of Psychosocial Development; Identity Statuses; Mead, Margaret

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Erikson's Theory of Psychosocial Development

Erik Erikson (1902–1994) was a pioneer in emphasizing the role of social context in human development. From his Freudian roots he developed a theory of the life cycle that proposes that people's lives can involve an evolution of their potentials. In doing this he helped establish the notion of the interplay of individual experience and cultural context in the unfolding of psychosocial stages over the life course.

Erikson built on Freud's basic ideas rather than significantly modifying them; he showed how cultures can affect ego development over the entire life span, not just during the first few years of life. In the process, Erikson developed an eight-stage theory of epigenetic development, which he originally referred to as the eight ages of man (1950). He considered his theory psychosocial; each stage of ego development involves the gradual meshing of the individual's maturing psychological (ego) characteristics with the increasingly complex social contexts encountered during the life course. Accordingly, he proposed that a new psychological structure develops as each new social structure is mastered.

The stages are not of any necessary length, and people pass through them at differing rates.

Generally, however, the tasks associated with each psychosocial stage must be adequately completed before going on to the next stage. Completing psychosocial tasks involve solving real-life problems and overcoming personal difficulties. Completing the tasks associated with a stage is considered a positive resolution of the stage when the individual acquires the positive quality of that stage (e.g., trust or autonomy). Incompletely mastered tasks constitute negative resolutions, and signal that the person will have to return to that stage later to reattempt the tasks, or will have considerable trouble when presented with situations requiring ego capacities that should have been mastered previously (because the person does not have sufficient trust or autonomy, for example).

The years of infancy and childhood include four stages in which specific ego strengths are ideally acquired: During the first stage, children need to develop the ego strength of basic trust (versus mistrust); in the second, autonomy (versus shame and doubt); in the third, initiative (versus guilt); and in the fourth, industry (versus inferiority).

During adolescence and youth, the task is to develop a viable sense of identity (the fifth stage) with which to move on to the tasks of adulthood. This can be a period of identity confusion and identity crisis, especially if the person's culture encourages a high degree of choice or provides little guidance in how to transit adolescence. During the sixth stage, young adults face the challenge of developing a sense of intimacy (rather than isolation), while during the seventh stage middle-aged people face the problem of nurturing a sense of generativity (caring for others) instead of being drawn into a sense of self-absorption and stagnation. In the last stage, which is usually entered in old age, individuals must evaluate and come to terms with the overall quality of their lives. Here the major alternatives are integrity versus despair.

Of the eight stages, Erikson wrote most about the identity stage (e.g., 1968, 1980), in part because he believed it has become the most difficult stage for people to resolve in modern societies. (In his own later life he turned his attention to the integrity stage; see Erikson, Erikson, and Kivnick 1986). Erikson first noticed the trend toward more problematic identities in the 1940s, and originally conceived of the notion of the identity crisis when treating identity loss among war-trauma victims

during World War II. He subsequently wrote extensively about the “identity crisis,” which he saw as a growing epidemic in modern societies, drawing parallels between this type of disturbance and the experiences of “severely conflicted young people whose sense of confusion is due to a war within themselves” (Erikson 1968, 17). He also wrote about the identity problems of adulthood that he saw to be “normal” responses to problems associated with modern societies.

Erikson applied his theory of psychosocial development to a number of topics: cultural differences in child rearing (1950), how the structuring of children’s play reproduces cultural ideologies (1977), the interplay between individual biography and historical events (e.g., 1958), and the contribution of youth to cultural renewal (1968, 1975). His theory has found applications ranging from clinical approaches to treating disorders of childhood and adolescence to the psychohistorical analysis of figures like Martin Luther and Mahatma Gandhi.

Erikson’s theory is not without its critics (e.g., Côté and Levine 2002). Some feel it is androcentric (focused on male experiences) and Eurocentric (focused on Western experiences) in the types of models used to illustrate it, while others find the idea of progressive life stages to be too linear and prescriptive (preferring to see psychosocial tasks met as they arise or not encountered at all, with no serious developmental consequences). Yet others think that many cultures do not institutionalize some of the stages he proposed, especially those cultures where there are few distinctions among the roles played by people of different ages (e.g., where childhood labor is widespread). Still, Erikson’s theory continues to be taught in human development and clinical courses, and no theories have been proposed that seriously compete with it in terms of its depth and breadth of explanation.

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See also: Adolescence in a Cultural Context; Ego Development; Epigenetic Principle; Erikson, Erik Homburger; Freud, Sigmund; Identity Statuses; Parental Development

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Ethics: A Feminist Perspective

The feminist perspective on ethics is intended, like all ethical theories, to provide people with a way of deciding what the right thing to do is and choosing a way to do it. Ethics within the feminist perspective is an important part of human ecology, in that it helps answer questions about our responsibilities for human welfare, including society as a whole and the environment. The feminist perspective on ethics draws from ethical philosophy and is based on a type of thinking called feminism. Most basically, feminism is the belief that women and their experiences are of value. It can also be described as a movement made up of people of all ages, races, sexual orientations, and genders who are working together to make the world equal, fair, and without harmful prejudice. The feminist perspective takes these beliefs and applies them to ethics. Ethics is a branch of philosophy that help us look at problems or moral conflicts, conflicts in which people must decide what the right course of action is. Ethics includes thinking about types of action, consequences of actions, and the reasons behind actions. Ethical choices are made about what actions may be required, forbidden, or allowed. Consequences of actions may be good, bad, or somewhere in between. Reasons behind actions may be focused on an individual, other people, or both. For example, is littering in a park right, wrong, or in between right and wrong? What if in the park, there is a sign that warns people that littering is against the law, and that people who are caught littering can be fined? In this example, littering belongs to the type of action called forbidden. One consequence of this action is that the person who littered could be fined if she is caught. Another consequence is that littering can spread germs and harm the environment. A reason for littering might be that the person who littered did

not feel like walking to a trash can and so, threw her trash on the ground. Ethical principles can help people judge what is the right thing to do.

While there are many theories about ethics, most theories are based on one or more of five ethical principles: autonomy, nonmaleficence, beneficence, justice, and fairness. The principle of autonomy protects the rights of individuals to privacy and independent choice. Nonmaleficence prohibits practitioners from doing harm to others by neglecting, abusing, or exploiting them. The principle of beneficence encourages individuals to consider the welfare of others. The principle of justice requires fidelity and equity. Fidelity requires people to create an atmosphere of honesty, integrity, and trust, and to honor commitments and promises.

The first characteristic of the feminist perspective on ethics is that it requires that we pay attention to the experiences of women and girls. Many things that we read about in history are based on the stories of men's lives. For example, until recently, many of the experiments done in science included only men and boys. The history of ethics itself is primarily based on the experience of male philosophers. The feminist perspective requires us to listen to the stories and experiences of women and girls and recognize that they are just as important as those of men and boys.

The second characteristic asks us to appreciate different ways of understanding situations. We are often told that objectivity or understanding things in a way that is "neutral" is the best way to think. Ethics from the feminist perspective says that subjectivity or understanding things in a way that takes our own feelings and experiences into consideration is an equally important way to think. Is it possible to be completely neutral or objective? Are we able to put aside our own beliefs and the way that we see the world? Feminist ethicists would say that it is not possible because our experiences shape our understanding and beliefs. For this reason, to be ethical from the feminist perspective, we always need to be clear about how our experiences and beliefs influence or shape the way that we understand things. Like the field of human ecology in general, feminist ethics helps us look at moral choices people make within the specific physical and social context within which people live.

A third characteristic comes from the fact that

feminist women and men work to ensure political, economic, and social equality between men and women. Ethics from a feminist perspective looks not only at the that the oppression of women affects all people, but also the effects of other inequalities that exist in our culture. These inequalities may be based on the amount of money someone has, his job or position in society, or his human characteristics (e.g., gender, sexual orientation, race or ethnicity). Ignoring the way that differences based on socioeconomic status, gender, race or ethnicity, and sexual orientation affect our understanding can lead us to make classist, sexist, racist, and heterosexist decisions, which violate ethical principles as understood in feminist ethics.

The fourth characteristic of ethics in the feminist perspective is that we must examine power in relationships. In every relationship we have in our lives, there is power. For example, a teacher has power over a student. An older brother may have power over a younger brother. A boss has power over a worker. U.S. culture organizes power around different aspects of our identity, frequently causing the inequalities mentioned in the previous paragraph. Men often have greater power than women. White people often have greater power than people of color. Wealthy people often have greater power than poor people. Heterosexual people often have more power than bisexuals, gay men, and lesbians. This is not because one group is better than the other, but because of the prejudice and discrimination that exists in our culture. People also gain power through education, age, and position. Power can be used in good and bad ways. The feminist perspective on ethics requires us to be aware of the power that we have in our relationships and how our power affects other people.

The fifth characteristic of the feminist perspective on ethics is that it calls for individuals to work toward change that benefits all members of society. This point is important because it takes ethics one step beyond knowing what is right, and beyond personal morality, or doing what is right as individuals. Ethics from the feminist perspective also requires that we do something to make a situation better. For example, if an ethical person saw someone being treated unfairly, she would be compelled to act in a fair way herself and to do something that makes it more likely that people are treated fairly. The feminist perspective on ethics ask us to not only think about what should be, but



Teenagers attending an event celebrating a specific racial/ethnic/national group (Skjold Photographs)

how to make the world a place that is closer to what should be. This means that when we act from the feminist perspective on ethics, we work toward eliminating prejudices and discrimination, so that the world is a fair and equitable place for all its members. For example, when the Civil Rights Act was passed, it required all U.S. citizens to treat people without racial, ethnic, religious, or sexual discrimination. This is a systems change, and the feminist perspective on ethics requires us not only to make our own behavior more ethical, but also to change any system that leads to unethical behavior.

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See also: Consumption, Ethical; Environmental Justice; Gender and Environment; Moral Development

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Ethnic and Racial Identity in Adolescence

Ethnicity and race are more and more apt to be central aspects of individuals' identities, as we witness a tremendous growth in the non-European population of the United States. An ecological perspective (see Bronfenbrenner 1989) on understanding identity formation acknowledges that children and adolescents develop their identities within the contexts of their families, schools, communities, and broader ecologies. The environments in which children's lives are embedded, together with the meanings ascribed to race and ethnicity in these environments, influence adoles-

cents' understanding of who they are (Erikson 1968).

When children and adolescents are trying to answer the basic question "Who am I?" references to their race and ethnicity are likely to help form their answers to this question. Additionally, the ways in which individuals' ethnic and racial groups are viewed in their surrounding environments will also influence the ways in which they think about their race and ethnicity. The development of a self-identity is critical, because it gives individuals a sense of who they are and who they will become (Erikson 1968). The process of answering the "Who am I?" question is especially critical during adolescence, when individuals focus more intensely than in childhood on identity formation. This exploration takes place in various contexts, including, but not limited to, the family, school, neighborhood, city, state, and country. In other words, individual identity is shaped by the interaction of the individual with these significant contexts of life.

There is considerable misunderstanding regarding the definitions of the terms race and ethnicity. A person's race is based on physical characteristics that are external and visible to the human eye (for example, skin color) (Phinney 1996b). Examples of races that are common in the United States are Black, White, and Asian. Ethnicity, on the other hand, is based on cultural traditions and values that are transmitted over generations (Spencer and Markstrom-Adams 1990). Examples of ethnicity that are found in the United States are African American, Haitian, Chinese, and Cuban. People who are of one ethnicity may be from different races. For example, there are Cuban people who are racially White, and there are also Cuban people who are racially Black. Ethnic and racial identities are important because they make up important components of an individual's overall self-identity.

Because race and ethnicity are two different concepts, the definitions of racial identity and ethnic identity are also different. The term "ethnic identity" is used to describe the way individuals interpret and understand their ethnicity and their degree of identification with their ethnic group (Phinney 1996a). Racial identity pertains to individuals' identification with their racial group, as well as a shared history as a result of being members of a particular race (Helms 1990). For exam-

ple, for Black individuals, their racial identity would involve overcoming oppression and related struggles that result from historical oppression and the racism that has existed throughout U.S. history. On the other hand, for Mexican individuals, their ethnic identity would involve their degree of identification with particular Mexican customs, such as the celebration of quinceañeras, which are parties designed to celebrate the coming of age of a 15-year-old Mexican female.

Clearly, then, it is possible for individuals to have both a racial identity and an ethnic identity. Their racial identity will be based on their racial group membership and their experiences with and understanding of the societal factors that affect their racial group, while their ethnic identity will be based on cultural characteristics that are transmitted from one generation to the next. For example, while Black Haitian Americans and Black African Americans would both have racial identities associated with being Black, Haitian Americans' ethnic identity would be based on their Haitian heritage, whereas African Americans' ethnic identity would be based on their African tribal heritage.

An important factor to consider regarding ethnic and racial identities is that adolescents will vary in the degree to which they identify with their racial or ethnic group. While ethnic identity may be a very important aspect of one Chinese American adolescent's identity, it may not be important at all for the identity of a different Chinese American adolescent. As mentioned above, adolescents' identification is contingent on their personal experiences and the factors in their surrounding environments. Thus, it is important to acknowledge that adolescents come from varying backgrounds and that all adolescents will not necessarily identify strongly with their ethnic or racial group, and some adolescents may not identify with their group(s) at all.

One final point to consider is that there are many people in the United States who are multiracial or multiethnic. Multiracial individuals have one parent who is a member of one race and a second parent who is a member of a different race. For example, a multiracial adolescent may have a Black mother and a White father. Multiethnic individuals, on the other hand, have parents who have differing cultural backgrounds. For example, an adolescent who has a Japanese mother and a Chinese

father would be considered multiethnic. People with mixed heritages have usually been referred to with terms such as “biracial,” “multiracial,” or “mixed.” Similar to people with only one ethnic or racial background, multiracial and multiethnic individuals vary in their preference for the ethnic or racial labels that are used to identify them. They also differ with regard to their degree of identification with their group. As a result, it is best not to make any assumptions regarding others’ preferences for ethnic labels or identification with particular groups.

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See also: Acculturation; Adolescence in a Cultural Context; Adolescent Identity Formation; Ecodevelopmental Theory; Erikson’s Theory of Psychosocial Development; Hispanic Immigrant Experience; Racial Identity Development among African American Adolescents

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European Americans

The ecology of human society in the United States has been deeply influenced by the Europeans who have been until recently the overwhelming majority of its citizens and of the immigrants who have entered. But it would be an error to think that European Americans have ever formed a homoge-

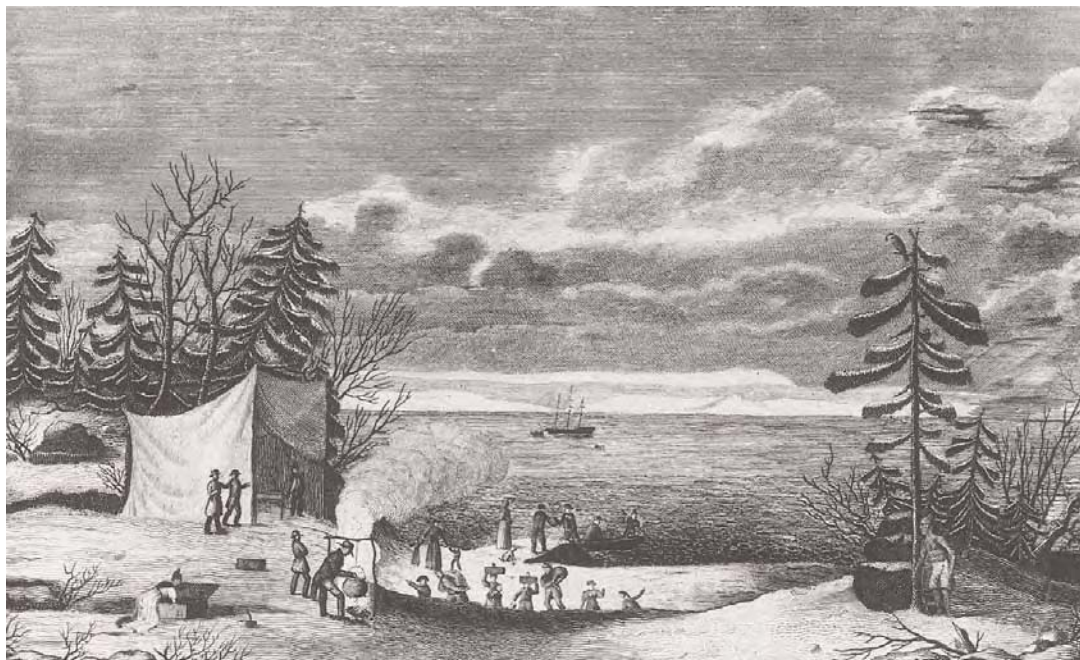
neous society, now threatened by the immigration of non-Europeans. The history of immigration to the United States, as well as to its various communities before the country came into existence, tells a very different story. This country and the communities of which it is comprised have always had to deal with a diverse body of citizens, often in conflict, often intolerant of each other’s ways. Acceptance and unity have never come easily, even when all those involved have been European.

The area that became the United States belonged to the original inhabitants, the native American Indians, until 1607, when English Europeans settled Jamestown, in Virginia, or perhaps more importantly, 1620, when a small group of English Europeans came by boat across the Atlantic and settled near Cape Cod in what is today Massachusetts (an Indian name).

The little English group who came to America in 1620 was fleeing from the insistence of the English government that everyone had to belong to the national church and worship in the same way. They were Protestant dissenters, members of one of the many groups breaking into new religious worship. All they wanted was religious freedom and peace to practice as they wished.

Yet, on that little ship, the *Mayflower*, there were indentured slaves, White children who had been sold because the debt of their parents in Europe. They were going to work their way to freedom, but for some it never happened, and they remained indentured for their whole lives. Also, within one generation, these people and other refugees who had sought religious freedom showed themselves so intolerant of other religious worship that in 1660 they hanged a woman named Mary Dyer, because she was a Quaker. There is a monument to her on the Boston Common. She and her husband had come to America in 1635. She remained true to her faith, and along with other members of her faith, she was executed.

That pattern continued throughout the history of European immigration to America, which has lasted over 370 years. Some people came with families, many came alone; some sent for their loved ones, some never did. But always America attracted the same kind of Europeans: people who were desperate, outcasts often, sometimes criminals, risk takers, people who had little hope in the Old World and were seeking freedom in the New World. For most of those 370 years, the over-



Historical engraving of immigration to the United States (Hulton/Archive by Getty Images)

whelming numbers came from Europe. In the past three decades, that pattern has shifted, and now Europe contributes relatively a small portion of the immigration to America.

Those who had come earlier and were now looking at those who were about to land always said essentially the same thing: “Be like us, or we won’t like you.” In the 1600s, it was not easy to be like everyone else. America attracted European Methodists, Presbyterians, Congregationalists, Calvinists, Puritans, Baptists, French Huguenots, people who quaked before God (Quakers) and people who shook before God (Shakers). All these sects had their origin in the Protestant reform movement started by Martin Luther in 1517, but they were all different from each other, and many of them were intolerant. Baptists caught in the midst of their water ceremonies would be attacked and drowned. Methodists would have their homes burned down.

They also came from many countries in Europe and spoke many languages. There were English, French, Germans, and Dutch. They fought over names. Some wanted a part of what was called New England to be named Green Mountain. The Germans wanted it called Gruenberg, which meant the same thing in German. But the French won out, and it was called Vermont, which also means Green

Mountain. These earliest European Americans did not like each other’s languages or religions, yet they had to learn to live together in the same country, and that meant they had to learn the principle of tolerance. And in fact the new country did actually enshrine the principle that the national government could not legislate the establishment of any one religion in its founding document.

An interesting illustration of the conflict between tolerance and intolerance can be seen in the history of Maryland. When the first Catholics came to America, led by the English nobleman Lord Baltimore, he had been given a tract of land named after the Catholic wife of Charles I, Queen Mary. In 1633, he settled with his refugee followers in Maryland, and announced that this would truly be a haven for all religious people seeking freedom, regardless of their faith. He invited Protestants who were being persecuted by other Protestants, and they joined with the Catholic European families in what was supposed to be a new regime of freedom and tolerance. Alas, within a hundred years the Protestants were in the majority, and they legislated the closure of the Catholic church in Maryland. Yet in the end, in Maryland as elsewhere, Catholics were given full civil rights.

From 1620 to 1820, immigration came overwhelmingly from Europe, and it was Protestant. In

the eighteenth century, impoverished Scotch-Irish Presbyterians who had lost all their land were allowed out of debtors' prisons in England and were permitted to come with their families to the New World. Some went to Australia, others to America. Opening up the prisons also permitted a considerable number of desperados and thieves to join in the immigration, but America was opened to all. White immigration was already being joined by the slave trade from Africa, because many were prospering in America, and slavery seemed to offer no problem for the religious communities, particularly in the South, although Black (and White) slaves still were found in the north. The indentured White person or family was very much a part of that eighteenth-century migration from England.

As the original thirteen colonies began filling somewhat, these latest immigrants and their families poured through the Appalachian mountain gaps and spilled over into new territories to the west of the mountains. Those who stayed in the mountains had their own distinctive culture. They were heavily English and Scots and Scots-Irish, got into the same squabbles and fights over religion as their ancestors in Great Britain, and have been immortalized in stories of the mountain family feuds between the legendary Hatfields and McCoys, the American version of Romeo and Juliet. These mountain people are sometimes called hillbillies, but some have said that their distinctive speechways represent the last vestiges of Elizabethan English speech. Mountain people were among those the French visitor Alexis de Tocqueville met when he came to America in the 1830s. When he described American eating habits, what he saw in these mountain people was the ability to take a wagon filled with corn and convert it into nutrition, energy, and a very powerful alcohol. The mountain people were not alone in their drinking habits; deTocqueville called America the besotted Republic, because he had never seen so many families drinking so much at one time! Indeed, the United States held the record for most alcoholic consumption until Russia passed us early in the twentieth century.

By the end of the eighteenth century the separate states had become a nation, the United States of America. Almost immediately, there were calls to cut off immigration. Earlier, Benjamin Franklin had hoped that Germans would be kept from these shores. Franklin did not like the German language or German attitudes. He said they would never as-

similate into American culture, that their language was ugly, and that their institutions were starting to play too large a role in Pennsylvania. There were the Pennsylvania Dutch (actually Deutsch, or German; the followers of Jakob Amman, the Amish), there were settlements named Germantown, Rittenhouse, and Muhlenberg; everywhere he looked, Franklin saw the Germans. He was afraid that the University of Pennsylvania would adopt German as the institution's second official language (it failed to do so by one vote of the faculty). Finally, in 1794, a Connecticut congressman led the fight for new anti-immigration legislation. According to him, the country was filled up, there was no more room, and there were too many non-English coming to the country. Like Franklin, he hated the Germans. He managed to have a law passed reserving citizenship for immigrants who had been in the country for fourteen years. The Supreme Court said this limitation was unconstitutional, and the legislation was overturned.

What the congressman did not foresee was the Louisiana Purchase, and a tremendous need for cheap labor and families for settlement, as our country tripled in size after 1805. When Lewis and Clark told President Thomas Jefferson of the size of America's new territory, there was no more talk of limiting immigration, at least for the moment.

However, there was a problem. Europe was running out of sufficient numbers of Protestants. As a result, in the 1830s and 1840s the United States turned to another available source of desperate people: the starving Catholics of Ireland. Here were the hungry and wretched, willing to risk everything in the hope of finding a new world. But Irish Catholics seemed impossible to assimilate. American Protestants had a deep-seated prejudice against the Catholic Church, the Pope, and everything that they stood for. As the Irish started escaping their famine and coming to America, they were met by a wall of bigotry. Those that survived the crossing arrived weakened; they were excluded from all but the most menial jobs in the big cities and ports of their arrival. In New York, Boston, Philadelphia, and the cities of the South, "Irish Need Not Apply" was the standard addition to advertisements for any respectable position. The contemporary language of newspapers described the Irish as vermin and maggots who could never become Americans. They were vilified and dehumanized.

Nevertheless, as has so often happened in this country, they started out on the bottom and worked their way up. In the Civil War they and their fellow German immigrants were the cannon fodder, serving in units led by officers who spoke German or Gaelic, since most of the conscripts could not speak English. Their numbers were enormous because poor Irish and German families were willing to accept the \$300 that was given to anyone taking the place of a drafted soldier. The number of Irish youth who died in the early years of the Civil War got so large that finally in 1863 in New York City the Irish mothers rose up in a violent riot, and mobs burned enlistment centers and killed indiscriminately. The riot turned racist when Blacks, always pitted against the Irish, were also attacked by the Irish mob.

It took fifty years or more, but by the end of the nineteenth century the Irish were making it in America. Irish mayors were elected in Boston and New York City by the 1880s; the Irish were becoming schoolteachers and policemen, and they were very visible in American sports like baseball and prizefighting. The heavyweight champion of the world was John L. Sullivan; Tammany Hall politics was Irish, and even the criminal world was overwhelmingly controlled by the Irish.

Immigrants kept pouring into this country, in spite of political parties like the Know Nothing Party, which insisted that America should close its doors. People and languages were coming from all parts of Europe. Newspapers were published in dozens of languages. The Germans now represented nearly 40 percent of all American immigrants, the largest single number of any ethnic group. But all the immigrants were not Europeans. Cheap labor was needed to build the great Western railroads of the 1860s, and Europeans, even the Irish, were no longer willing to do the dangerous work of blasting through the mountains. The owners of the Pacific Central turned to China and found in the willing and pliable Chinese coolie the perfect worker. They came by the thousands, often working for racist Irish supervisors who had little value for Chinese labor. Those who survived became the earliest population of the western Chinatowns and often objects of intense discrimination.

Europe had two more massive contributions to make to the United States. The Industrial Revolution still required large numbers of cheap laborers

toward the end of the nineteenth century, and in the 1880s, the last two large immigrations took place, one non-Protestant and one non-Christian.

Poverty in Italy produced a large influx of immigrants starting in 1880, the same year that saw the beginnings of anti-Jewish riots and legislation in Czarist Russia. The Jews of Eastern Europe had been living there for over 500 years, but with the advent of an anti-Semitic Czar, Alexander III, they got the message: It's time to leave. The Jewish immigration eventually numbered in the millions. In order to manage these numbers of Europeans, the American Immigration Service opened on Ellis Island in New York City harbor a station to process this wave. They came impoverished and moved right into the ghettos that had been abandoned by the last group of wretched earlier immigrants. In all the big cities of the East, Little Italies and Little Israels sprouted. Some families came together; sometimes husbands came first, and then sent for their spouses, or just disappeared. The Hebrew Immigrant Aid Society was founded in the 1880s to look for runaway Jewish husbands who had abandoned their families. Jewish and Italian orphanages grew in numbers to manage the abandoned children of desperate mothers. As could be expected, crime flourished in this environment. The Italians and Jews pushed out the Irish and Germans, and by the early twentieth century they had taken over. There were a dozen Jewish prizefighting champions of the world between 1900 and 1935. Murder Incorporated, the execution arm of Italian organized crime in America, was almost exclusively made up of Jewish hit men. The Italians and the Jews worked very closely together.

The political call to end immigration got stronger again at the end of the nineteenth century. This time, politicians and educators from New England took the lead. The new pseudoscience of eugenics was used as the theoretical wedge. Testimony before Congress by Senator Henry Cabot Lodge of Massachusetts and faculty from Harvard, MIT, and Johns Hopkins claimed that American stock was being destroyed by the inroads made by eugenically inferior people from the Mediterranean regions of Europe and from the Slavic lands. The reference to Italians and Jews was clear. However, the need for cheap labor prevailed.

The great opportunity to change the flow of European immigration came in 1920, when two Italian anarchists held up a payroll in Braintree, Mass-

achusetts. The year was 1920. When Sacco and Vanzetti were finally executed in 1927, all of the restrictive immigration laws had been passed, and the United States was about to change. The doors were slammed shut on Europe. They stayed closed through World War II when so many lives could have been saved by admitting Jewish refugees from Hitler and not until the 1970s did they open again. Nevertheless, from 1920 to the early twenty-first century, the flow of illegal immigrants has continued. From Ireland and Italy initially, now from across the Rio Grande, there are people who want nothing more than the opportunity to get to this country. This time, the risk takers are coming from Asia and Latin America. With the collapse of the Soviet state in 1990, those parts of Europe that had still had harsh enough conditions to inspire emigration began to be more completely integrated into the way of life of western Europe, which offers a secure and comfortable life to its citizens. Europe no longer provides the desperate. They are coming from another part of the world.

Toward the end of the twentieth century, the politics of immigration became involved in the presidential campaigns. Language again became a test. Should America legislate one language? California has always been the battleground. The politicians on one side argue that English is needed as the official language of the United States, because otherwise people will never integrate. Ironically, the most popular name among first-generation Latinos in Los Angeles and New York is Kevin, not exactly a typical Latino first name.

Somehow, over the centuries, Europeans who at first seemed impossible to assimilate have become thoroughly American. Admittedly, differences in race make acceptance even more difficult, but we now have a large percentage of interracial families, and that number is growing every year. It was not easy to accept that Europeans who were so different from those who were already here could become part of the country, and that is worth remembering in our current problems.

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See also: Families, Southeast Asian; Hispanic Immigrant Experience; Parent Education Programs for Immigrant Families

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Evaluation Research

Evaluation research is the use of social science research methods and other systematic procedures to answer questions about social programs. The aim of evaluation studies can be to support the design of such programs or to improve existing programs, determine their effectiveness, or understand how they work. By providing information to assist program development and decision making, evaluation research is an essential component of society's efforts to develop innovative strategies to solve social problems. Evaluations may vary widely in their research designs and data formats, depending on the questions that are being asked and the types of evidence that are needed to answer them.

The kinds of programs that are candidates for evaluation cover a wide spectrum. For example, to reduce rates of teenage pregnancy in a school district, a program may be introduced in schools that aims to change students' sexual behaviors. To reduce the rates of accidental poisonings in a community, a hospital might establish a poison control hotline so that community members can call for information and assistance, especially in an emergency. To reduce levels of heart disease from over-

consumption of fats, an educational program for doctors may be conducted that encourages them to talk with their patients about healthy nutrition. In an attempt to lower the number of traffic accidents, a state might change its licensing system for new drivers and its testing requirements for experienced drivers. All of these interventions require time and money to design and put into practice, and if they are not effective there are other approaches that can and should be used instead to address the identified problems. Therefore, there is generally strong interest in knowing whether a program is working, whether it is being conducted as planned, whether it is worth the money it costs, and whether it represents the best way to address the problem at hand (Berk and Rossi 1999).

There are several different categories of questions regarding social problems and potential program interventions for which evaluation research is used. Needs assessment questions relate to how serious or extensive a problem is within a particular population or geographic area. For example, before a high school makes a commitment to deliver a program aimed at preventing student drug use, the school personnel need to know the nature and extent of drug use at that school. Once a decision has been made to deliver a program, implementation questions concern how well the program is being delivered, including, for example, how closely the program's delivery follows the original plan, how many students are receiving all of the activities, and how well the students understand and enjoy the program's activities. Finally, outcome questions address how well the program has accomplished its stated goals, what other effects it might have, and what the reasons might be for its degree of effectiveness.

The techniques for collecting data in evaluation studies vary widely; they include such methods as survey questionnaires, achievement tests, direct observations, clinical assessments, individual or group interviews, demographic statistics, assessment of financial costs and benefits, and numerous others. Typically, many data formats are combined within a single study, which adds depth and perspective to the process of making interpretations and answering the evaluation questions.

There can also be great variation in the design of an evaluation study, that is, the way it is set up to answer the questions of interest. When the ques-

tion concerns whether a program causes positive change among its participants, an experimental design is, at least in theory, the most powerful way to address the question. For example, to assess the impact of an educational program, participating students can be assigned at random into one of two groups, one of which will receive the program while the other will not. Following the delivery of the educational program to the first group, the groups are compared on the outcome of interest, and any statistically significant differences between the groups are presumed to be due to the impact of the program. In practice, however, experimental designs have been found to be very difficult to implement for a variety of reasons, and alternative design options have been developed to evaluate the effectiveness of programs (Shadish et al. 2002). As noted above, many other evaluation questions are not concerned with program effects at all, as when a detailed description of program activities is needed rather than evidence of impact on participants. Such situations often call for designs in which qualitative (in the sense of nonnumerical) data such as interviews and descriptive observations are used (Patton 2001).

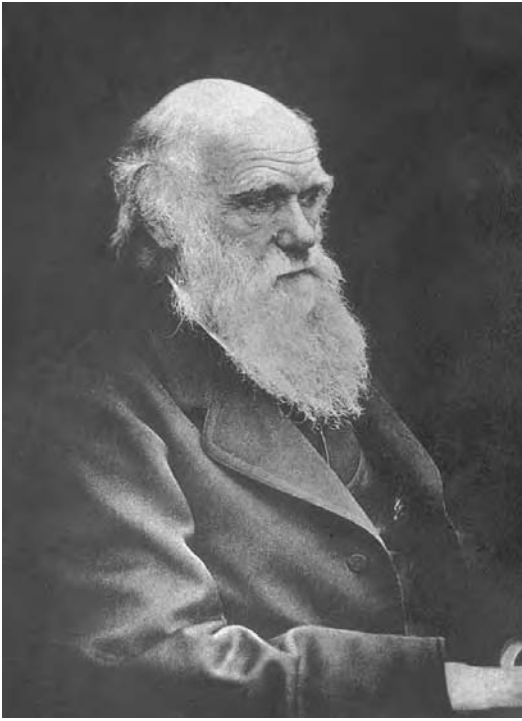
Compared to other forms of research, evaluation research has several unique characteristics. First, rather than focusing on the growth of scientific knowledge within a field, evaluation studies are often conducted to assist with specific decisions that need to be made, as when a community agency must decide on the best way to deliver health services to its clientele. Second, whereas for much of scientific research the primary audience consists of other scientists, the people who are interested in the results of evaluation studies usually constitute a highly varied audience, which can include lawmakers, program funders, program staff members, and the clients served by the program. Finally, the success of an evaluation study is often judged on the basis of its practical usefulness, in addition to the rigor with which it is conducted and the clarity of its conclusions.

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See also: Outcome-Based Program Evaluation; Qualitative Research; Quantitative Research

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Charles Darwin (Hulton/Archive by Getty Images)

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Evolution

One of the most significant changes in the dominant Western worldview came with the introduction over a period of some hundred years, beginning only in the eighteenth century, of a new idea of change itself, of change over long periods of time: in a word, of evolution. The Western worldview today is dominated by conviction, based on powerful evidence that the universe, the stars, the earth, and all living things have evolved through a long history that was not foreordained or programmed, a history of continual, gradual change shaped by more or less directional processes consistent with the laws of physics (Mayr 1979, 47).

The modern theory of evolution dates from a joint presentation by Charles Darwin and Alfred

Wallace to the London Zoological Society in 1856. One of the basic ideas of evolution, that present forms of plant and animal life have changed over vast periods of time to become as they now are, is at least as old as the Greek philosopher Anaximander, who believed that all life began in the sea and gradually evolved to take advantage of land as well as ocean environments. What was missing in older ideas of evolution was a mechanism or guiding principle by which evolution would be given order and direction. That principle was supplied by the idea of natural selection.

Darwin formed his idea of natural selection while on a mapping expedition over much of the world with the British Navy in the late 1830s. One of the most impressive experiences Darwin had came when he realized, while exploring the tropical rain forest of South America, that each square meter of the open forest contained the seedlings of dozens of plants, some of which, if successful, would grow to fill the entire space of that square meter, and more. Obviously, only a very few of the many young plants striving to grow in that space would be able to survive long enough to bear seed and pass their characteristics on to another generation of offspring. Those best equipped to take advantage of the circumstances surrounding them would have the best chance to reproduce themselves; most, however, were doomed to fail. The surviving individuals would emerge only after a process of natural selection. Darwin realized that the same principle was at work in all of life as in that one square meter of rain forest. All species and all individuals must survive a natural selection process. Here was a principle to give guidance and direction to the process of evolution. Evolution must flow always in the direction of functional effectiveness, in the direction of survivability. By the same token, there is no guarantee that evolution will continue for any given species; extinction is always an alternative.

Darwin's theory of evolution involves three basic principles: (1) Species produce many more eggs and offspring than can survive and reproduce themselves; (2) sexual reproduction permits a wide variety of genetically different offspring to be produced by each breeding pair, male and female; (3) nature selects from among this variability individuals whose characteristics result in survival and breeding capability. Note that these principles hold for all living organisms that reproduce sexu-

ally. Darwin knew that characteristics that permit the organisms possessing them to survive were likely to be passed on through the successful reproduction of those organisms. He knew nothing, however, about the mechanism of such inheritance. Our current understanding of genetics, which began with the work of the Austrian monk Gregor Mendel in the mid-nineteenth century, provides this mechanism. The present theory of evolution, usually referred to as the modern synthesis, actually is a combination of Darwin's theory of natural selection and Mendel's ideas of genetics.

Darwin had formed the basic ideas of his theory of evolution by the end of the 1830s, but came forth to publish those ideas only when Wallace independently conceived his own similar ideas in the mid-1850s. Following a joint publication with Wallace in 1856, Darwin made use of his twenty-year head start in working with his own theory of evolution. In 1859, he published his basic book on the subject. *The Origin of Species* became an international sensation, and the theory of evolution soon became known as Darwin's theory. It has become one of the most influential ideas in the history of thought. Ernst Mayr has said that the synthetic theory of evolution is "the organizing principle of biology" (1979, 47, emphasis added). Theodosius Dobzhansky (1973), another important contributor to the development of modern evolutionary theory, titled an article, "Nothing in Biology Makes Sense Except in the Light of Evolution." Indeed, the current understanding of life, the earth we stand upon, and the universe that surrounds us is an evolutionary understanding.

Evolution and Behavior

An organism's status as a species endows it with the potential to behave in ways unique to that species. This idea is embodied in Zing-Yang Kuo's (1967) principle of behavioral potentials, which suggests that each species is endowed with the potential to behave in species-typical ways. As the song from the musical *Showboat* put it, "Fish gotta swim, birds gotta fly." On the other hand, there is no guarantee that those potentials will be actualized. Thus, as Ashley Montagu pointed out, "The wonderful thing about a baby . . . is its promise" (1962, 17), suggesting that we are born *Homo sapiens*, but we have to learn to be human beings, and quite frankly, not all of us do so. Another way of saying the same thing is that the nature of any in-

dividual human being (or that of an individual of any species) is not a direct product of biology, but rather a set of characteristics acquired or developed during the course of that individual's growth. For that reason, the notable evolutionary biologist Paul Ehrlich suggested that we are better off thinking of human (or species) natures in the plural, rather than of a single nature (Ehrlich 2000).

As species evolve their behavioral potentials change. In fact, there is a close tie between behavior and evolution. Surprisingly, the relationship goes not from evolution to behavior, but from behavior to evolution. In a very important and real sense, it is what an organism does that allows it to survive and pass on its genes to future generations. Said another way, it is the phenotype, the actual properties of the organism (in this case the animal's behavior), and not the genotype that drives evolution. The Nobel laureate biologist Conrad Waddington put it this way: "Now natural selection obviously acts on the phenotype. If for instance, natural selection demands that a horse can run fast enough to escape from a predatory wolf, what matters is not what genes the horse has got, but how fast it can run. It is irrelevant whether it can run fast because it has been trained by a good race horse trainer, or because it has got a nice lot of genes" (1969, 360).

For almost fifty years Japanese primatologists have been studying the social behavior and emergent traditions of Japanese macaque monkeys (Nishida 1986). Provisioned with novel foods—potatoes and rice—the monkeys soon began to toss handfuls of rice gathered from the sandy beach into the water where the rice would float and the sand would sink. The monkeys thus discovered a way to wash sand from their food. These practices spread throughout the colony and are now part of the animals' normal behavioral repertoire. The practice is handed down from generation to generation—a primitive form of cultural transmission, though alternative explanations of this behavior have been proposed (Heyes 1998). Once they began spending more time near and in the water, young macaques began playing in it. This play led to the development of new behavioral skills, such as swimming. The animals also incorporated new foods into their diets, fish for example, and may now be capable of swimming to distant islands. Behavior such as this would subject them to new ecological pressures and potentially

affect the course of their evolution. This example illustrates how behavior may drive evolution. Of course, as organisms change over time and new species evolve, the new biologies of these species endow them with new behavioral potentials, and thus evolution affects behavior as well.

Why the Authors of This Entry Are Not “Evolutionary Psychologists”

When one thinks of evolution, what comes to mind are things that are most frequently associated with biology: genes, brains, zebra herds and lion prides on the plains of the Serengeti, and so forth. Human behavior has a long history of being viewed as separate and distinct from that of the other organisms with which we human beings share our planet. This is, however, not the case at all. Like all biological organisms, our bodies and behaviors are, at least at some level, the product of our evolutionary history. That said, the precise role evolution has played (and is playing) in human behavior is rather controversial, leading some to suggest that human brains are constructed of cognitive modules, shaped by evolution during the Pleistocene (5 million years ago) to help human beings adapt to the evolutionary adaptive environment of that time. Most proponents of this view, which over the years has been referred to as ethology, sociobiology, and most recently evolutionary psychology, suggest that evolution acting through the genes provides a predisposition or genetic tendency to engage in certain behaviors—an innate universal human nature if you will. This basic human nature can be, and often is, impinged upon by society and culture, but if left to their own devices human beings would degenerate to “basic instinctual” behavior patterns, as did the savage children in William Golding’s 1954 novel *Lord of the Flies* (see, for example, Buss 1999).

The authors of this entry take a rather different view of the role of evolution in human behavior, a view that has an equally long history, but is more in accord with what is known about how both behavior and biology develop, how genotype becomes phenotype; we hold a probabilistic epigenetic view. According to this view, individual species are endowed with species-typical behavioral potentials, which during a lifetime of experiences shape their behaviors in particular ways. There is, however, no guarantee that any individual animal will develop any particular set of behav-

iors. Behavioral potentials are rather plastic. “Are cats rat killers or rat lovers?” asked Zing-Yang Kuo, the great Chinese psychologist. The answer is, “It depends.” Kittens raised with rats out of sight of cats that kill and eat rats, themselves never eat rats, even when hungry. Never having seen a rat eaten, these kittens simply do not see rats as food. At the same time, of course, we do not deny the important role that evolution plays in providing each species with its unique set of behavioral potentials, as we have discussed above. A recent essay we coauthored with some colleagues provides an extended treatment of the role of brain evolution in the appearance of language and complex human culture (Greenberg et al. 1998), a treatment that exemplifies our view.

There are two important points to make about Darwinian evolution. First, as with all significant scientific theories, it is dynamic—undergoing new developments and fine tuning. One major instance of this is the introduction of a new idea called punctuated equilibrium, a modification of or adjustment to the traditional model. This theory posits that while evolution does take a long time, changes are rather sudden (tens or hundreds of thousands of years rather than millions), followed by long periods of no change. These static periods, or periods of equilibrium, are punctuated by short periods of dramatic species change, whence the term “punctuated equilibrium.” This theory accounts rather nicely for the gaps in the fossil records. Those gaps would exist because there are no changing fossils there to be found.

The second point we believe necessary to note is that Darwinian evolution, evolution by natural selection, applies only to biological systems. Thus, even though the term “evolution” is used widely in many sciences, the processes and mechanisms involved are quite different. Scientists speak of cosmic evolution, but this form of evolution certainly doesn’t involve the inheritance of adaptive traits or genetics, the way biological evolution does. Survival of the fittest, an important Darwinian principle, should not be simplistically applied to corporations or economies or human societies. Those institutions change, but not as a result of the biological competition involved in species change.

Homo sapiens, serendipitously, has evolved substantial physiological and behavioral complexity. One consequence of the tremendous behavioral complexity of humans, especially in terms of

the computational complexity of human nervous systems, is that the manner of evolution has changed for humans. In short, human beings adjust their environments to meet their needs, rather than adjusting their physiology to fit their environments. This point is not a trivial one. Indeed, maladaptive gene frequencies that should by all accounts have gone the way of the dinosaur persist in human populations because human beings have evolved the capacity to compensate for them. Perhaps more important, however, is that as we humans manipulate the environment to benefit our species, we may be doing so at a substantial cost to other species. We are not, as it were, masters of our ecology, able to usurp its resources for our exclusive benefit with impunity. Very much the opposite is true. Overexploiting the ecological resources available to us alters the ecology of multitudes of species, including the human species, in often unpredictable ways. By not appreciating the delicate balance of the ecosystem of which we are an intimate part, by not recognizing the substantial role human behavior continues to play in the evolution of life on this planet, we may seem to benefit in the short term, but in the end we may hasten our own demise.

Evolution stands alone in the life sciences as the key theoretical principle. However, evolution has implications not only for biological sciences, but for behavioral and ecological sciences as well. Indeed, in the century and a half since Wallace and Darwin jointly proposed the idea of descent by natural selection, many scientists have come to accept the evidence that behavior and ecology have substantial influences on the evolution of species. Moreover, human behavior and ecologies cannot be considered as outside the purview of evolution. If one accepts both these well-supported theories, it is obvious that the relationship of evolution to behavior, particularly the complex behaviors of humans, is one of continual, bidirectional interactions rather than evolution shaping genes, which shape behavior.

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See also: Epigenetic Principle

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Expanded Food and Nutrition Education Program (EFNEP)

EFNEP is a national Cooperative Extension nutrition education program in which paraprofessionals are employed to help diverse, low-income families improve the nutritional quality of their diets. The content (basic and family nutrition, food habits, food decision making and management, and food-related skills) is practical and used daily. Its scope is sufficiently broad to address relevant needs of families. Small improvements such as making and using a grocery list are indicators of personal success and provide incentives for initiating other changes. Multiple teaching strategies that are appropriate for different learning styles are encouraged. The content and number of lessons vary depending upon the needs, interests, and abilities of the participants. Participants, adults and youth, learn in their communities. Often the learning occurs individually in participants' homes or in small groups in the neighborhood. These settings are comfortable ones for learning. Participation is voluntary, not mandatory.

EFNEP's programs are carried out by paraprofessionals; it is a dynamic program, as participants are continually recruited, enrolled, taught, and graduated. Paraprofessionals become proficient in food and nutrition content areas, in planning and evaluating learning experiences, and in teaching and recruitment strategies by completing a 120-hour initial staff development program and participating in ongoing staff development opportunities throughout their employment. Staff development and audience-appropriate, up-to-date resources are essential to EFNEP, as the information taught by the paraprofessionals needs to be consistent with the most current research-based information. The paraprofessionals, preferably indigenous to the designated communities, are hired and supervised by county Cooperative Extension educators, with statewide leadership provided by Cooperative Extension administrators and faculty at the land-grant universities, and national guidance provided through the United States Department of Agriculture (USDA).

The national EFNEP guidelines define the target audiences, describe the content areas, and delineate the expected outcomes, they are the basis for program accountability. Since its inception in 1968, the EFNEP guidelines have been modified, but the expected food and dietary outcomes have remained constant. As participants attain and maintain desired food and nutrition practices in nonthreatening learning environments, they also become contributors to society and move from dependency to independence to interdependence. Program leaders report the impact of EFNEP participation to Congress, state and county governments, and other funding agencies. It is an effective publicly funded program.

EFNEP is a response to a societal reawakening to the fact that millions of Americans were living in poverty. The public outcry was substantiated by the preliminary findings from the spring 1965 USDA food consumption household survey (Nutritive Quality of Diets, USA n.d., 3-6). The results indicated that only half of the households met the dietary allowances for the nutrients studied, and 21 percent of the households had diets that were rated as poor. Calcium, vitamin A, and ascorbic acid were frequently in short supply. Thirty-six percent of the households with incomes less than \$3,000 had poor diets, as compared to 3 percent with incomes more than \$10,000. The report also

summarized results from eighty-three other studies that documented dietary and nutritional deficiencies for specific population groups. The public was not satisfied with the existing efforts of the United States government and especially the USDA to address the needs of the poor, underserved, disenfranchised groups residing in rural and urban areas. The USDA was pressured to seek other actions in addition to the distribution of excess agriculture commodities through the school lunch program and the commodity food distribution program.

Cooperative Extension leaders recognized early in the 1960s that some population groups, including the low-income, were not participating in Cooperative Extension's educational programs. The Cooperative Extension System is a collaborative effort of the USDA, the land-grant universities, and county governments. Beginning in 1962 several federal, state, and county pilot projects were initiated that focused on how to reach and how to teach the low-income population (Brink 2000). During his tour of impoverished areas secretary of agriculture Orville Freeman learned about the pilot project that was being conducted by the Alabama Cooperative Extension Service, in which paraprofessionals were hired to teach young, low-income homemakers residing in rural Alabama (Coleman, Priester, and Robertson n.d.). He saw this effort as a meaningful response to addressing the needs of the poor.

On August 19, 1968, Secretary Freeman wrote a memorandum to President Lyndon Johnson strongly recommending that the president authorize USDA through the Cooperative Extension System to proceed with an expanded homemaker program that would employ and train women from economically deprived communities (indigenous paraprofessionals) to teach primarily food and nutrition content to other poor families in their communities. Secretary Freeman also recommended that the direct costs associated with the employment of paraprofessionals and the buying of educational materials be paid from Section 32 funds (funds normally used to pay for farm products and commodities for use in school lunch programs) until July 1, 1970 (the beginning of the fiscal year), during which time one million of the poorest families would be reached (Freeman 1968). The results from the Alabama project and other pilot studies indicated that indigenous para-

professionals could establish rapport and communicate effectively with their peers. The employment of paraprofessionals was an effective, cost-efficient implementation strategy to reach and teach the hard-to-reach low-income population. Qualifications for being a paraprofessional included an ability and willingness to learn and to accept new ideas, the ability to communicate and work with others, an appreciation of various values and standards, and willingness to accept supervision. A high school diploma and prior work experience were not required.

President Johnson approved the plan outlined in the memorandum initiating the Cooperative Extension program known today as the Expanded Food and Nutrition Education Program. Prior to this, Cooperative Extension administrators and program leaders had proposed a program that employed paraprofessionals to reach the low-income population, but they had been unable to obtain funding. When EFNEP became a reality, it challenged and changed the Cooperative Extension System. State Cooperative Extension administrators were not accustomed to being told how funds could be expended. Many Cooperative Extension professionals and faculty members had limited or no experience working with or programming for low-income, ethnically diverse population groups. The employment, staff development, and supervision of paraprofessionals afforded new experiences throughout the Cooperative Extension System and the land-grant universities.

Nevertheless, EFNEP benefited from the expertise and resources of the Cooperative Extension System and the land-grant universities. The federal, state, and county partnership was recognized and provided the network for program implementation. Other strengths of the Cooperative Extension System were the philosophy of "beginning where the people are" and the value placed on staff development opportunities for staff and volunteers. The land-grant universities had the faculty with Cooperative Extension responsibilities with expertise and ready access to research-based information. Faculty and county extension educators had experience in developing resources and supporting educational efforts that were implemented by others, as Cooperative Extension's home economics/human ecology programs and 4-H youth programs were implemented primarily through volunteer leaders. The paraprofessionals added a

new dimension to program implementation and to Cooperative Extension's staffing pattern.

EFNEP extended or expanded Cooperative Extension's food and nutrition education opportunities to ethnically diverse, hard-to-reach low-income audiences, adult of all ages and youth, to improve the nutritional quality of their diets. The person responsible for the family's food and meals was targeted as the participant in the adult component of EFNEP. Children from low-income families participated in 4-H-type nutrition programs as a means of addressing food and nutrition needs of families. The core content areas were basic and family nutrition, food habits, food preparation, food preservation and storage, food selection and buying, and meal planning. The specific content was, and still is, based on the latest research findings. The stated program expectations were to do the following for all families reached:

1. Increase knowledge of the essentials of good nutrition.
2. Increase ability to select and buy food that satisfies nutritional needs.
3. Increase ability to prepare and serve palatable meals.
4. Improve diets and health for pregnant women, infants, preschool children, teenagers, total families, and elderly.
5. Improve practices in storage and sanitation.
6. Increase ability to manage resources, including food stamps.
7. Increase participation in the food programs of the Department of Agriculture.
8. Increase use of agricultural products, such as milk and other dairy products, fruits and vegetables, and meat and poultry (U.S. Department of Agriculture, Federal Extension Service 1968).

Communications between the federal and state Cooperative Extension partners about EFNEP increased following President Johnson's approval. Time was of the essence. Even though EFNEP was an expansion of existing Cooperative Extension nutrition education programs, there were many new features: specified target audiences, defined program outcomes with results expected by July 1, 1970, program implementation by paraprofessionals, and designated use of funds. These and other topics were presented and discussed at the No-

vember 18–20, 1968, national food and nutrition education training program workshop for state Cooperative Extension teams, consisting of administrators, the designated EFNEP leader, and usually a nutrition faculty member. The USDA Federal Extension Service staff provided suggestions and identified resources that could be used in staff development workshops with county Cooperative Extension educators, who would be providing the local leadership. Resources included guidance for completing a local needs assessment; guidance for the development of position descriptions for the paraprofessionals, and their recruitment and employment; identification of roles and responsibilities of the Cooperative Extension educator providing the local leadership; management tools for planning work schedules, recording and reporting travel; identification of existing, but limited, food and nutrition resources; and a staff development education outline for orienting county Cooperative Extension educators about EFNEP.

Following the national workshop, the priority was building state leadership teams to develop the amended state nutrition plan of work and implementation plan, to create an introductory workshop for county and local Cooperative Extension teams, and to identify educational resources. In which counties and areas would the program be implemented? The usual practice was for local staffs and boards of directors to share in the decision making. Therefore, their input was essential in modifying the nutrition plan of work and developing the implementation plan. The state leadership teams used two main approaches to identify potential program locations: counties where Cooperative Extension programming with low-income audiences already existed and counties with a large number or percentage of individuals living in poverty, as defined by the Office of Economic Opportunity poverty guidelines. County Cooperative Extension staffs in potential counties were contacted in person by members of the state leadership team and provided detailed information about this program or invited to a state-initiated meeting at which details were presented and discussed—or both.

State EFNEP leadership teams encouraged formation of county Cooperative Extension teams consisting of a home economist, a 4-H agent, and the agricultural agent, who was usually the person responsible for the overall local extension program

and budget. The team members participated in an initial orientation workshop. Sequence of topics and approaches used during the initial workshop varied from state to state depending upon programming experiences with and for low-income audiences. Topics included the rationale for and an explanation of EFNEP; participatory learning principles; information about government food programs and agencies providing services to the low-income clientele; identification of existing resources and resource needs; program evaluation; process for identifying, selecting, training, and supervising paraprofessionals; paraprofessional work expectations; and components and resources for the initial phase of the staff development plan for the paraprofessionals. Understanding the diversity within the low-income population and being non-judgmental were essential for the employment and supervision of the indigenous paraprofessionals and for planning educational experiences with program participants.

The county and area planning for the implementation of the EFNEP was multifaceted: obtaining support from county Cooperative Extension committees and county commissioners/legislators, establishing working relationships with agencies and organizations that provided services to low-income families, identifying specific geographic areas for EFNEP implementation, recruiting and hiring paraprofessionals, and developing plans for and conducting the initial staff development sessions for the paraprofessionals. Its recommended duration was 120 hours (Home Economics 1968).

The content of the initial paraprofessional staff development sessions included information about the Cooperative Extension System, EFNEP, work expectations, record and reporting requirements for program evaluation and management, recruitment strategies, educational strategies, and basic foods and nutrition information and skills. Frequently the paraprofessionals possessed misconceptions about foods and nutrition that they first needed to unlearn before they could learn the content that they would teach to others. Adjustments in the teaching plans were frequently made to better address the abilities and needs of the paraprofessionals. The subject matter needed to have relevance to the paraprofessionals and ultimately to the participants they would teach. By actively involving the paraprofessionals in the learning process,

the Cooperative Extension professional was at the same time modeling an educational strategy and evaluating the paraprofessionals' understanding and application of the information. Initial staff development sessions focused on the basic information that a paraprofessional needed to begin recruiting and teaching adults and youth. Ongoing staff development sessions reinforced and enhanced the initial learning, introduced new research results and their applications and changes in the EFNEP's guidelines and in guidelines pertaining to other USDA food programs, and provided opportunities for the paraprofessionals to learn from each other through the sharing of experiences. The frequency of ongoing staff development varied from one day a week to one day a month, depending upon need.

Since the adult component of the EFNEP was the primary data source for the evaluation results needed by July 1, 1970, it became the program priority. Paraprofessionals focused on recruiting, enrolling, and teaching adult participants (homemakers). The paraprofessionals recruited participants by canvassing the designated neighborhoods, by placing flyers in public places such as Laundromats and social services offices, by receiving referrals from agencies that provided services to residents, and from the youth who volunteered to participate in the youth component. Once recruited, the paraprofessionals enrolled the homemakers by completing the family record form, which included names and ages of family members, participation in USDA programs and welfare programs, family income, estimated food expenditures and a twenty-four-hour food recall (food eaten within a twenty-four-hour period). This information, the paraprofessional's observations, and the participants' interests provided the basis for the learning plan.

The frequency with which the paraprofessionals met with participants varied, with the norm initially being monthly, the frequency of other Cooperative Extension home economics programs. The paraprofessionals taught the participants individually in their homes and in small groups within their neighborhoods. These were comfortable and accessible environments for the participants. Teaching in the home had additional benefits. It gave the paraprofessionals a more comprehensive picture of the participant's needs, strengths, and limitations. The participant had the

opportunity to apply the learning to immediate family food experiences, which increased the probability of adapting and adopting new food-related behaviors. The paraprofessionals also kept a log on each participant, detailing the learning experiences and recording reported and observed food and dietary changes. The family record form was completed every six months. Six lessons in six months were determined to be inadequate to effect desired food and dietary changes. Paraprofessionals were encouraged to teach participants more frequently in order to achieve the expected outcomes. This was one of many learning experiences for all involved with the EFNEP. Other ongoing data instruments were the paraprofessional's list of families and list of youth participants.

While EFNEP was being implemented, the state of uncertainty as to whether funding would be continued persisted. Section 32 was a temporary funding source for the first six months. The outcome of the November 1968 presidential election changed the administration. Would President Nixon and the Congress allocate appropriations for EFNEP beginning in fiscal year 1970 (July 1, 1969)? In fact, EFNEP survived the transition. Funding for EFNEP was included as part of the Federal Extension appropriations under the Smith-Lever Act as title 3(d), earmarked funds with restricted use that are allocated annually and monitored by Congress. The appropriations were to be used only for the implementation of EFNEP, including costs associated with the employment of paraprofessionals and educational materials. Ongoing program evaluation became a vital component, as the federal partner was required to report program results to Congress. Because Smith-Lever 3(d) funds are appropriated annually, EFNEP funding remained uncertain. The new questions pertained to the level of funding.

The EFNEP received appropriation increases during fiscal years 1970 and 1971 (Hobbs 1995), enabling program expansion to additional low-income communities. Also, beginning with the 1970 appropriations, a portion of the allocation was earmarked for EFNEP youth programming (Davis 1969). Even though children from low-income families were always one of the target EFNEP audiences, most of the initial program effort focused on adults, in order to get the essential program results in time. The earmarked appropriations added impetus to EFNEP's youth component. Most

of the youth programming was done in groups and, to the extent possible, by volunteers.

As EFNEP continued, both the professional staff and paraprofessional staff developed a sense of what was expected and were able to fulfill the expectations. The EFNEP paraprofessionals were successfully working with participants from the target audience. Adult participants were reporting desired changes in food and dietary practices. When the federal appropriations stopped keeping pace with inflation in fiscal year 1972, Cooperative Extension administrators and EFNEP leaders were confronted with closing down local EFNEP sites and terminating the employment of paraprofessionals or obtaining funds from other sources or both.

Increasing program efficiencies while maintaining its effectiveness became a priority with the downsizing. The adult EFNEP target audience was redefined to families with young children, living in or near poverty, as these were the families for whom EFNEP participation could make the greatest difference over time. The youth EFNEP target audience was redefined to youth from low-income families of 4-H-age, as defined by the state Cooperative Extension 4-H program. (U.S. Department of Agriculture, Extension Service 1974) The intent was to facilitate the transition from youth EFNEP to other 4-H programming, an intent that was consistent with the concept of progression, which involved moving participants from the EFNEP to other Cooperative Extension programs and to other community-based programs.

In adult EFNEP, participants were not expected to be long-term participants; rather the eager learners were expected to move on to other Cooperative Extension programs, allowing new participants to be recruited. However, participation data indicated that over time more adults participated for three years or more (U.S. Department of Agriculture, Economic Research Service n.d., 25). Consequently, a progression model utilizing the twenty-four-hour food recall and a food behavior checklist was developed as the planning and evaluation tool for the paraprofessionals to use with participants to assess needs, plan lessons, and evaluate progress toward the accomplishment of EFNEP's goals (Leidenfrost 1976). The content and number of lessons depended upon the participants' needs, interests, and abilities. The paraprofessionals were encouraged to meet a minimum of

twice a month, more often if possible, with the adult participants. Minimizing the dropout rate among adult participants was another program efficiency goal. For adult EFNEP, a dynamic process of recruiting, enrolling, teaching, and graduating participants became the norm. Over the succeeding years modifications of the assessment and management tools have included the use of available technologies. Progressing adult and youth participants through EFNEP continues to be a priority, as it enables more families and youth to participate and benefit from the program.

Cooperative Extension professionals acknowledged the importance of using appropriate educational resources with culturally diverse low-income audiences. Factors considered included the reading level of print materials, the fit between information needed by the participants and the breadth of information presented, the feasibility of participants to implement recommended actions, and the racial groups included in pictures. Initial identified resource needs included single-concept brochures; easy-to-prepare, low-cost, nutritious recipes; audience-appropriate resources focusing on maternal and infant nutrition; and youth nutrition resources. The need for multilingual educational resources that acknowledge the differences in cultural food preferences has intensified as the diversity among the participants has increased. Usually a team approach involving nutrition faculty, Cooperative Extension educators, paraprofessionals, and participants is used in developing new resources to ensure appropriateness. Over the years, some basic food and nutrition content has remained the same, and some has changed, as new information results from research. Nutrition faculty keep abreast of the changes, continually revise educational resources to be consistent with the latest information, and ensure that the Cooperative Extension educators and paraprofessionals are able to translate the changes into meaningful terms for the participants.

Another key component of EFNEP is ongoing staff development at national, regional, state, and local levels. Topics focus on the latest foods-and-nutrition research findings, program management, program development from planning through evaluation, communication and educational strategies, information to enhance understanding about the diversity among EFNEP participants, and pilot projects with USDA's Food Stamp Program and the

Special Supplemental Nutrition Program for Women, Infants and Children (WIC). Collaborative efforts with USDA food and nutrition-related programs and other community-based programs maximize benefits from these programs as new participants are recruited into EFNEP.

EFNEP is a learning experience for all involved. Adult participants adopt the desired food-related and dietary practices and become empowered through their participation in EFNEP. They contribute to improved health and well-being for their family members. Adult participants become involved in their communities. Some become EFNEP volunteers. Some obtain additional education, completing a general equivalency diploma (GED) or taking college-level courses. Some become EFNEP paraprofessionals. Some attain professional positions. Youth participants learn basic food and nutrition knowledge and skills and enhance their reading, mathematical, and critical thinking skills. They learn to be responsible, engage in teamwork, and be respectful of others. All of these experiences contribute to improving their lives in many ways, including developing workforce preparedness.

For many paraprofessionals, being employed as an EFNEP paraprofessional is their first employment opportunity. For some it is the first employment opportunity that has allowed them to feel that they are making a societal contribution. New possibilities emerge through the staff development opportunities. Being an EFNEP paraprofessional has motivated some to pursue additional formal education and professional careers. Common growth experiences among the professionals with EFNEP responsibilities are understanding and acknowledging the diversity within the limited resource population and designing relevant educational opportunities. The addition of paraprofessionals to the Cooperative Extension staffing pattern has challenged the professionals to consider the appropriate depth and breadth of content for different audiences with diverse backgrounds and experiences: paraprofessionals, adult participants, youth participants, and volunteers.

The Cooperative Extension System and the Expanded Food and Nutrition Education Program have mutually benefited from their organizational association. EFNEP's effectiveness is a result of the infrastructure, wealth of resources within the Cooperative Extension System, and the commit-

ment of competent staff. The Cooperative Extension System has gained recognition, visibility, and audience-specific resources from EFNEP. Added values for the Cooperative Extension System come from the addition of paraprofessionals to the staffing pattern; from the focus on the diverse, low-income population; and from expanded programming in metropolitan areas in line with population shifts. The resources of the land-grant university system contribute to the effectiveness of EFNEP, as it connects the university with the hard-to-reach, hard-to-teach population groups in each state and with some of the most challenging societal issues involving the health and well-being of its low-income citizens.

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See also: Cooperative Extension System (CES); Paolucci, Beatrice; Public Policy and Early Childhood; Women, Infants, and Children (WIC), Special Supplemental Nutrition Program

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Externalizing Disorders

Behavior disorders in children are typically classified as either internalizing or externalizing disorders. Externalizing disorders are a broad category of behavior disorders in children and youth in which the distress is manifested in externalizing behaviors rather than focused internally on feelings. Externally manifested behaviors can take many forms, including acting-out behaviors, aggression, delinquency, and conduct problems. It is important to note that although the behaviors associated with externalizing disorders are directed outward, the child may still experience significant inner turmoil. The factors contributing to externalizing disorders are as varied as the exhibited behaviors. The most frequent types of externalizing disorders in children are attention deficit hyperactivity disorder, oppositional defiant disorder, and conduct disorder (Johnston and Ohan 1999). We will now examine each in turn, suggesting that the reader who desires precise diagnostic criteria consult the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV; American Psychiatric Association 1994).

Attention Deficit/Hyperactivity Disorder (ADHD)

ADHD may be characterized by inattention, hyperactivity, and impulsivity. Children or youth who are inattentive often fail to attend to details, have difficulty paying attention, fail to follow instructions, and may have difficulty organizing tasks and activities (American Psychiatric Association 1994). Symptoms of hyperactivity may include behaviors such as fidgeting, excessively running or climbing (when inappropriate), talking excessively, having difficulty remaining seated, and acting as if “driven by a motor” (American Psychiatric Association 1994). Symptoms of impulsivity may include behaviors such as blurting out answers before questions are completed, having difficulty waiting for one’s turn, and interrupting others (American Psychiatric Association 1994).

ADHD has been estimated to affect 3–5 percent

of all school-age children in the United States, or roughly two million children (American Psychiatric Association 1994). Although ADHD is diagnosed at a high rate, debates still exist as to the causal factors that may act and interact to encourage the development of this disorder, as well as its developmental course through adolescence and adulthood.

Oppositional Defiant Disorder (ODD)

Oppositional defiant disorder (ODD) can be characterized as a pattern of hostile, defiant, and negative behaviors that last for at least six months. Children or youth who are diagnosed with this disorder often lose their temper, argue with adults, defy rules, are easily annoyed, and may be angry and resentful (American Psychiatric Association 1994). These behaviors are typically seen more frequently in conduct-disordered children than in individuals of the same age and developmental level, and create a significant impairment in the individual’s social, academic, or occupational functioning.

The prevalence of ODD has been estimated to range from 2–16 percent of school-aged youth, and is considered to be more prevalent in males, especially before the onset of puberty (Johnston and Ohan 1999).

Conduct Disorder (CD)

The essential feature of conduct disorder (CD) is a pattern of behavior in which the child or youth ignores the rights of others or violates age-appropriate norms. Children or youth who have been diagnosed with this disorder typically are aggressive to people and animals (e.g., they bully, initiate fights, are physically cruel to either people or animals), destructive with property (e.g., they deliberately set fires), deceitful, or apt to engage in thefts (e.g., they break into someone else’s house, car, or building), or they may commit other serious violations of rules (e.g., running away, truancy) (American Psychiatric Association 1994). Conduct disorder has two subtypes: childhood-onset type (where at least one conduct problem was present prior to age 10) and adolescent-onset type (where no conduct problems were present prior to age 10).

CD prevalence estimates vary widely, with an incidence of approximately 2–9 percent of female school-age children and 6–16 percent of male school-age children in the United States (American Psychiatric Association 1994). Rates for the

age of onset of CD vary; CD rates are higher in adolescents (7 percent of youth age 12–16 years old) than children (4 percent of youth age 4–11 years old) (Kazdin 1997).

Commonalities among Externalizing Disorders

Comorbidity, or the co-occurrence of different disorders, tends to be very prevalent in individuals diagnosed with ADHD and CD/ODD (Campbell 2000; Johnston and Ohan 1999). Research has shown that a substantial number of youth exhibiting one externalizing disorder diagnosis also exhibits another (e.g., Kazdin 1997; Johnston and Ohan 1999).

Gender differences in the diagnosis of externalizing disorders are also well noted in the research literature (e.g., American Psychiatric Association 1994; Kazdin 1997). Since externalizing disorders tend to be more prevalent in males, more research has been focused upon this group. There is still much to understand about the developmental onset and outcomes for females with externalizing disorders (Johnston and Ohan 1999).

Some similarities exist as well in the treatment of ADHD, ODD, and CD. These treatments can be grouped into three types of categories: medication, family-based intervention, and child-based intervention. Stimulant medication is a common treatment of youth diagnosed with ADHD or comorbid externalizing disorders, and has shown much effectiveness (Johnston and Ohan 1999). Family-based interventions (e.g., parent training) have shown positive short- and long-term effects with youth diagnosed with ODD and CD, and short-term effects for youth diagnosed with ADHD (Johnston and Ohan 1999). Child-based interventions (e.g., social skills programs, cognitive-behavioral programs) have shown positive results, but may be more powerful when combined with other types of interventions (Johnston and Ohan 1999).

Although diagnostic criteria have been distinguished for these different disorders, it is important to note that no one characteristic of a child or context (e.g., family, peers, community, etc.) can solely account for the development of an externalizing disorder (Department of Health and Human Services 2001). These problems result from an interaction of characteristics of the youth and contextual factors, including family, peer group,

school, and community (Department of Health and Human Services 2001). The expression of these disorders, as well as their etiology, differs as a function of the age and developmental level of the individual. Thus, interventions need to focus on the changing multiple risk factors across different settings and recognize that there may be different targets for interventions at different developmental levels (Department of Health and Human Services 2001). Future research should help in the development of multimodal treatments, that is, interventions that have multiple components, which show much promise.

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See also: Attention-Deficit/Hyperactivity Disorder (ADHD); Internalizing Disorders; Lead Poisoning

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Extracurricular Activity Participation

As children enter their adolescent years they are often exposed to behaviors such as truancy, violence, and substance use, which are alarming to parents, teachers, and youth alike. These problem behaviors can disrupt educational environments and can contribute to serious social and economic problems. Some experts have argued that rather than trying to prevent each problem behavior, parents, schools, and communities should work toward building in youth the ability to resist the lure of problem behaviors (Roth et al. 1998). As youth develop the various systems in which they live, they need positive environments that offer the opportunity to build important internal resources. Researchers and educators have long suggested that extracurricular activities (EA) can provide an important, positive context for developing youth. In many ways, youth, families, and communities can encourage positive youth development through participation in extracurricular activities. (With positive youth development, a developing youth avoids risky problem behaviors and is on a path toward becoming a healthy adult.) Extracurricular activities are programs that fulfill two basic conditions: They are not part of the regular school curricular program, and they are structured in some way (in other words, youth involved are not just socializing, but are working toward some positive mission or goal). Extracurricular activities can include participation in clubs, student government, youth groups, and the like. Some specific of extracurricular activities are school band, 4-H club, church youth group, basketball team, French club, volleyball team, karate club, skate club, and service club.

The Benefits of Youth Participation in Extracurricular Activities

A considerable amount of research has examined the benefits of youth participation in extracurricular activities. This research has found that youth who participate in extracurricular activities are more likely to have better grades (Marsh 1992), have higher standardized test scores (Gerber 1996), attend school more regularly (Mahoney 2000), and have higher self-esteem (Marsh 1992). Youth who participate have been found to be less likely to drop out of school (Mahoney 2000), mis-

behave at school (Marsh 1992), and commit delinquent acts (Mahoney 2000). Other studies, which examined individual extracurricular activity programs, have found that students who participate in some programs show increased involvement with the school or community, improved social skills, higher academic achievement, and decreased problem behaviors (Roth et al. 1998).

Although the evidence for the benefit of EA participation is strong, these studies cannot “prove” that participation “causes” benefits such as improved academic success. Since a youth chooses to participate in an EA, some have suggested that only students who are more academically successful are likely to join, so it is no surprise that these two factors are related. Researchers have attempted to address this weakness by statistically controlling for factors like income level, ethnic background, I.Q., social status, and risk background. Even when these factors are controlled for, studies have found that there is a strong relationship between EA participation and positive youth development. Moreover, some studies have found that youth who are at risk in particular seem to benefit from participation (Mahoney 2000).

Clearly, there are many characteristics of a youth and her individual ecology that contribute to shaping how she behaves. It appears from the research, however, that extracurricular activities are one ecological context that can help prevent a youth from being involved with problem behaviors.

How Does Extracurricular Participation Positively Influence Youth?

Researchers have offered several explanations as to why youth who participate in extracurricular activities seem to be more successful. Some authors have explained that youth who participate in activities learn important skills that help them in other aspects of their life, such as teamwork and leadership skills. Others have argued that just spending time participating in an extracurricular activity decreases the opportunity for a youth to be involved with problem behaviors. For example, research has found that youth who are involved in positive activities from 2 to 8 P.M. are less likely to commit, or be a victim of, a crime (Sickmund, Snyder, and Poe-Yamagata 1997).

Still other researchers have suggested that as youth participate in extracurricular activities they are influenced both by the culture of an activity

and the experiences they have as a part of that activity (Marsh 1992). This social environment influences a youth's values and how he perceives school or society (Brown and Evans 2002). In the case of most extracurricular activities, the environment is a positive one, which encourages positive values, attitudes, and behaviors (Brown and Evans 2002). Having interactions with positive peers and positive adults in a positive setting can help youth develop the kind of internal resources they need to avoid negative behaviors. For example, as a youth participates in student government, he learns more about the importance of going on to college. He learns that discussion can be a way of resolving problems. All of these things influence his values about violence or attitudes toward attending college.

What Makes a Good Extracurricular Activity?

Professionals who work with youth have identified the characteristics of a beneficial youth program:

- Youth feel that they are a part of a group or taking part in something special.

- Youth have the opportunity to develop relationships with adults and positive peers.

- The program has goals that encourage youth and staff to achieve great things, while also having structure that hold participants accountable to certain standards.

- Youth have opportunities to take on leadership roles. For example, a committee of youth may organize a social event.

- The program is appropriate for the age group.

- For example, having activities that are not too difficult for younger children, or not too uncool for older youth.

- The program involves parents and peers.

Most importantly, though, extracurricular activities should be fun and attractive for youth.

Most times, the best judges of this are youth themselves. Youth need to be a part of deciding how a program is organized and conducted. At a time when many youth are at risk for involvement in problem behaviors, youth and adults need to work together to develop positive sources of influence for youth. Extracurricular activities can be one of these sources. These activities, however, have to be organized carefully to be appealing and engaging to youth.

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See also: Adolescence in a Cultural Context; Community Youth Development; Community-Based Organizations; Ecodevelopmental Theory; Leisure Activities among Young People; Political Participation by Young People; Self, Self-Concept, and Self-Esteem; Youth Development

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F

Faith-Based Organizations

Faith-based organizations are organizations or programs that have a religious orientation and offer various forms of services to individuals. They are community-serving ministries that have both a religious and a social service component. They may be churches, synagogues, temples, or community organizations that aim to help people and involve religion. The role of religion or faith varies from organization to organization. For some faith-based organizations religion plays a role as the motivation for their mission, and for others religion is an integral part of the content of their program. Although the staff and volunteers of such organizations usually adhere to a specific faith or religious tradition, participants may or may not share those same beliefs. Such organizations can be an important resource for youth, adults, and families by promoting spiritual, religious, social, and practical support. Needs addressed by faith-based organizations may include anything from tutoring, mentoring, and addiction recovery to legal assistance. In addition, they might offer religious education or nurture spiritual development. Underprivileged populations are usually the focus of faith-based organizations and initiatives.

Faith communities address their neighborhoods' needs in a variety of ways. For example, Victory Outreach in Los Angeles is an extremely effective recovery program that helps men and women recover from addiction through faith conversion and spiritual growth. Industrial Areas Foundation (IAF) organizes communities in a way that politically empowers underrepresented members of so-

ciety (Orr et al. 1995). In the South Bronx, the Urban Youth Alliance, a thirty-year-old faith-based organization, now provides after-school programs that include mentoring, counseling, recreation, and religious and secular educational programming for neighborhood gang youth. They offer these programs in conjunction with a local religious organization, the Latino Pastoral Action Center, and a neighborhood congregation, the Love Gospel Assembly (Trulear 2000).

Although religious congregations have been at the heart of American public life since its inception, the terms "faith-based organization" and "faith-based initiative" have gained increased prominence in the last decade. Service has always been central to the mission of congregations and religious institutions. They have fed and clothed the poor, offered guidance and counseling, and educated individuals for centuries. However, their ability to meet the complex issues facing youth and families today effectively has become identified as an important community asset. This is especially true in urban areas. Government officials, policy makers, foundations, and community organizations have begun to recognize that congregations and faith-based organizations are uniquely positioned within their neighborhoods to distribute social services to those in need. Congregations are often a natural resource for reaching their communities. They are often highly trusted and regarded. They have a donor base, a committed core of volunteers, and clergy who have an intimate knowledge of the needs and habits of their neighbors.

Faith-based terminology has gained promi-



Church-run soup kitchen (Skjold Photographs)

nence in the public, religious, political, and academic sectors. The term is inclusive, referring to congregations and organizations of various religions and faith traditions. Additionally, the term “faith-based” enables organizations to designate religion or spirituality as an important part of their program, while communicating that evangelism and proselytizing are not necessarily major goals of their initiative. Dr. Donald Miller and his colleagues at the Center for Religion and Civic Culture at the University of Southern California were among the first to document the important role faith-based organizations played in rebuilding neighborhoods in South Central Los Angeles after the Rodney King Riots in April 1992 (Berndt and Miller 2000; Orr 1995). After neighborhoods were devastated during the riots, faith-based organizations were among the first to provide resources for community redevelopment by offering such things as medical services, loans to start small businesses, after-school programs for kids, and hope. Also bringing faith-based issues to the public’s attention, President George W. Bush established a White House Task Force on Community and Faith-Based Organizations early on in his administration, which led to the U.S. Department of Health

and Human Services Center for Faith and Community-Based Initiatives.

Significant controversy has surrounded the government’s advocacy and support of legislation and federal funding for organizations with religious affiliations because of a potential violation of the U.S. commitment to separation of church and state. Although religious and nonreligious groups have raised questions about the federal government’s support of compassionate care through faith-based organizations, in 2002 the U.S. Department of Health and Human Services established a Center on Faith and Community-Based Initiatives intended to provide resources to local organizations that achieve valid public purposes such as decreasing violence, strengthening families, and improving neighborhoods.

Faith-based organizations or initiatives can take many shapes. A faith-based organization may be a single congregation that offers particular services in its community, or it may be a coalition of churches and law enforcement services that offers an alternative program to juvenile offenders. If an organization involves a congregation or several congregations, that may mean opportunities to build strategic partnerships within the community, lever-

age resources, build financial and community support, recruit volunteers, attract participants, and implement programs. Faith influences or shapes the programs. It serves to attract and engage participants as well as provide motivation and support for paid staff and volunteers, as well as, in many cases, the youth and adults who attend programs.

Faith-based organizations generally have focused leadership. Urban congregations are faced with many legitimate needs, including food, clothing, and shelter. The organizations that are most effective in these circumstances provide services with a specific focus, whether that be high-risk youth or single mothers. Additionally, a specific focus often provides a rallying point for congregations of different faiths to gather around. Although Muslims and Jews may not share the same doctrinal beliefs, they are able to work together for the welfare of the children in the neighborhood.

Faith-based programs intend to bring about transformation in the lives of their participants and their community. That transformation is sometimes intended to be religious and at other times not. Although personal transformation through religious faith is often the ultimate goal, faith-based organizations recognize that there are many changes in the lives of their participants that are worth pursuing. Reverend Ray Rivera from the Latino Pastoral Action Center in the Bronx said to a group of ministers, “While we want to see kids develop religious faith, we must be willing to notice that other areas of change and growth are part of godly transformation in the lives of youth. When a truant goes back to school, when a kid leaves a gang and joins our basketball program, when a kid stops using drugs and gets a job—even if he doesn’t start going to church, that’s still transformation” (Trulear 2000). In addition, faith-based organizations aim to bring about change in their individual neighborhoods. Their intention might be to decrease violence or increase employment or literacy. Regardless of mission and size, faith-based organizations are community-serving ministries that in some way use the power of faith, the power of religion, to make themselves effective in the lives of individuals and in their community.

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See also: Catholic Schooling: The Achievement of Poor and Minority Students; Community Youth Development; Community-Based Organizations; Comprehensive Community Initiatives

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Families, Southeast Asian

Southeast Asians, or Indochinese, in the United States are for the most part refugees who came from Vietnam, Laos, and Cambodia after the end of the Indochinese War in 1975. The four major ethnic groups include the Vietnamese; the Lao and the Hmong, who come from Laos; and the Cambodian, or Khmer, who came from Cambodia. Other ethnic groups, such as the Chinese-Vietnamese, most of whom came from South Vietnam, and the Mien and Thai Dam who came from Laos, are not treated in this entry due to lack of data. Although Americans use the term “Southeast Asian” to categorize these ethnic groups, persons from these groups do not necessarily identify themselves as Southeast Asians. They tend to identify themselves, for example, as Hmong, Cambodian, Lao, or Vietnamese.

Historians have identified two major waves in the history of Southeast Asian immigration to the United States. The first wave began in 1975, when the North Vietnamese completed their conquest of South Vietnam, the Khmer Rouge—a social and nationalistically radical Khmer regime—took over Phnom Penh in Cambodia, and the Pathet Lao—the North Vietnamese-supported Communist Lao regime—assumed power in Laos (Caplan, Whitmore, and Choy 1989). The first wave



Southeast Asian immigrants in the United States (Skjold Photographs)

(from 1975 to 1978) consisted mostly of military and government officials, who were well educated and possessed useful professional skills that were attractive to American employers. Thus they experienced lower levels of culture shock, less difficulty in their adjustment process, and fewer family problems than did the subsequent wave. The second wave of Southeast Asians began arriving in the United States in 1979 and continued to arrive throughout the early 1990s. The second wave occurred after the Communist regimes took over Cambodia, Laos, and South Vietnam and began to impose harsh policies on the people. The second wave primarily consisted of rural peasants, farmers, and fishermen who had little education and minimal exposure to Western lifestyles. As a result, they experienced more difficulty adjusting to the social, cultural, and economic life in the United States (Gold 1992).

Population

Today, there are about 1.7 million Southeast Asians living in the United States (U.S. Bureau of the Census 2000). Of the 1.7 million there are about

175,000 Hmong, 179,000 Lao, 184,000 Cambodians, and 1.2 million Vietnamese. About 74 percent of the total Southeast Asian population can be found in the following ten states: California, Texas, Minnesota, Washington, Massachusetts, Virginia, Wisconsin, Pennsylvania, Florida, and Georgia. The primary reasons Southeast Asians chose to relocate in these states were to reestablish family ties and gain access to social support.

Family Structure

The household of typical Southeast Asian families consists of two to three generations. Across groups, Hmong and Vietnamese households tend to have more generations living together than Lao and Cambodians (Haines 1989). Married adults have an extremely low divorce rate (i.e., in 1990 the divorce rate was less than 5 percent). The fertility rate for Southeast Asian women tends to be high, averaging 3.9 children per woman. Hmong have the highest fertility rate among the four groups, with 6.1 children per woman (Rumbaut 1995). In general, Southeast Asian individuals tend to marry early, with Hmong and Lao men and women mar-

rying younger than Vietnamese and Cambodian. After marriage, women in Hmong and Vietnamese cultures live with their husbands' families. Lao husbands live with their wives' families. Cambodian couples have the choice of living either with their wives' or husbands' families.

Religion

The majority of Cambodians and Lao believe in Theravada Buddhism, a more strict Buddhist tradition, whereas the Vietnamese believe in the more liberal Mahayana Buddhist tradition, as well as a mixture of Confucianism and Taoism (Lee 1996). Hmong people were influenced by Confucianism and Taoism, and most are influenced by animism, a "belief that all natural objects have spirits and that humans and spirits live interdependently with each other" (Gates et al. 2000, 315). They also practice ancestor worship. Although Cambodians, Lao, and Vietnamese believe in Buddhism and a mixture of Confucianism and Taoism, they too practice animism and ancestor worship. Thus, instead of believing in just one religion, most Southeast Asians tend to be more flexible and combine multiple belief systems. This flexibility involved some Southeast Asian families converting to Christianity. For example, within the Hmong population, about 30,000 Hmong (or 2 percent of the total Hmong population) have converted to some form of Christianity (Moua 2001). One study conducted with 400 Vietnamese and 400 Lao in the Pacific Southwest found 9 percent Catholic and 6 percent Protestant for the Lao sample and 42 percent Catholic and 4 percent Protestant for the Vietnamese sample (Nguyen and Henkin 1981). The number of Southeast Asian Christians is expected to increase as the second and third generations of Southeast Asians become more integrated into mainstream American society (Zhou and Bankston 1998).

Family Values and Socialization

Despite different religious beliefs among the four Southeast Asian groups, most parents believe in values such as collectivity, self-discipline, hierarchy of authority, moderation and harmony, and filial piety (Suzuki 1982). Collectivity emphasizes kinship ties, reciprocity, and mutual dependence. This value teaches children to sacrifice their own personal interests for the collective good of the family, kin, or clan. Based on this value, children

are taught to be modest and humble in order to achieve virtue and gain respect from others. Self-discipline underscores the importance of controlling one's emotions in order to think rationally and make objective judgments. Thus, Southeast Asian children are taught early in life to control their tempers, delay gratification, and know when it is appropriate to be assertive. The belief in hierarchy underscores the importance of paying respect and obedience to those who are in higher positions, such as the ruler of the country, the teacher, and the head of the household. Children growing up in this environment are taught to obey their parents, to exhibit a good appearance, and to be respectful in speech and behavior. However, as children become more acculturated, they tend to endorse this value less, leading to a generation gap and parent-adolescent conflict (Detzner, Xiong, and Eliason 1999). The values of moderation and harmony mean an emphasis on maintaining a balance between action and inaction by assuming a middle ground on issues. By so doing, individuals can avoid conflict and open confrontation with others, both of which are viewed as negative and shameful. To avoid negativism, individuals must develop a flexible mode of thinking that promotes harmony.

Finally, the value of filial piety underscores the importance of family obligations and adult children's obligation to care for their aging parents. This value enhances the identity of elders as well as their social security in later life. A competent, successful child will not only bring pride to parents but also provide them a stable and financially secure home when they are older. Given these values, Southeast Asian children are naturally taught early in life about the importance of the family (Xiong, Detzner, and Rettig in press). The family is in fact considered the basic foundation of society by Southeast Asians.

Families in a Transitional Ecology

Southeast Asian families are living in a transitional ecology, adjusting to multiple systems and demands. Studies indicate that Southeast Asian parents have encountered numerous problems with the U.S. educational and legal systems, as well as with demands from their U.S.-born children (Zhou and Bankston 1998). To understand why Southeast Asian parents have faced such problems with systems in the United States, it is important to understand not only their values but

their previous ecologies. In Southeast Asia, the Ministry of Education of the central government establishes and controls education, including school policy, teacher preparation, licensing, curriculum, regulations, and so on (Te 1994). Corporal punishment is accepted as an appropriate teaching tool in the school system and the family. Therefore, parents are not expected to be involved in the educational process; teachers are responsible for both teaching and disciplining the children. However, in the United States education is controlled by local officials selected by local citizens (parents and others), and corporal punishment in the school is prohibited; therefore, parents are expected to assume more responsibility in their children's education. These contrasting ecologies and expectations have been the arenas of miscommunication between families and schools and between families and child protection services, as well as of conflict between parents and children.

The transition to a different ecology has also meant different rates of acculturation for parents and their children. Research indicates that as families have lived longer in the United States, children have become more fluent in the English language through their daily interactions with peers and school personnel. Parents, on the other hand, have tended to lag behind their children, which, in turn, has weakened their authority to discipline and transmit traditional family values to the children, leading to intense intergenerational conflict (Detzner, Xiong, and Eliason 1999).

The adaptation processes of Southeast Asian families in the United States depends on several factors, including gender, year of arrival, age of arrival, place of birth, educational background prior to and after the transition to the United States, and place of residence. Because they are the fastest growing Asian groups in the United States, their adaptation and integration will play an important part in the promotion and development of future Southeast Asian American generations.

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See also: Acculturation; Adolescence in a Cultural Context; Child Development, Cultural and Community Influences on; Children from Immigrant Families; Culture and Human Development; Ethnic and Racial Identity in Adolescence; Family Diversity; Parent Education Programs for Immigrant Families

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Family, Theories of

The family is the primary social institution of society and serves as the most proximal ecological context of development (Bronfenbrenner 1979; Lerner and Spanier 1978). In general, theories offer conceptual frameworks for organizing and integrating existing knowledge, while supporting the generation of original knowledge on a specific topic of interest (Lerner 2002). Theories of family, specifically, are conceptual frameworks useful for understanding concepts related to families and for generating new knowledge about families as social groups embedded in the larger social milieu (Klein and White 1996).

There are five classical theories of family—symbolic interactionism, social exchange, structural-functionalism, systems theory, and family development theory. Classical theories of family have deep philosophical and sociological roots. Contemporary theories of family integrate major tenets of classical theories, while emphasizing interrelationships between the developing individual, the family, and other social contexts (e.g., social-contextual theory, human ecology theory) and the construction of meaning within families (e.g., feminist theory, phenomenological and ethnographic theories, communication theory, cognitive-behavioral theory). Theories of family are integrated within the field of family studies and serve as frameworks for understanding, researching, and helping families (Boss et al. 1993).

Symbolic interactionism emerged from the early twentieth-century work of the pragmatists (i.e., John Dewey, William James, Charles Pierce) and the writings of Charles Horton Cooley, George Herbert Mead, William I. Thomas, Robert E. Park, Ernest W. Burgess, Herbert Blumer, and Reuben Hill. The central focus of symbolic interactionism is on the connections between symbols (i.e., shared meanings) and interactions (i.e., verbal and nonverbal actions and communications), which are used as a frame of reference for understanding how individuals and families create symbolic worlds that shape behavior. Shared meanings, according to symbolic interactionists, foster adaptation and survival of the family within the larger social context. From the symbolic interactionist perspective, families are viewed as social groups. Symbolic interactionists are interested in the ways in which families construct and maintain a shared set of values and beliefs, as manifested in

terms of some core key constructs: identities, roles, and interactions (LaRossa and Reitzes 1993).

Exchange theory is a theory of motivation with roots in utilitarian philosophy (Klein and White 1996). Exchange theory provides a framework for understanding marital and family functioning based on an economic metaphor of losses and profits. From this theoretical perspective, it is assumed that family members' actions are rooted in their attempts to maximize the chances of meeting their perceived needs; moreover, patterns of family functioning are considered patterns that are created from family members' attempts to maximize the chances of getting needs met. While principles of exchange theory have been embedded in family research from the 1930s, the use of exchange theory as a family science framework was not fully articulated until the 1970s, with the work of family researchers (e.g., Lewis and Spanier 1979, Scanzoni 1972; Safilios-Rothschild 1970). Social exchanges are characterized by interdependence, and those who study them ask how interactions affect each family member involved. It is further assumed that such interactions are regulated by norms of reciprocity and fairness. This theoretical framework has been widely used to understand issues such as dating, mate selection, marital stability, divorce, and parent-child relationship quality. Key interests of family scientists who work from an exchange perspective are rewards, costs, expectations, experiences, and satisfaction; relationship dependence and alternatives; exchange regulations and norms; and trust and commitment to exchange contracts (Sabatelli and Shehan 1993).

Structural-functionalism is a general theory that has been adapted and applied to the field of family science. The structural-functionalist approach suggests that people organize into and function as families because the family structure is most able to satisfy the physical and psychological needs of its members. Talcott Parsons (1965) adapted structural-functionalism to explain both the internal functioning of the family and family relations with the greater society. For example, the structural-functionalist perspective suggests that traditional division of family labor (i.e., male breadwinner and female homemaker) evolved in response to the needs of society for both instrumental contributions (e.g., direct participation in the labor force) and expressive contributions (e.g., socialization of children). Gender role specializa-

tion is thought to maintain family equilibrium, and it is argued that deviating from these roles would lead to family disorganization. Key interests of family scientists working from this framework are groups, roles, values, boundaries, and conformity and deviance.

Family systems theory is a framework used to understand individual and family behavior with regard to the larger social environment. This theoretical framework for understanding intrafamilial relationships and relationships between families and their wider social contexts has developed within the broader framework of general systems theory, or cybernetics (Bertalanffy 1968; Weiner 1948). General systems theory is a metamodel used to organize, integrate, and generate knowledge, a metamodel based on one core tenet: The system is greater than the sum of its parts. In terms of family relationships, the family is more than a collection of the individuals who make up the family. The functioning of the family as a whole has implications for the functioning of individual family members, as well as implications for understanding intrafamilial processes. Family systems theory is concerned with key characteristics of family organization: the level of interdependence between family members, the hierarchical organization of family relations, boundaries between the family and its environment, patterns of family interaction, and goals of the family system (Whitchurch and Constantine 1993). Family systems theory has formed the basis of therapeutic frameworks for use by family therapists (Broderick 1993; Minuchin 1974).

Family development theory combines the foci of symbolic interactionism and structural-functionalism with general concepts of life span theories, or theories of human development. Family development theory is primarily concerned with the delineation and description of the stages and shifts that family members commonly experience across the family life course (Carter and McGoldrick 1980, 1988; Duvall 1957; Hill and Mattesich 1979; Rodgers 1964; Spanier, Sauer, and Larzelere 1979). The first outline of the stages of the family life cycle (Glick 1947) proposed seven stages of family development (Rodgers and White 1993); subsequent revisions have offered a six-stage standard model of the family life cycle: (1) leaving home of adult children, (2) joining of families through marriage, (3) raising young children,

(4) raising and preparing adolescents, (5) launching young adult children, and (6) aging as a later-life family (Carter and McGoldrick 1999). In addition to the description of the stages of the family life cycle, family development theory is also concerned with the organization of the stages of family development as a result of two concurrent forces: first, the development of individual family members (i.e., their biological, psychological, and social development), and second, the impact of social conditions (e.g., social expectations and ecological conditions).

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See also: Family Life Cycle; Family Paradigms; Family Systems Theory

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Family Crises

In technical language, a crisis is defined as a state of temporary dysfunction in an individual or a family following a stressor. As stressors occur that could otherwise lead to a crisis, human ecologists have opportunities to serve as resources to help people prevent crisis through primary and secondary prevention. Primary prevention involves education about what to expect from a stressful event such as divorce, as well as the teaching of coping skills. Secondary prevention involves help such as redefining the stressor, finding the silver lining in cloud of the problem before a crisis has developed.

Stressors

Stressors are occurrences that produce change. Stress is a state that arises out of a perceived demand. Stressors may originate from situations, transitions, and sociocultural events. Situational origins of stressors may be material, personal/physical, or interpersonal in nature. Examples of material situational stressors include the loss of income, of a home, or of a vehicle. Transitional stressors are life passages. They include individual and family transitions. Sociocultural stressors are those related to values, socialization, deviance, and conflict. Sociocultural factors such as discrimination for sexual orientation, ethnic group, or age and status in society (e.g., gender, socioeconomic status) may cause stress. Sociocultural stressors are often situational in nature as well. Stressors that have multiple origins are more difficult to cope with and therefore are more likely to lead to crisis than stressors of one origin.

Stressors may be what are generally considered private events (e.g., a promotion, a marriage, the birth of a baby) as well as what are generally considered negative events (e.g., a divorce, the death of a family member). Whether or not an event is defined as stressful is determined by the attitude of the individual experiencing the event. That definition helps to determine whether the stressor leads to crisis. The death of a loved one may be experienced as the end of the world by one person and may mean relief that he is no longer suffering to another. The former definition, all other things being equal, is more likely to lead to crisis than the latter (McCubbin and Patterson 1983).

The degree of stress experienced due to an event also depends on the extent of change re-

quired to adjust to the event; the more change is required, the more stress is experienced. Change is stressful. It requires use of resources (e.g., time, energy, space) that may have previously been used for other things. Another factor that helps to determine whether a stressor will lead to crisis is the person's resources. There are several categories of resources: personal (e.g., communication skills, high self-esteem, education), family (e.g., healthy adaptability and cohesion), material (e.g., money, car, house), social (e.g., friends, acquaintances), and community (e.g., counselors, therapists, support groups, clergy). However, the quantity and quality of resources are not the only important things; also important is whether or not the person actually uses them and uses them effectively (McCubbin and Patterson 1983).

Another factor that helps to determine whether a stressor will lead to a crisis is the extent to which other stressors are ongoing or recent in the life of an individual. If a person who is presently experiencing the transition that comes with turning 30 has in the year prior to that transition experienced multiple stressful events such as marriage, pregnancy, childbirth, building a home, moving, changing vocation, marriage problems, and divorce, that person is more likely to experience crisis when turning 30 than a person who has not experienced other such stressors (McCubbin and Patterson 1983). The level of a person's organization (very organized, well organized, somewhat organized, or very disorganized) prior to the stressor is also a determining factor. The lower the level of organization prior to the stressor, the greater the likelihood of crisis (McCubbin and Patterson 1983).

The nature or degree of seriousness of the event (e.g., catastrophe or minor problem) also helps to determine whether a stressor leads to crisis. Whether it was expected (as in the case of a normal life transition) or unexpected is also important. One can prepare, to a degree, for expected events, and even for unpredictable events. Preparation could include gaining information before the stressor (e.g., premarital counseling, childbirth classes) or practicing for a possible stressor (e.g., fire drills, life boat drills) (Hoff 1995).

Individual coping strategies help to determine whether a crisis develops from a stressor. There are seven general areas of coping that can be helpful in a wide variety of stressful situations: cognitive,

communicative, emotional, relationships, spiritual, environmental, and individual development. If enough coping strategies are used to manage the stress caused by the stressor, a person may not go into crisis. If a person is lacking in coping skills, they are more likely to experience crisis. It is better to have many coping skills than to be very proficient at just a few.

The origin of the stressor, the definition of the stressor, the amount of change necessary to adjust to the stressor, the individual's resources and whether they are used, previous and simultaneous stressors, the level of organization before the stressor, the nature of the stressor, and the individual's coping strategies are all factors that determine whether a stressor leads to a crisis. Because of this, individuals experiencing the same stressor may, in fact, experience different levels of stress, and some will experience a crisis while others will not.

Family crises are crises experienced by entire families rather than by one individual in a family. As with an individual crisis, a family crisis is a state of temporary dysfunction that lasts from a few days to a few weeks. The family temporarily is unable to meet its goals. In the case of an individual crisis, family members themselves can be resources and provide support, but in the case of a family crisis, family members themselves may be dysfunctional and unable to provide the needed support.

Role of Human Ecologists

Human ecologists are in a unique position to prevent family crises when stressors do occur by providing education about what to expect in the various developmental stages of a family as well as education to help make families stronger and less vulnerable: Problem-solving skills, communication skills, and decision-making skills can be taught, as well as the importance of routines, rituals, shared time, respect, support, understanding, flexibility, and consensus. With family crises, as with individual crises, human ecologists can also serve as resource people to help prevent crises after stressors occur or to help promote a positive outcome once a family is in full-fledged crisis. Human ecologists can also provide education that will leave families less bewildered and more capable of handling situations. Knowledge and skills can help families believe from the start that a stressor is a necessary part of life and something

that can be handled, and so the family can make any necessary adjustments more easily. Knowledge and skills in the areas of parenting, caring for the elderly, caring for sick or disabled persons, and caring for oneself can serve as resources for the family that will render them less vulnerable to crisis. Human ecologists can also teach strategies for coping with stressors and crises when they occur.

At any point in time, a family may experience stressors, strains, and transitions. Stressors are life occurrences that produce change in the family. Strains are excessive physical or mental tensions. Transitions are changes in status or role, which may be predictable or unpredictable. These stressors, strains, and transitions may pile up, causing demands on the family system's resources. Family resources such as time, energy, space, as well as other material, personal, social, and community resources may be needed to manage these demands. When another stressor occurs while the family is using its resources to manage the demands of the pile-up, a family may go into crisis. Whether the family goes into crisis depends on the nature of the stressor as well as other factors, such as how vulnerable the family is based on its strengths or weaknesses, developmental stage, family type, the family's appraisal of the stressor, the family's problem-solving type (authoritarian, consensus, or individual), the family's coping strategies and resources. These factors figure into the determining of a family's good adjustment or poor adjustment (resulting in crisis) to a stressor.

Crisis Management

Crisis management is the process of working through a crisis to its resolution. The goal of crisis management is the facilitation of a positive resolution to a crisis. Crisis management by human ecologists may be either formal, undertaken as part of their professional roles, or informal, undertaken in their roles as family members or friends. Both are equally important and require the same overlapping steps of assessment, planning, intervention, and follow-up. Four aspects of each step will be outlined: Who does it, when they do it, where it is done, and how it is done. All steps of crisis management are done with rather than for the people in crisis, in order to help them regain a sense of control (empowerment). It should also be noted that crisis management does not require extensive training. If one does not have training in crisis

management, he can refer the person to a professional who has had such training (e.g., people who work in crisis centers, counselors, therapists). If a person refuses formal assistance from the community, a layperson can follow the same steps that a trained crisis manager would follow.

Assessment

Who does the assessment tends to be whoever is around the person or family at the time of the crisis. Assessments are ideally done immediately, as soon as there is a stressor that may lead to a crisis or when a crisis state is suspected. Assessment is most often done in the setting where one is at the time, such as the home or the classroom. The first step in doing an assessment is to determine the risk to life by suicide or homicide. It may be a life-or-death situation when someone is in crisis. Suicide and homicide are two possible negative outcomes of a crisis which can be avoided through proper crisis management, beginning with assessment. A question to ask is, "Are you thinking about hurting yourself (or someone else)?" If the answer is yes, find out whether the person has a means (e.g., gun, pills, razor blade) and whether the means is readily available (e.g., loaded gun). If they have a means, decide if it is a highly lethal means (e.g., loaded gun, acetaminophen, sleeping pills). If there is a highly lethal means that is readily available, the person is at high risk for suicide or homicide. This person should not be left alone. If there is no one in the natural setting who can stay with her until the crisis is over, there are two other possibilities for action. One is to have the person hospitalized. The other is to have her promise not to hurt herself or anyone else for a specified period of time (perhaps twenty-four hours). If possible, put this agreement in writing and have her sign it. Hospitalization is generally viewed as a last resort because the hospital itself can be a stressor.

Risk-to-life assessment, called Level I assessment, can be performed by anyone. Level II assessment is generally performed by professionals who have been trained in crisis management. At Level II, a crisis manager finds out if the person is able to function in roles. A person in crisis is temporarily dysfunctional. Level II assessment includes identifying (1) the origins of the crisis (situational, transitional, or sociocultural); (2) the phase of the crisis (pre-crisis or active crisis); (3) the manifestations of the crisis, whether emotional

(e.g., fear, anxiety, anger, guilt, shame), biophysical (e.g., perspiring, frequent urination, diarrhea, headaches), cognitive (e.g., problems with usual problem solving), or behavioral (e.g., running away, seeking support); and (4) relevant resources available, whether personal (e.g., high self esteem, good education, communication skills), family (e.g., healthy levels of adaptability and cohesion), social (e.g., friends, acquaintances), or community (e.g., support groups, counselors, therapists, clergy). After determining these factors, one can make a plan for intervention.

Plan

Developing a plan helps a person decide what problem is to be solved, how it will be solved, when it will be solved, where it will be solved, and who will be involved in solving it. When the plan is put in writing, it is called a service contract and is signed by the person in crisis, the crisis manager, and others involved in the plan.

Intervention

Intervention strategies should be tailored to the specific crisis origin. The specific strategies are beyond the scope of this entry, but general intervention strategies include listening; encouraging expression of feelings; helping the person to understand the crisis, to accept reality, and to explore new ways to cope; and linking the person to a social network (e.g., family, friends, support groups). General intervention can be performed by the person assessing and planning, since these steps overlap. One must listen and encourage expression of feelings throughout the management process. The general intervention, therefore, is done in the same setting as planning and begins at the same time as assessment and planning.

Follow-Up (Contact and Treatment)

Follow-up involves contact in order to evaluate progress toward resolution. It may be performed the day after intervention and six months after intervention (recommended in the case of attempted suicide). The follow-up plan is made at the time of the intervention planning and is written into the service contract. Part of the plan may be for follow-up treatment of a chronic problem such as marital problems that may have contributed to the crisis. If the crisis originated from a social problem such as drunk driving, social-change strategies

such as participation in Mothers against Drunk Drivers should be part of the follow-up treatment. The interventionist or some other professional may perform the follow-up, but confidentiality during the follow-up must be maintained.

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See also: Work-Family Conflict References and Further Reading

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Family Diversity

Family diversity refers to differences in one or more dimensions within and among families. Because we live in an increasingly multicultural world, an understanding of family diversity is crucial to being able to appreciate and help others who may be different from us, and to discourage judgments that one specific type of family is superior to all others. Although attention to family diversity has increased considerably in recent years, the demography of American families has always been diverse. The assumption that the White middle-class family ideal is the historical norm has obscured the fact that different types of families have always existed (Coontz 1999). It is true that in recent years more and more individuals from different types of families (e.g., gay/lesbian families, single-parent families) have demanded social recognition and have increasingly advocated for rights previously denied to them (e.g., lesbian and gay couples have sought the opportunity to adopt children). As a result, many in the general public mistakenly believe that family diversity is a new American phenomenon. In fact, however, single-



Child with lesbian parents (Laura Dwight)

parent families and mixed families of various kinds have always been common. What is relatively new is the systematic study of family diversity and its effects. Scholars now view diversity from a variety of perspectives, particularly in terms of family types and family processes. What has been found is that, although some family processes are more positive and effective in general than others, these effective processes do not occur in only one specific type of family.

Family Types

Many in the general public tend to view diversity in terms of race and ethnicity, looking at differences between families of various ethnic and racial groups, such as Asian American and African American families. However, there are other dimensions to be taken into account in determining family type, such as family structure and sexual orientation. For example, different forms of family structure include, but are not limited to, single-parent families, stepfamilies, grandparent-headed families, and adoptive families. Gay and lesbian families are examples of types of family determined by the sexual-orientation dimension.

Family Processes

Family processes are to interaction patterns between family members, such as communication between spouses or partners, parenting styles, and the nature of intergenerational relationships. Some patterns of family interactions are clearly more effective than others. For instance, family members who provide nurturance and support in a time of crisis display effective interaction patterns; however, family members who are verbally or physically abusive to each other do not exhibit effective and healthy patterns. In some instances, however, it is not nearly as clear whether a particular family process is or is not adaptive. For example, whether or not very strict and controlling parenting behaviors help children develop a sense of self-control probably depends on a variety of factors, including the larger context in which the children live.

One of the key factors that determines which family processes are and are not effective is the sociocultural context in which they occur. For example, most research has found that the authoritative parenting style, which is characterized by high levels of parental warmth and firm but nonpunitive discipline techniques, brings about the most favor-

able child outcomes, whereas the authoritarian parenting style, which is characterized by relatively low levels of parental warmth and higher levels of rigidity and restrictiveness, yields less favorable child outcomes (Demo and Cox 2000). However, this general finding does not seem to apply to some types of families. For example, Ruth Chao (2001) found that, unlike their European American adolescent counterparts, Chinese American adolescents from authoritative families did not perform better in school than those Chinese American adolescents from authoritarian families.

Important Issues in

Understanding Family Diversity

Although some patterns of family interaction tend to be more positive and effective than others, those effective interaction patterns do not exist in only one particular type of family. Alan Acock and David Demo (1994) found that parents and children in first-married, two-biological-parent families reported slightly higher levels of well-being than those in single-parent or stepparent families. However, the differences in well-being across family types (e.g., between stepparent and single-parent families) are much smaller than those within family types (e.g., differences between one stepfamily and another stepfamily). Other studies have also suggested that differences between family types along a large number of well-being dimensions tend to be quite small, suggesting that no single family type is the prototype for fostering positive adjustment for its members (Demo, Fine, and Ganong 2000).

Another crucial point is that, although there is a tendency to expect all families within a particular type to be similar, a specific family type is not necessarily homogeneous. In reality, considerable heterogeneity exists even among families of the same type. For example, the gap between highly educated and less advantaged Asian American families is large. A study of Chinese and Japanese American families in California showed that the majority of them have achieved levels of economic well-being that are comparable to European American families. At the same time, approximately 40 percent of South Asian refugee families in California remain in poverty (Chan 1991).

Another important point is that both similarities and differences exist in the experiences of all types of families. By only examining differences

between various types of families, one may erroneously conclude that a particular type of family is more distinct than it really is. Therefore, it is important to examine the similarities across different types of families as well. For example, Lawrence Kurdek (2000) found that both attractions (i.e., positive qualities of the relationship) and constraints (i.e., factors that make it difficult to leave a relationship) are important predictors of maintaining a close and committed relationship for gay and lesbian couples, as well as for heterosexual couples. This finding suggests that some family processes have similar effects regardless of a couple's sexual orientation.

Finally, and perhaps most importantly, it is crucial to recognize the multiple and intersecting dimensions of diversity. For example, when single parents are examined, they are usually placed in one category, and their family structure becomes the most prominent dimension, one that leads others to make assumptions about their family life. Obviously, however, other dimensions affect the life experiences of single-parent families. For instance, single parents may differ in terms of socioeconomic status, race/ethnicity, and sexual orientation. These four dimensions and many others can and do intersect and affect their life experience. Although the intersecting of dimensions is not a novel concept, family scholars have increasingly challenged us to avoid a single-dimension view, and to examine family diversity from multiple, intersecting dimensions (Fine, Demo, and Allen 2000).

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See also: Acculturation; Child Development, Cultural and Community Influences on; Children from Immigrant Families; Divorce, Children's Adjustment to; Families, Southeast Asian; Family Paradigms; Gay and Lesbian Studies; Grandparents Rearing Grandchildren; Parent Education Programs for Immigrant Families; Parenting Styles; Adolescent Mothers

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Family Life Cycle

The family life cycle is a theoretical framework that describes the function of family in regard to the developmental tasks that comprise the family life course. In essence, it is the conceptualization of what has been called the family career. The family life cycle follows a general pattern of systematic development guided by the coexisting biological, psychological, and social demands placed upon members simultaneously, both inside and outside the family context (Hill and Mattesich 1979). According to those who have extended and tested the notion of the family life cycle (e.g. Carter and McGoldrick 1999) these demands occur in a sequence of stages, referred to collectively as family time, which define the tasks of the family as a unit. Across theories of family development, the family life cycle begins with newly established couples and concludes with the senescence of aged parents. It is hypothesized that the stage of the family life cycle and composition of the family have considerable impact on the family system and individual family members' development (e.g. McGoldrick and Carter 1999).

As a point of entry for understanding family functioning from a developmental perspective, the family life cycle is a framework useful both as a guide for family researchers (Spanier, Sauer, and Larzelere 1979) and family therapists (Carter and McGoldrick 1980; Russell 1993). The focal point of

family life cycle theories is the tracking not only of change in the family, but more specifically of the development of the family over time; that is, “the regular process of differentiation and transformation over the family’s history” (Mattlesich and Hill 1987, 437). Integral to the family life cycle approach is the acknowledgement of the interconnectedness of developing ecological systems: developing individuals (the individual-psychological system) within developing families (the group-interactive system), within developing societies (the societal-institutional system) (Rodgers 1973).

Both systemic and structural concepts underlie the family life cycle perspective. Systemic principles of interdependence, boundaries, resilience, and task performance are central features of the family life cycle. The principle of interdependence suggests that family members are enmeshed in a set of behavioral, emotional, and physical relations, such that a change in any one family member affects and is affected by other family members. That is, when one family member wishes to change, the family system must somehow deal with that request. Pressures by one member to change the family system can facilitate change in the family as a whole. In regard to the boundaries of a family system, the principle of boundary permeability defines the extent to which information and change penetrate or escape a family system. The tenet of resilience states that a family system has the ability to heal itself. That is, family systems have coping strategies unique to the system, strategies that have been honed across generations. Even though such coping strategies may be unique to each family system, according to the principle of resilience the strength to adapt to change and to recover in response to stress is an inherent function of the family.

The final feature of family life cycle theory is that of task performance. As a social institution, the family is assigned at least five tasks: physical maintenance, socialization for roles inside and outside of the family, maintenance of family morale to perform social roles inside and outside of the family, maintenance of social control, and the acquisition of family members to be launched from the family when mature (e.g., Klein and White 1996).

In addition to systemic concepts that provide a foundation for understanding family functioning across the family career, principles derived from a

structural-functionalist perspective augment general principles of the family life cycle perspective. Quite specifically, the structural-functionalist influence provides the outline of the family life cycle as divided into stages. Delineations between stages are based on criteria such as the occupational status of the breadwinner, the size of the family, and the ages of family members (Duvall 1957). Although the stages of the family life cycle vary by theorist, the following eight stages cover the breadth of family stages: (1) newly established couples, (2) childbearing families, (3) families with school-aged children, (4) families with secondary-school aged children, (5) families with adolescent children, (6) families with young adult children, (7) families with middle-aged parents, and (8) aging families, in which the parents are in retirement (e.g. Carter and McGoldrick 1999).

The family life cycle begins with the married, childless couple, charged with the tasks of renegotiating relationships with their families of origin and establishing a healthy relationship, which will prepare them for the next phase of the family life cycle, parenthood. The second through fourth stages of the family life cycle define the family with dependent children; during these stages the family prepares for and reorganizes to include infants and toddlers, helps young children develop interests in and relationships with extrafamilial family contexts, and increases the social network of the family in order to provide an increasingly larger context that will aid in the socialization of their children, respectively. The fifth stage of the family life cycle, the family with adolescent children, revolves around realigning relationships between parents and their children from hierarchical parent-child relationships to mutually respectful adult parent-adult child relationships. Thus, a balance between connectedness and autonomy must be maintained in order to allow adolescent children freedom to negotiate the tasks required for the transition to adulthood, while maintaining supportive bonds with parents. The sixth stage of the family life cycle, often called the launching phase, includes the preparation for the leaving of the home of adult children and the actual departure of young adults from the family home. Following the sixth stage, post-parenting couples are charged with restructuring the marital relationship and reestablishing bonds with nonnuclear family members. And last, the final stage of the

family life cycle, which extends approximately from retirement to death, centers around the adjustment of family members to issues of aging and eventually loss of family members (Rodgers and White 1993).

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See also: Intergenerational Relations; Parental Development

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Family Paradigms

Human ecology theory has at its core a systems theory that provides a framework for examining the reciprocal relationships of humans with the multiple environments constructed by human beings and nature. The theory of family paradigms is based on systems theory, using concepts taken from cybernetics (the study of mechanical systems). The study of family paradigms addresses the behavior of families within their various environments, sociocultural, human-constructed, and natural. How a family sees its own nature and uses the resources of time, energy, space, and material things to achieve its goals determines the nature of its family paradigm. The paradigmatic view of family recognizes that there are multiple ways of "being family." That is, although a given society may present one model of family as an ideal, in reality the principle of what is called equifinality applies, which in this context means that there are multiple ways of being family.

The concept of family paradigms has its origins in the work of David Kantor and William Lehr (1975), who proposed three distinct paradigms: Closed, Random, and Open. A fourth paradigm, Synchronous, was later added by Larry Constantine (1986). The four paradigms represent distinct ways that families organize their behavior, interact with each other, and create an overall image of what it means to be a family. Variations of this theory are found in David Reiss's model of families operating within distinct worldviews (1981), the circumplex model of family structure and cohesion developed by David Olsen and his colleagues (1983), Mary Ann Fitzpatrick's relational-dimension instrument for married couples (1988), and David Imig's relationship assessment scale (2000).

Family paradigms are in part worldviews. A family's paradigm is an image of or belief about how a family should operate, which in turn guides the members in how they view and interact with the environments in which they must function.

During the course of a day, large amounts of competing information bombard people, creating a sense of information overload. How people decide what information to pay attention to is determined by their worldview. A worldview is like a filter that allows some information to enter a person's consciousness while keeping other competing information out. These perception filters are particularly effective, almost blinding individuals to some information. In other words, a worldview can narrow one's ability to recognize the value of some information. In order to receive this other information, and more important, to understand it, one needs to change one's worldview. This change is called a paradigm shift; it is difficult for families, just as it is for individuals.

Paradigm Equals Image Plus Structure Plus Behavior

A family paradigm has three components: image, structure, and behavior patterns. Family image is shaped by the way family members believe things, such as household tasks, should be done. Image also determines the goals that a family pursues, the morals and values they adhere to, and the way information is interpreted. Images are internal, and they are complex and at times contradictory.

Structure is a general framework composed of rules and strategies. Strategies are recurring patterns of interactions and behavior that families develop and use regularly in order to accomplish tasks while minimizing the use of resources, such as energy and time. Rituals and routines allow work to be accomplished without having to create a new process or procedure each time the task needs to be attended to.

The third component in creating a family paradigm comprises the collective behavior patterns of its members. Behavior patterns are recurring patterns of strategies, rituals, and routines. Often the members are not conscious of their patterned interactions, as they occur almost routinely. As with image and structure, each of the four family paradigms mentioned above has distinct behavior patterns.

Within the behavior patterns are specific roles that family members assume. The role of Mover is characterized by initiation of action. The Mover in a family initiates activities, suggests solutions to problems, and contributes significantly to the overall structure of family activity. If people are

looking for something to do, it is the Mover who develops a plan. Sometimes Movers are viewed as being leaders, but depending on the family's power structure they may be catalysts rather than actual leaders.

In response to the Mover, there is an opposing role known as the Challenger. Challengers question the ideas and plans of the Mover. Sometimes the Challenger has a different idea; at other times the Challenger is just opposing the Mover with no suggestions for alternative actions. In some families the role of Challenger is welcomed and encouraged; others work diligently to reduce any opposing movements.

Challengers and Movers are dependent on Followers. Followers are family members who are willing to act on the plans and suggestions of either the Challenger or the Mover. The movement of Followers empowers Challengers and Movers. In some family paradigms the movement of the Followers is almost predetermined by the acceptance of a family's hierarchy or the internal position of power and authority assigned to family members' positions. In some families the position of father or mother is considered to be the highest, with birth order determining the descending significance of the remaining positions. Followers may follow those with strong hierarchical powers, but often coalitions of subsystems organize, rejecting or undermining the hierarchy.

The fourth player part in behavioral patterns is that of the "Bystander" who remains outside of the interplay for power observing the interactions of other family members. Bystanders can be thought of as gatekeepers, reminding the family of what is important in the larger scheme of things. Bystanders are powerful in that they become the "voice of reason," when communication becomes chaotic or conflicted, reminding members of what is important or held of value within the family.

Four Paradigms: Closed, Random, Open, Synchronous

Closed Paradigm

Families who coconstruct a Closed paradigm are guided by an image of stability, security, and belonging. The activities of the members are centered around establishing a sense of security. Boundaries within these families are often non-permeable, and they are established both mentally

and physically, with fences around the home, curtains on windows, and locks on doors. Rules are established to assist the members in knowing what is expected, and behavior is regulated using a system of reward and punishment. Failure to comply with family expectations can result in guilt, shame, and disappointment. The security of belonging comes from knowing what to do and being able to do it. There is a sense of interconnectedness within this family structure that unites members in identity. This can be seen by asking members what the rules of the house are. They will be able to draw up a distinct list of dos and don'ts. When someone engages in behavior on the don't list, it is seen as acting outside of the good of the family. When visitors behave in ways that are offensive to a family, they may be excused on the grounds of ignorance or told to leave and never return. Clearly though, everyone is expected to learn the rules and conform to them for the good of the family.

Closed families have a distinct hierarchy. Often the father is the head of the household, though a Closed family may have the mother as the head, and in some instances a child may even be the head. What makes the family Closed is not who is the head, but the fact that there exists one member who dominates the decision-making process, with other members supporting. Over the course of time, stability as to how decisions are made provides members with a sense of comfort, since all know their roles in the family and agree, even though sometimes subconsciously, to carry out their responsibilities as they have been delegated.

Tradition, ritual, and routine are the primary modes of operation within the family, and they provide a sense of stability, security, and belonging. As the family forms, patterns of daily tasks are developed and put into operation. Tasks are divided according to the hierarchy, with important decisions being entrusted to those with greater power and more menial tasks being allocated to those with less power.

Family traditions guide in the organization of holidays and religious holy days, which are observed with ritual that is felt to be time-honored and frequently has been observed across generations. Change for Closed families is very difficult. When asked to consider a different way of observing an occasion, members resist and cling to the concept of tradition as dictating why things are done in a particular fashion. Often the meaning

behind the actions has been lost; it may no longer be applicable to the family's situation. This same concept of ritual and tradition also guides the daily activities with established routines. Closed families often have a set dinnertime, and some even have an established weekly menu. Life in the Closed paradigm is scheduled.

Closed families regulate member access to resources using both physical and emotional boundaries. Such families monitor incoming information by regulating what television the children may watch and what music they may listen to. Internal information is given on a need-to-know basis, often with the subsystems of adults knowing things the children do not know, and children knowing things the parents do not know. It is common for these families to have secrets, forbidding members to talk about family matters with outsiders.

It is Closed families who provide stability to society; they may be different from culture to culture in the traditions, rituals, and routines they uphold, but the general principles by which they shape their behavior cut across all cultures.

Random Paradigm

To understand the Random paradigm one must recognize that for many people life works best unscheduled and unplanned. Random families are characterized as being free-spirited and creative. Members are encouraged to explore their environments and bring back everything they find of interest. Boundaries are diffuse and permeable, allowing a free flow of information to enter and leave. There is no hierarchy, no central administrating power; in fact, no one really has any power since all are encouraged to do their own things. Parents are held accountable by society for the behavior of their children, but within the family children are trusted to make many of their own decisions.

Random families are creative and spontaneous, and their members are independent and autonomous. There is a sense of family identity, but being different is held in greater esteem than being the same. Resources coming into the family are used by everyone. The goal is to try and meet each member's needs rather than to distribute equally what is available. Often in such families the risk is that resources will run out before all members get what they require.

Random families are often caught in the ten-

sion of trying to be emotionally close while developing and protecting individual interests and rights. These families struggle with organizing and scheduling time together, since organization and scheduling conflict with their fundamental belief in nurturing spontaneity. Life is unpredictable, but much to the chagrin of the outside observer whose values reflect a Closed paradigm, ultimately Random families seem to manage to achieve their goals and resolve crises satisfactorily.

As the antithesis of the Closed family, the Random family pushes at the established norms of society. Though these families operate within most social norms, they often do so in an unconventional manner. With their creative abilities and drive to be different, individuals from Random families become the trailblazers of new and innovative social practices. These families produce the trendsetters who reshape the cultural environment.

The Open Paradigm

The Open family paradigm is less common than the Closed and Random paradigms. Open families operate within a model of collaboration. Collaboration implies that everyone works together to make a decision and that everyone supports this decision. In Open families collaboration requires everyone to agree on a course of action, an ideology, or a decision-making process. Members are encouraged to be authentic in what they believe and to identify and articulate feelings and beliefs. It is not enough to be in agreement or disagreement, members must be willing engage in a discussion that will allow all members to redefine their beliefs and thus their positions. Open families negotiate everything. Discussions are their lifelines; they give the family meaning.

Hierarchical structures are not found in these families. Parents work with children to decide how routine tasks will be accomplished, as well as to construct rituals for celebrations. Rituals are always negotiable, and tradition carries little significance in the family's identity. Open families are adaptable and practical. They examine everything for its appropriate use and discard those things that all members feel are unnecessary.

Membership in this family requires one to become emotionally engaged with decisions. Refusal or withdrawal from a discussion signals rejection. Such rejection subjects the withdrawing member to being ejected from the family. Discussions can

seem endless, as the family gathers new information that can be used in making the decision. Resolution to problems can be difficult to achieve, and in extreme cases the family becomes immobilized by indecision.

The Open family contributes to society by encouraging dialogue, often reconciling the opposing views of Random and Closed families. Individuals from the Open paradigm help organizations within society to recognize fresh ideas being introduced by Random individuals, while maintaining respect for the traditions held by those of the Closed paradigm.

The Synchronous Paradigm

The final family paradigm is Synchronous. Synchronous families seem to share what are known as congruent cognitive maps. Congruent cognitive maps mean shared beliefs that closely regulate daily behavior and the personal pursuit of goals. Members of Synchronous families have similar experiences with consistent environments that have shown little if any significant change across generations. Though Synchronous families have many similarities to Closed families, their internal structures differ significantly. Closed families explicitly instruct members and promote the acquisition of knowledge through prescribed, directed, objective instruction; Synchronous families rely on an implicit model of communication for instruction. Knowledge is constructed through observing, listening, and doing things together. There is an internal knowing that cannot be explained, nor is it questioned. Critical thought of the kind identified with the sciences is not viewed as necessary and therefore tends not to be present. What one knows about life comes from living and working with others who are like-minded.

Members seem to be working for a common good, even though there has been no explicit discussion of what this good is or what it means. Children are raised alongside of their parents, accompanying them at work, learning life skills for survival, and carrying out household responsibilities. Communication is minimal, with strong boundaries controlling what comes into and out of the home. There is a strong sense of identity, of who belongs, with implicit rules for guiding behavior. Deviance from acceptable behavior is met with exclusion, often in the form of shunning. With little discussion, no one knows more or less than

another, and though there is a hierarchy there are no power struggles, because to act against a decision or action can result in exclusion.

Synchronous families are part of the larger society in which they are found. In a sense they are timeless, since they seem to be oblivious to technology or to keep exposure to technology to a minimum. The Synchronous paradigm may be the dominant family structure in a geographic area, or they may be a small pocket within a larger metropolis. A unique feature of the Synchronous family is their internal connection to their natural surroundings. They seem to move to an internal rhythm that is regulated by the natural environment, and they are less influenced by the socially constructed behavioral and technological environments. By understanding the paradigm families use to pursue goals, one can gain insight into ways of helping them when they experience difficulties. Paradigm knowledge allows a family scientist to recognize when problems are results of a family's paradigm and when they are being caused by one of the surrounding environments.

Deborah C. Bailey

See also: Child Development, Cultural and Community Influences on; Family Diversity; Family Crises; Family Systems Theory; Family, Theories of; Parenting Styles

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Family Resource Management

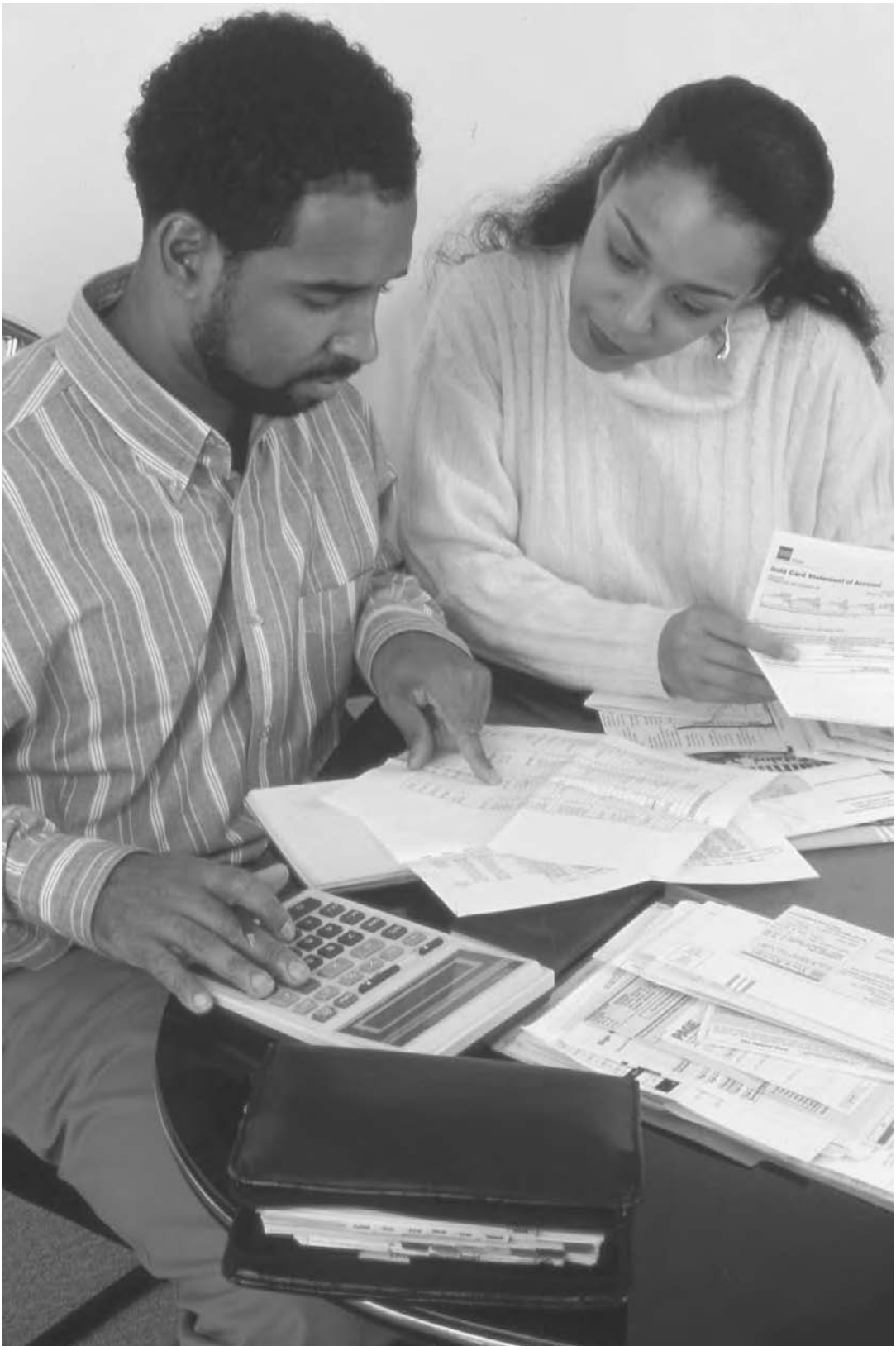
Family resource management, formerly known as home management, encompasses the study of the formation and use of resources to achieve the goals of individuals and families or households. Family economics, closely related to family resource management, deals with the family and individual use of scarce resources as determinants of levels and standards of living. Both fields emphasize the interaction of families and individuals with other social and economic systems.

Pioneers in family economics, Benjamin Andrews, Hazel Kyrk, and Margaret Reid were firmly grounded in economics and addressed decision making in relation to economic concerns of the household. Following publication of their seminal works in 1923, 1933, and 1934, a group of professionals differentiated home management from family economics by the emphasis on the use of resources for the optimal development of individuals within the family or household.

Family resource management and family economics both have roots in home economics. Since many college graduates in home economics until the late 1970s pursued work in education, coursework in home management (and later family resource management) was closely tied to requirements in home economics education. Two major texts served the programs: First was that authored by Irma Gross and her colleagues, in various editions up to 1980, and second, that of Paulena Nickell and her coauthors, published until 1976. The texts emphasized three primary managerial steps of setting goals, making plans, and controlling the plans in action. Beatrice Paolucci and her colleagues (1977) focused on decision making in everyday life and on the family as an ecosystem.

Beginning in the early twentieth century, home management in higher education used a unique kind of teaching laboratory known as the home management house. Across the United States and later in African and Indian colleges that were influenced by the United States, students resided in the houses for a period of time and managed the household, which in some cases included an infant. This experience emphasized the intrinsic nature of human values and the instrumental role of technology. Home management houses continued in the United States until the late 1960s, while they closed more slowly abroad.

Developments in industry influenced the direc-



Managing family resources (Laura Dwight)

tion of home management. Two wives of efficiency engineers, as efficiency experts are sometimes called, were especially influential in introducing efficiency methodologies in the home. The work of Christine Frederick and Lillian Gilbreth came to full fruition with World War II, when efficiency and work simplification received careful attention in industry, on the farm, and in the home. Research in time use began in earnest in the 1920s and continued as an important research topic in family resource management through much of the 1990s (Avery 1996).

Ruth Deacon and Francille Firebaugh in 1988 and earlier conceptualized the family system as containing personal and managerial subsystems, with much interchange across their boundaries. The managerial subsystem contains elements of planning and action. Deacon and Firebaugh take an ecosystem perspective on the family and give special attention to the interrelationships of paid and family work.

As women have joined men in expecting to be engaged in paid work and as technology has blurred boundaries between home and work, an even more broadened view of the formation and use of resources to meet individual and family goals has become essential (Chesley and Firebaugh 2002; Orrange, Firebaugh, Heck in press). Research has developed around entrepreneurship and home-based businesses and the management of family work and activities, including child care. (Hunts et al. 2000).

Today in higher education, courses related to family and work are found in the fields of Sociology, Human Development, and Organizational Behavior. Courses in family resource management are limited to programs in Human Ecology, Human Sciences, and Family and Consumer Sciences. Research on topics formerly encompassed in family resource management continues to a modest degree in Human Ecology but is also spread across many fields.

Francille M. Firebaugh

See also: Deacon, Ruth E.; Child Care: Issues for Infants and Children; Firebaugh, Francille M.; Management; Paolucci, Beatrice; Work and Families; Work-Family Conflict

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Family Systems Theory

Family systems theory is derived from general systems theory (von Bertalanffy 1968; Weiner 1948). Whereas general systems theory has been used as a paradigm for explanation across academic disciplines, family systems theory is specifically useful for understanding family behavior and adjustment. This framework has most extensively been used as a therapeutic paradigm for the assessment and treatment of families (Bowen 1978; Broderick 1993; Kerr and Bowen 1988; Minuchin 1974). The family systems framework proposes that the whole, in this case the family, is different from the sum of its parts, the individuals who make up the family. Specifically, this framework focuses on the interdependence, rather than the independence, of family members (Klein and White 1996; Whitchurch and Constantine 1993).

There are two basic elements of systems theory that translate into the fundamental elements of

family systems theory: recursion and feedback (Klein and White 1996; Whitchurch and Constantine 1993). Recursion refers to reciprocal causality. A systems perspective is unconcerned with simple causality, in which X causes Y; instead, the focus is on the reciprocal relationship between X and Y. In regard to families, meaning is derived from the relationship between individuals and elements as each defines the other. Each family system has a complex coherence structure based on the interrelatedness of members. It is inherently true, from a systems perspective, that a change in any one family member reverberates throughout the entire system—a change to one is a change to all.

Feedback, the second fundamental aspect of systems theory, involves processes that constitute self-corrective mechanisms. In regard to a system, the existence and quality of feedback influences whether a communication system will continue or discontinue. Two types of feedback, positive and negative, serve to increase the probability of the survival of the system. In order for a family system to sustain itself, the system must both remain stable and change when appropriate. If appropriate positive feedback is given, the system will remain stable; if appropriate negative feedback is given, the system will change as is needed. From a family systems perspective, the system is self-regulating, maintaining the integrity of the family system through both positive and negative feedback loops (Kantor and Lehr 1975).

Family systems theory also describes how a healthy system functions. Regardless of the content of interactions within families, certain processes are theoretically related to adjustment, while contrary processes are related to maladjustment. At any given time, a family system can be identified along a continuum between entropy and what is called negentropy (Beavers 1977). Nегentropic family systems are functioning toward maximum order. That is, patterns of relating in such families maximize the orderliness, maintenance, and survival of the family system. In contrast, entropic families tend toward maximum disorder and disintegration, such that the survival of the family is undermined. Family systems theory suggests that negentropic families maintain a balance between change and stability and between openness and closedness of boundaries.

Another way of putting it is that, because it is necessary for the family system in a healthy func-

tioning family, a negentropic family, to both change and remain stable, morphogenic and morphostatic tendencies must be balanced. Morphostasis refers to the tendency toward stability; morphogenesis refers to system-enhancing behavior that allows for growth, productivity, innovation, and change.

As every system does, each family has a set of implicit rules, of values and role expectations for individuals involved in the system. According to family systems theory, a family can be defined by these rules, also called boundaries, which identify and differentiate each family (S. Minuchin 1974; P. Minuchin 1985). These rules define what is right and normal for each family. The boundaries of a family system serve as a filter for information exchange between the system and other systems; for example, between the school and the family. Indeed, a healthy family has boundaries that are neither too permeable, nor impenetrable. The extent to which family systems allow information to flow in and out of the system determines the openness or closedness of the system. A balance between openness and closedness is associated with healthy family functioning. At times, a family has the resources to expose itself to change without threat to the identity of the family; at other times, exposure to other systems will stress the family system, rather than serving its functioning.

The healthy family system, in turn, fosters the healthy development of each of the family members, both by supporting individual development and by creating a model for maintenance of healthy systems relations. An individual's ability to handle stress and accommodate change, according to family systems theorists, is directly related to the ability of her family to maintain healthy functioning. Moreover, the level of functioning of an individual is transmitted through her differentiation of self, which involves the ability to function both independently and dependently (Bowen 1978; Kerr and Bowen 1988). Through the influence of an individual's family experiences, family systems patterns are transmitted through interlocking generations over time.

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See also: Family Paradigms; Family, Theories of
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Father-Child Relationships following Divorce

The question facing both fathers in particular and society as a whole at the dawn of the twenty-first century is: Are fathers to be—or not to be—a part of the human ecology of children? Unprecedented and conflicting changes have occurred in the American family over the past half century that have transformed father-child relationships and our expectations for the role of fathers in their children's lives. In the 1950s, both the divorce rates and the rates of unmarried motherhood were low, and as a consequence fathers could reasonably count on continuing contact with their children throughout the adult life-cycle. Beginning in the 1960s, however, the American family has undergone radical transformations, which continue today. The social context has changed to the extent that some feminists have declared fathers to be nonessential (Silverstein and Auerbach 1999). For some, America has gone from "father knows best" to father is nonessential.

Many family forms are present today in large numbers that were infrequent in the 1950s. In recent years, the percentage of children born to

mothers who were not married at the time of delivery has hovered around 33 percent; the first-marriage divorce rate around 50 percent, the permanent separation rate around 17 percent; and the step-family divorce rate around 60 percent (Hetherington and Stanley-Hagan 1997). What is of critical importance to society is that in virtually all of these events, it is the father-child relationship that is marginalized or severed. Of perhaps equal importance is the reality that this marginalization and severing of father-child relationships comes at the same time that nurturant father involvement in the lives of their children has become an issue of national concern (Braver and O'Connell 1998; Farrell 2001; Knox 1998; Parke and Brott 1999).

The father-child relationships of children born to never-married mothers is tenuous, and in any case beyond the scope of this article, which focuses on the consequences of divorce for children and fathers. The most powerful determinant of father-child relationships following divorce are the policies and practices of the family court system, which awards either sole custody or primary residential parental responsibility to the mother around 85 percent to 90 percent of the time. Fathers generally are awarded "visitation"—a term abhorred by father advocates, who view visitation as structuring the role of the father as a visitor in his child's life rather than as a meaningful parent. What this means for fathers and children is that they are living in different residences and see each other on a limited and fixed visitation schedule, which is determined by the courts or negotiated "in the shadow of the law." Thus, what was formerly daily father-child contact in a shared residence now becomes infrequent contact on a fixed schedule, with father and child living in different residences. Under these court-mandated circumstances, the father-child relationship is at greater risk of being marginalized or severed than is the mother-child relationship, since mothers and children continue to share a residence and have daily contact.

The risks of negative consequences for fathers and children as a result of the marginalization or severing of the father-child relationship with divorce appear to be substantial for both fathers and children. An early review of the literature (Thompson 1994) provides one of the best discussions of the issues to date. Ross Thompson's lasting contri-

bution was to focus on the division of the intangible assets of a marriage, the emotionally meaningful relationships between the former spouses and their offspring. While the dominant discourse on divorce at that time tended to focus on the division of the tangible assets of divorce (primarily financial assets), Thompson had the foresight to focus on the emotional relationships between former spouses and their offspring, as well as on the long-term impact of these relationships on the lives of fathers and children.

Consider first the consequences of divorce for fathers (Amato 2000; Braver and O'Connell 1998; Knox 1998; Parke and Brott 1999; Thompson 1994). Compared to mothers of divorce, fathers of divorce have higher—and often substantially higher—rates of: suicide, depression, alcohol abuse, drug abuse, poor health, work problems, relationship problems, and social isolation. Although numerous explanations for these negative outcomes for fathers have been proposed, those favored by father advocates focus on the loss of meaningful contact with their children. The core argument here is that postdivorce father-child relationships are of critical importance not only for the well-being of children, but also for the well-being of fathers. Additionally, some of these negative outcomes for fathers also likely stem from the changing role expectations for fathers that began in the mid-1970s. Beginning in the mid-1970s, fathers were increasingly expected by society to be involved in nurturing their children. At the same time, however, the opportunity structure for the father's nurturing involvement with his children was decreasing, due to increasing rates of divorce and unmarried motherhood. Such a conflict between changing role demands and changing opportunity structures hardly can be conducive to either fathers' or children's physical or mental health.

For children, the consequences of divorce are commonly negative. The most significant exception is that divorced children from high-conflict marriages fare better than children whose remain in high-conflict marriages. The negative consequences for children of divorce, as compared to children of intact families, are immediate, short-term, and long-term. Although there currently is intensive debate in the scholarly literature regarding the magnitude and subtlety of these negative effects, there nonetheless is substantial evidence to suggest that the consequences for children of di-

vorce are present and pervasive, and that they include higher levels of academic problems, a higher rate of dropping out of high school, conduct problems, poor psychological adjustment, psychological distress, poor self-concept, low social competence, precocious sexual activity, teen pregnancy, alcohol and drug use, long-term negative health consequences, and relationship difficulties in adolescence and adulthood (Amato 2000; Booth 1999; Emery 1999). There also is a growing realization that divorce does not affect all parties in the same way. Outcomes of divorce are mediated and moderated by a variety of factors inherent to different families, different children, different fathers, and different mothers, as well as by their social and economic context. Indeed, very recent longitudinal studies suggest that some of the negative outcomes of divorce for children formerly attributed to the act of divorce are manifested prior to the event of divorce. In short, the picture is complex and evolving.

While the consequences of divorce for the father-child relationship can be viewed from many different perspectives, the perspective least explored focuses on the voices of children of divorce themselves. One view comes from the longer-term, retrospective perspective of adult children as they look back on how they wished things might have been in their relationships with their fathers—their perceptions of the wants, regrets, and missed opportunities of father involvement caused by divorce. In a recent study (Finley and Schwartz 2001), a colleague and I asked children of both intact and divorced families “What *did you want* your father's level of involvement to be compared to what it actually was?” The critical results demonstrated that, as compared with adult children of intact families, what adult children of divorce wanted most from their fathers was companionship, sharing activities, leisure/fun/play, providing income, emotional development, and caregiving. What was most important to children of divorce were the emotionally meaningful intangible assets lost through divorce (Thompson 1994)—the “being there” assets of affection, emotional connection, and companionship with their fathers. If fathers and children are to be spared the suffering that goes with the current situation, then changes must occur in social attitudes, social policies, and social practices that reinvigorate the father-child relationship following divorce.

There are many changes that have the potential to enhance father-child relationships, including (1) restructuring the divorce industry to provide equal opportunity for both fathers and mothers to maintain meaningful postdivorce relationships with their children; (2) replacing the inherently adversarial family court system with one based on a vision of divorce as a social service rather than a legal service; (3) changing the dominant discourse on divorce to emphasize the research findings that show fathers and mothers to be equal in their parenting skills and capacities; and (4) reducing the use of false abuse complaints as a tool to gain a competitive advantage during custody disputes.

There is ample evidence to indicate that the filing of false abuse allegations during custody disputes has severe emotional, social, and mental health consequences for the child, for the targeted parent (mostly, but not exclusively, the father), as well as for the parent who filed the false allegation (as mediated through the increasingly disturbed behaviors of the child who served as the tool for the false allegation). Through proactive interventions, both the domestic violence industry and the divorce industry have the opportunity to better serve the best interests of the child by reducing false abuse allegations and prosecuting them when they occur. Such proactive interventions would maintain the falsely accused parent (again, most commonly, but not exclusively, the father) as an important figure in the human ecology of the child (Farrell 2001; Finley 2001; Tong 2002).

The interventions suggested above have the possibility of reinvigorating and enhancing postdivorce father child relationships. They contain the seeds of hope for improving the quality of life and well-being of all members of the former family triad—children, fathers, and mothers—as well as facilitating the transition to the uncertainties of postdivorce family life.

Gordon E. Finley

See also: Child Custody; Contemporary Men's Movement; Divorce, Children's Adjustment to; Divorce Mediation; Remarriage

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Feminist Ethics

See Ethics: A Feminist Perspective

Financing Homeownership

Owning one's own home meets the basic human need for shelter; it also ties individuals to the community. Compared to renters, homeowners move less often, are more involved in community activities, and are more likely to vote. In 1940, the homeownership rate in the United States was 43.6 percent. In 2000, it was at an all time high of 66.2 percent. Economic growth, tax incentives, and govern-

ment-regulated mortgage financing encouraged householders to participate in the American Dream (U.S. Census Bureau 2001).

Homeownership is an economic investment that usually requires financial arrangements. This entry includes explanations of types of mortgages and the qualifying process, as well as some discussion of the financial risks and advantages of homeownership.

Home Mortgages

Most residential real estate purchases are financed with a mortgage. A mortgage is a long-term loan on real property. In many states a mortgage is also a legal document that allows the lender to retain title to the property, or to place a lien or claim on the title. In other states real estate loans are secured by a deed of trust. A deed of trust transfers ownership to a trustee until the loan is paid in full. The mortgage document or deed of trust entitles the lender to repossess the property, or foreclose, if a borrower fails to make timely loan payments (Steinmetz 1998). In foreclosure the lender sells the property and uses the proceeds to pay off the loan and costs of foreclosure; any remaining proceeds are paid to the borrower.

Most individuals consider a home their most expensive purchase. The decisions about mortgage financing have significant long-term consequences for the household budget and financial well-being. Many factors affect the long-term costs of mortgage financing. Borrowers with excellent credit histories qualify for the lowest interest rates; lower interest rates mean smaller monthly payments. Depending on the number and severity of past debt problems, borrowers with poor credit histories may be denied a mortgage or offered mortgages at a high interest rate. Higher interest rates compensate lenders for the increased risk assumed by making a loan to an individual with credit problems.

PITI

The components of monthly mortgage payments are often referred to as PITI. The *P* stands for the principal, or the amount of the loan; the *I* refers to the interest payment; the *T* stands for the taxes involved, in this case property taxes; and the *I* stands for the insurance involved, in this case hazard insurance. The amount of each component will help determine the monthly payment.

Repayment Period

Mortgages with long repayment periods have lower monthly payments because the principal is repaid over more payments. The total interest costs, however, are higher. Many financial advisers recommend that borrowers find the best thirty-year mortgage available and make one or two additional monthly payments each year. In that way, a thirty-year mortgage will be repaid within sixteen to twenty years, saving the borrower thousands of dollars in interest and quickly building home equity.

Types of Mortgages

Fixed-rate mortgages have stable interest rates; monthly principal and interest payments are fixed for the whole repayment period. Although changes in property tax rates and hazard insurance may yield small changes in monthly payments, fixed-rate mortgages provide borrowers a sense of certainty.

Adjustable-, flexible-, or variable-rate mortgages allow the interest rate to change over the life of loan. Mortgage lenders assume less risk; they can raise or adjust the interest rate to match the financial market. Initial rates are usually lower than fixed-rate mortgages, making it easier for individuals to qualify. Adjustable-rate mortgages are especially attractive to borrowers who plan to remain in a home for a short period of time or for young professionals who expect salary increases. These borrowers may finance the purchase with an adjustable-rate mortgage, refinancing years later if they decide to stay, if rates for fixed-rate mortgages decline, or if their personal financial situation improves.

Conventional mortgages not insured or subsidized by a government program typically require a 20 percent down payment. Many first-time homebuyers find it difficult to accumulate a 20 percent down payment. To encourage homeownership among young householders and new immigrants, or to stimulate revitalization of urban neighborhoods, there are programs that offer financing with lower down payments for first-time homebuyers. Many first-time homebuyer programs will also subsidize closing costs, offer lower interest rates, and provide homebuyer education. Local housing agencies, nonprofit organizations, homeownership centers, the U.S. Department of Housing and Urban Development (HUD), and the Fed-

eral National Mortgage Association (Fannie Mae) are good sources of information about special programs for low- and moderate-income households interested in purchasing a home.

Qualifying and the Secondary Mortgage Market

Soon after the closing or purchase of a home, the lender will sell the mortgage on the secondary mortgage market. The secondary mortgage market consists of investors such as Fannie Mae and the Federal Home Loan Mortgage Association (Freddie Mac) who buy mortgages from lenders. Fannie Mae and Freddie Mac are private companies created and regulated by the federal government to ensure that mortgage funds are consistently available. The secondary market provides primary lenders with cash to make new loans; it also redistributes mortgage funds nationwide. During the qualification process the local lender attempts to compare a mortgage application with the underwriting guidelines of the secondary market or determine the worth of a potential mortgage on the secondary market.

The lender will verify the applicant's income and assets as well as review a comprehensive credit report. The lender will also use qualifying ratios to determine the maximum mortgage amount. Conventional lenders prefer the front-end qualifying ratio, the proportion of household income committed to the new mortgage payment, to be 28 percent or less. The back-end qualifying ratio, the proportion of household income committed to the new mortgage payment plus current debt payments, should be 36 percent or less. However, some special programs for first-time homebuyers have more flexible qualifying ratios.

Financial Advantages and Risks of Homeownership

Over the past fifty years, homeownership has generally been a wise investment, with property values appreciating significantly. On the other hand, homeownership is not a guaranteed investment. Local employment opportunities and home-building activities affect resale value; many homeowners have seen their home depreciate or decrease in value during a downturn in the local economy.

Personal Finance and Accumulation of Wealth

Housing costs are often the largest component of the household budget and affect the householder's

ability to make other purchases and investment decisions. Federal and state income tax codes provide incentives for homeowners. Property taxes and interest payments on the first mortgage and home equity loans can be deducted. In the first years of repayment interest payments are high, and deductions can be substantial.

Monthly mortgages payments are a type of forced savings; a portion of the payment reduces the mortgage balance and builds equity. Home equity equals the current market value minus the balance of the mortgage and other liens. Home equity is an asset providing owners significant financial flexibility. Home equity loans allow homeowners to borrow cash at favorable rates by using their housing as collateral.

Older homeowners, at least 55 years of age, with home equity can qualify for a reverse mortgage. Reverse mortgages can be used to meet living expenses or make home repairs and modifications. Reverse mortgages are insured by the Federal Housing Administration (FHA). A reverse mortgage is typically repaid with interest when the home is sold or a homeowner's estate is settled.

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See also: Homelessness; Homeownership as a Tool for Building Family Capital Assets; Housing; Housing Policy

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Firebaugh, Francille M.

The range and quality of significant contributions to the various dimensions of human ecology by

Francille Firebaugh, addressing matters relating to families and their members, can hardly be equaled or surpassed. As a committed contributor to the Land Grant System, Firebaugh has been involved during her career in the education, research, and service bases of the system, nationally and internationally. Her work has been directed toward empowering and strengthening individuals and families in their efforts to enhance and protect their social and living environments knowledgeably and responsibly.

Firebaugh's educational preparation was concentrated in time. Receiving the B.S. degree in Home Economics Education at the University of Arkansas in 1955, she went on to the University of Tennessee, where she received the M.S. degree in Home Management and Family Relationships in 1956. After two years as an instructor at the University of Texas–Austin, she enrolled at Cornell University for a doctoral degree, receiving the Ph.D. in Household Economics and Management in 1962.

All of Francille Firebaugh's employment has been in higher education. In addition to the two years at the University of Texas–Austin, she moved through the academic ranks during her eleven years at Ohio State University (OSU) in the School of Home Economics in the area of family resource management. She both taught, primarily graduate education, and held a research appointment with the Ohio Agricultural Research and Development Center. Early on, her focus as to content was on the work of the home, continuing from her doctoral study. She has made major contributions through published articles on her research both on household work and, increasingly, its management. Her management interests led to the conceptualization and development of a theory of family resource management. Rooted in systems theory, her conceptualization of family managerial processes emphasized interactions within the family unit in relation to external environments. She coauthored two major texts on the subject, one with two editions. Along the way, she also assumed the role of principal family economist with the U.S. Department of Agriculture–Cooperative State Research Service for six months.

Graduate education was significant to her academic leadership; her students have gone on to assume leadership roles in academic and other institutions. Dr. Firebaugh was the major adviser for twelve doctoral students.

Her administrative leadership for programs began with her appointment in 1973 as director of the School of Home Economics, Ohio State University. She held this appointment until 1982, when the school was positioned to move to college status. At this point, Dr. Firebaugh assumed the role of acting vice president for Agricultural Administration and executive dean, Agriculture, Home Economics and Natural Resources, OSU. Following that year, she joined the provost's staff in the Office of Academic Affairs, OSU, and in 1982–1983 she served as acting vice president for Academic Affairs and provost, OSU.

Recognition needs to be given to the considerable contribution she made to her field along with her administrative responsibilities. Her expertise in her subject matter continued to bring numerous requests for speaking engagements and consulting. Also, with her clear program leadership, these requests broadened into national committee appointments, consulting and speaking commitments through which her understandings of the field and its direction have continued to be influential.

Her leadership at OSU culminated with her four years as vice provost for International Affairs, Office of Academic Affairs. Here, her international interests could be given full scope, and a number of significant projects and relationships, university-wide, were initiated. During her time at OSU, her international teaching and consulting activities took her to Afghanistan, Cameroon, Egypt, Ghana, India, Italy, Malaysia, Spain, and Taiwan. She maintains international interests through membership on the Board of Trustees of Escuela Agrícola Panamericana, a college located in Honduras.

Francille Firebaugh's eleven years as Dean of the College of Human Ecology at Cornell University gave her an opportunity that few have had to cap an academic career. During the period, her achievements were remarkable: minority enrollment increased; the Bronfenbrenner Life Course Center was established; conferences were held on time use, on the history of home economics, and on the college's achievements and leadership in human ecology; a new department, Policy Analysis and Management, was formed; major improvements to the college's facilities were made; and the endowment for the college was augmented by successful development efforts.

The following recognitions and honors are only

illustrative of the many she has earned over the course of her career; Meritorious Service Awards, College of Agriculture and Home Economics, 1978 and 1983, and College of Human Ecology, OSU, 1984; Who's Who in America, 1991 to present; Fellow, Society of Human Ecology, 1995; Alice H. Cook and Constance Cook Award, Advisory Committee on the State of Women, Cornell University, 1995; Distinguished Service Award, American Association of Family and Consumer Sciences, 1995; Helen Bull Vandervort Alumni Achievement Award, College of Human Ecology, Cornell University, 2000.

Firebaugh's Honor Society Memberships include Sigma Delta Epsilon, Women in Science, OSU; Phi Kappa Phi, Cornell University; Sigma Xi, Science, OSU; Kappa Omicron Nu, Human Ecology, University of Tennessee; Phi Upsilon Omicron, Home Economics, University of Arkansas; Phi Beta Delta, International Education, OSU.

Since Francille Firebaugh's retirement from the College of Human Ecology, she has been on special assignment at Cornell University as Vice Provost for Land Grant Affairs and special assistant to the president, Cornell University. Firebaugh's broad human interests, capabilities, and achievements are exemplary; her distinguished career embodies the character and objectives of human ecology.

Ruth Deacon

See also: Cooperative Extension System (CES); Family Resource Management

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Food Product Development

The process of food product development (FPD) begins within companies and is driven by their need to remain profitable. In order to be successful, these companies have to provide products that the consumer will purchase. This kind of success is only possible if the development process involves taking an ecological perspective, addressing the real or perceived needs of people in relation to their environment. Consumer needs arise, for example, from changes in consumer behavior related to nutritional requirements based on age or gender, time constraints of families and individuals, cultural influences, and packaging and recycling needs.

Food Product Development Process

New product development can be defined as "the development and introduction into the marketplace of a product not previously manufactured by a company," or the introduction of an existing product into a new market (Fuller 1994, 2). In order for companies to remain fiscally solvent, they need new products in the development phase that will be ready to replace others. As products reach maturity, consumers often lose interest in them, and sales decline. For this reason, product development has often been described as the lifeblood of a company.

Food product development consists of several phases, which often overlap; it is carried out by a team composed of business and technical personnel. The first step usually involves an assessment of market opportunities, which means identifying consumers' needs or the needs of a market segment. New ideas generated may come from people within the company, using total market analysis, or from external sources such as new restaurant

foods, trade shows and literature, libraries, government publications, and consultants.

Ideas must then be screened for technical and business feasibility. After a concept statement is formed that describes whom the product is for, what it looks and taste like, a prototype product is developed. The prototype must then be evaluated by obtaining information on ingredients, packaging, equipment, and consumer acceptability. Changes in the product are made, based upon this information and input from the product development team. Decisions must be made whether to go ahead with the new product or to stop development. If the decision is to continue, the product can be manufactured and placed into a test market or into limited regional distribution. The product development process is a dynamic one that depends upon feedback from the various team members. Good feedback increases the likelihood of producing a successful new product that fulfills consumers' wants and brings in a profitable return for a company's efforts.

Consumer-Driven New Food Product Development

Since consumers are increasingly viewed as the principle drivers of new product development, it is important that developers gain an understanding of what consumers' needs are by conducting well-designed research. These needs vary depending upon consumers' age, gender, income, education, marital status, household size, and racial and ethnic backgrounds. In the past products were developed for the mass market. Today market researchers must locate the consumers who have the greatest need or desire for a particular new product and will be most likely purchase it. Products that don't have broad consumer appeal may be appropriate for a specific type of consumer, or a niche market.

Families have become smaller and more diverse in size and make-up. Thus, new food products must also meet these families' new needs. Single parents have less time available and need to prepare foods quickly with little clean-up time. Often children and teenagers are home without adult supervision and need to prepare snacks and meals. Of children aged 6–17, 88 percent have made meals for themselves (Nickelodeon/Yankeovich 1990). Most parents want foods that are easy to prepare, preferably with some nutritious

value, and safe for these seven million latchkey children (5–14 years old) to prepare with little mess (Census Bureau 1999). Even in two-parent homes, if both are working outside the home, time is at a premium. Twenty-five percent of women work forty hours per week. American workers have lost three hours of leisure time per week (Labor and Statistics 2000; Wellner 2000) over the past three years. The higher incomes brought in from these families are often used to purchase products that cost more but save time (Sloane 2001). Foods that fulfill these needs are called "value-added" products, for example frozen prepared french fries instead of a fresh potato. The frozen bagged, prepeeled, shaped, and precooked potatoes can be put in the oven and be ready to serve in 15–20 minutes. Consumers are willing to pay more for this prepared product that saves time. Desire for convenience is a strong driving force to which product developers have responded and continue to respond.

Children typically make their first purchasing decision in supermarkets, where they influence at least 17 percent of family food purchases (Economic Statistics 2000; Sloane 2001, 49). There are about 61 million 5–19 years olds who increasingly have more money of their own to spend. Food product developers have responded to these markets with foods that have bright colors and are often fun and silly; they may be unappealing to older adults, but they are hits with kids.

Consumers are becoming increasingly mobile, as demonstrated by the surge in cell phone usage. More and more meals and snacks are eaten while on the go, in the car or at a work desk. Women and men spend over an hour a day in the car. This lifestyle shift provides product development opportunities in "hand-held foods such as appetizers, snacks, and light pocket meals." These types of foods can also provide opportunities for socializing and ways to sample the new ethnic cuisines that are becoming popular (Sloan 2001).

Consumers are becoming more health conscious and taking more responsibility for maintaining their own health, demanding high nutritional value in their food. Beyond basic good nutrition, people are increasingly looking for functional foods that are fortified with micronutrients and herbal supplements, and promise health and performance enhancement. Natural and fresh foods are becoming more popular, and there has

also been an increase in demand for vegetarian foods. Aging baby boomers are particularly interested in reducing the risk of heart attack and cancer through a vegetarian diet, which typically has high fiber, lower cholesterol, reduced saturated fats, and lower total fat. The lower fat content of vegetarian meals can help improve the endemic problem of teenage and child obesity. Food product developers are already taking notice of this new market, and the intelligent consumer needs to be well informed about nutrition to evaluate the claims they make.

Conclusion

Food product development is a process in which large and small companies engage to remain profitable. By providing products that meet consumers' needs they can achieve their business goals and those of the consumer. Market research helps to identify consumers and trends that provide opportunities for new product development. Changes in society affect the lives of families and children, and what they desire and therefore what is required of food products. This drives the food product development process.

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See also: Nutrition Assessment

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Foodservice Industry: Evolving Personnel Practices

Agriculture production, distribution, and market-

ing impact the lives of all American families. All facets of the agriculture and food industries need to function well so that high quality and affordable food is available to serve the health and welfare of children and families. The people who work in those industries must therefore be motivated and productive employees in order to assure that a high-quality food system exists for the people of our nation.

Personnel practices in the foodservice industry have advanced markedly within the last century. As our understanding of human needs and motivators increases, so too does the incorporation of that understanding into managerial and personnel practices. Employee management techniques that were commonplace in the foodservice industry as recently as the 1970s are now considered flawed and outdated. These old, or classical, styles of management were typically autocratic, based on a pessimistic view of the employee. Employees were thought to have no value to the organization beyond the work that their hands could accomplish. Communication was unidirectional, top down, and worker input was routinely rejected. Although this style of management is still found within the industry, it is now more common to find enlightened approaches to employee management. These new approaches promote employee involvement in the workplace. Management has discovered the interdependency of employee satisfaction and organizational outcomes. It is understood that each individual worker has ideas, energies, and experiences that can contribute to fulfilling the operation's mission. The synergies that result promote competitive advantage and organizational success. These new practices have proven their worth as today's employment and competitive environment continues to tighten.

In 1813, Robert Owen, a Scottish textile mill manager, reported a 50 percent increase in return on investment as a result of paying attention to the workers and their interests. Prior to this time there was little concern for the employee. Even with Owen's results, little changed in management practices until Fredrick Winslow Taylor, Lillian Gilbreth and Frank Gilbreth (1916), and Henry L. Gantt (1917) applied scientific analysis to work methodology. These theorists emphasized motion economy and performance standards to reduce costs and increase worker productivity. The new scientific management, however, typically did not bene-

fit the worker. Though the employee was taken in account in the development of work processes, it was only to determine the most efficient work design. The humanity of workers, their energies and motivations, continued to be ignored components of the productivity equation.

The Hawthorne studies produced the opening salvos of the human relations movement. The Hawthorne studies indicated that changes in work environment, social conditions, and work supervision methods served to increase output and employee morale. The human relations movement recognized the interrelationships between the employee, management, work, and organizational outcomes. It brought consideration of employees and their needs into the management spotlight. Though this movement failed in practice, consideration of the employee became as much a part of management's job as production and profits.

Management research expanded to include the identification of effective leadership styles and their impact on productivity and employee satisfaction. No longer were employees thought of as an undisciplined, lazy herd to be driven to work but as a motivated, ambitious, and creative workforce in need of leadership. During the 1960s, Ohio State and the University of Michigan conducted studies of leadership that sought to characterize the most effective leadership styles. Both studies found that managers who had both a high employee orientation and a high production orientation tended to have higher-performing and more satisfied subordinates. The production-only emphasis of classical management was insufficient, as was the human-only emphasis of human relations management. However, the two emphases when used together yielded improved productivity and improved employee satisfaction.

Theory and practice have grown even further since that discovery. Theory Z, also called participative management, suggests that involved employees provide greater productivity. Total quality management theory (TQM) suggests that organizations must shift from management-driven to employee-driven and from product-centered to customer-centered. This TQM shift changes management from employee-directive to employee-supportive. Management guidance and support rather than direction and control free the employee's inner creativity and energy to provide customer satisfaction. In this manner organizations

achieve optimal output and competitive success through the synergistic effects of teamwork and employee ownership of operational plans and goals. Some key tenets of TQM philosophy:

An organization exists to satisfy the customer. Management and labor must cooperatively develop the process by which customer satisfaction is achieved.

Management's job is to support, rather than direct, the employees' efforts to satisfy the customer.

Certainly, personnel practices and theory will continue to evolve as our understanding of human needs and motivations grows. Even at this point, however, personnel practices have changed from treating employees as mindless drones to recognizing the interdependency between organizations and their human elements and valuing the energy and input that employees can bring to the workplace.

It would be gratifying to say that personnel practices evolved more quickly in the foodservice industry than in other industries. After all, foodservice is a people business. However, this is not generally the case. Much of the research in human resource and personnel management has been done in the manufacturing sector. It wasn't until the 1980s that a textbook specifically covering human resource and personnel management in the hospitality industry was published. This lack of focus on the issue and an abundant labor market served to delay the interest in and need for effective personnel practices. However, that changed drastically in the 1980s. The abundant labor market evaporated as the U.S. economy grew and the number of foodservice operations increased, leaving more operations drawing from a smaller labor pool. Consequently, the foodservice industry made good use of the research and theory generated in the manufacturing sector. Personnel practices leapt from the old style straight into participative and TQM management styles. Employee empowerment, participative management, employee development, cooperative goal setting, and more are now part of the foodservice manager's vocabulary and daily routine. Managers recognize that the human element is an integral and irreplaceable component of the foodservice product. Manage-

ment practices have been adjusted to account for this fact. It is finally understood that a satisfied and successful employee is the cornerstone of a successful organization

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Foster Care

In Western culture, when children are thought to be unsafe in their families, they are put in the homes of surrogate parents until the unsafe circumstances can be fixed. There are many influences that make households harmful or unsafe for children. Similarly, there are many reasons why the circumstances remain unfixed and children remain in foster care for a long time or eventually get put up for adoption. Unhappily, even though foster care is the program intended to rescue children from inadequate or damaging environments, the foster care system itself may also be detrimental or contribute to further problems for the child.

Child maltreatment, in the form of either abuse or neglect, occurs when adults either are unaware of their children's needs or, aware of these needs, are unable or unwilling to provide the appropriate response. Originally, experts believed maltreatment was caused by single factors, such as poverty, substance abuse, or parental attitudes and maladaptive personality traits. Currently maltreatment (or appropriate care) is better understood as a product of interacting ecosystemic influences, including societal and community attitudes and resources, parental attitudes and coping resources, and the children's attitudes, behavior, and coping

resources. In any one case of child abuse or neglect, different factors may have more or less influence.

The process of foster care begins when a court decides that it is too dangerous for children to live in their home. This decision may occur when family members inflict physical injury on the children because of anger, cruelty, or bad judgment about discipline. Other problems might include sexual abuse, abandonment, or failure to provide adequate shelter, clothing, nutrition, supervision, health care, love, or attention. Children may also be exposed to extreme sexual or aggressive behavior between the adults. One parent may not protect the children from seeing or experiencing the abusive behavior of the other parent or another adult in the home.

Probably more children in foster care are neglected than abused, but many have experienced both. How badly children are harmed by such terrible things depends on many factors, including their age when the abuse or neglect occurs, how long it goes on, how many things happen and how extreme they are, and the role of the primary caretaking parent. The majority of the children in foster care are under 6 and therefore do not have good coping resources. Abused children are often terrified and cannot trust adults to protect them, which typically results in withdrawal or bad behavior. Neglected children may be born addicted to substances or suffer prenatal damage by the mother's drug use or poor nutrition. Babies may fail to thrive physically, psychologically, and socially, and all children—infants, toddlers, and preschoolers—may not develop normally with regard to physical skills, intelligence, language acquisition, the ability to regulate their emotions, and social skills. Later in their childhood, children who have been either abused or neglected have a higher rate of learning and social problems in school and social problems in general, including delinquency and substance abuse.

When maltreatment is suspected in a home, the children are taken to a safe place while they, their parents, and their household environment are assessed. A judge determines if circumstances warrant an immediate return home or not. If the home is not deemed sufficiently safe, a contract specifies what needs to be done for the children to return home. This may include change of housing, increase of income, removal of an adult, cessation of substance use, and acquisition of additional par-

enting resources. The children are often assessed and treated for problematic conditions that may have existed before and after being placed in foster care. Court hearings decide if and when it is safe for children to be returned to their parental home. If the circumstances dangerous to the children do not change and appear to be unlikely to change, the court may sever parental rights and make the children available for adoption. The court often takes this course when the parents are not physically or emotionally available for rehabilitation, as in cases of serious substance dependence, sexual abuse, and some kinds of physical abuse.

Foster care can be hard on children, especially in their first three years of life. Children are removed from their primary caretaker and given over to a stranger in a strange household. Often they are separated from their brothers and sisters. Uneasy and mistrustful, children often misbehave after a honeymoon period. The new adults and siblings may react negatively to this misbehavior, and the upset child may be moved to other homes, a process that may confirm the child's fears and lead to more emotional and behavioral upset. In an attempt to minimize some of these consequences, children are increasingly being placed in the homes of relatives. In many locations, approximately half of the foster placements are placed in kinship care.

Of children who are removed from their homes, half spent less than one year in care and about 60 percent of them were returned to one or both parents. Unfortunately, many children remain in care for long periods, sometimes indefinitely. This is called foster care drift, and it is especially harmful to children. Children and adults are inhibited from making strong emotional investments in impermanent relationships, and there is an increased probability that these children will suffer intellectually, psychologically, emotionally, and socially. If their problems are severe, they may be called special-needs children, making them harder to place in foster and adoptive homes. Therefore, the government often provides funding for services to help in that transition.

At a societal level, foster care has been shaped by a succession of federal laws, including the Child Abuse Prevention and Treatment Act (1974), the Adoption Assistance and Child Welfare Act (1980), the Child Abuse Prevention and Family Services Act (1988), and the Adoption and Safe Families Act

(1997). Nevertheless, foster care is the responsibility of the individual states. It typically is administered through the state departments of social services in collaboration with the county courts and is responsive to all three branches of state government. It is estimated that the cost of out-of-home care in 1998 was at least \$9.4 million (Bess, Leos-Urbel, and Geen, 2001). This, of course, does not include the bio-psycho-social costs to all parties involved, including the child, community, and nation. Those costs accrue immediately and over the years, as these children move into adulthood with their many special needs, including the possibility of repeating the cycle with their own partners and children.

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Jason B. Whiting

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4-H Youth Development

The ecology of human development is composed of the relations between individuals and organizations. Over time, these relations shape the course of human life. In the United States numerous organizations have been developed to foster healthy, positive relations between individuals and their communities. A key one across the last hundred years of American history has been 4-H.

4-H Youth Development is one of the largest and oldest youth-serving organizations in the United States, combining the efforts of state land-



Adolescents in the 4-H program (Skjold Photographs)

grant universities (e.g., Michigan State University, Ohio State University, Pennsylvania State University), federal, state, local governments, and the Cooperative State Research, Education, and Extension Service (CSREES), a part of the United States Department of Agriculture (USDA). 4-H Youth Development represents an ecological perspective, both in philosophy and in delivery of the 4-H program. It conducts 4-H programs in all 3,067 counties of the United States, the District of Columbia, the Commonwealth of Puerto Rico, and the five U.S. territories. The 4-H Youth Development programs impact youth from all ethnic, racial, and socioeconomic backgrounds, it impacts those who live in rural, suburban, and urban communities, for a total of more than 6.8 million participants, of whom 30 percent represent minority populations (National 4-H Council 2001b). 4-H Youth Development serves youth through a variety of methods, including organized clubs, school-enrichment groups, special interest groups, individual study programs, camps, school-age child-care programs, and instructional television programs. 4-H Youth Development has more than 610,595 youth and adult volunteers working directly and indirectly with these youth. At the beginning of the twenty-

first century, more than 45 million people are 4-H alumni (National 4-H Council 2001b).

History

4-H Youth Development has a long history, and it celebrated its hundredth birthday in 2002. Its earliest beginnings are rooted in the land-grant university system, established with the passage of the Morrill Acts, the Hatch Act, and the Smith-Lever Act. The Morrill Acts of 1862 and 1890 established the land-grant college system (today known as the land-grant university system), “creating colleges of agriculture and mechanic arts in all of the states” (Duncan 1970). The Hatch Act was passed in 1887, establishing Land-Grant University Agriculture Experiment Stations that conducted research to inform local citizens of each state.

In 1914, the Smith-Lever Act created a partnership between the USDA and the land-grant universities, thus creating the Cooperative Extension System (CES), currently the Cooperative State Research, Education, and Extension Service (CSREES) (SeEVERS et al. 1997). By establishing CSREES, this act created the outreach arm of land-grant universities, of which 4-H Youth Development is a part. Located at all land-grant universities, 4-H

Youth Development is a dynamic nonformal educational program for young people. 4-H Youth Development programs work across the country to assist youth in developing knowledge, skills, and attitudes that will enable them to become productive and contributing members of society.

During the late 1880s and the early 1900s, the 4-H Youth Development program slowly evolved. In the late 1800s, Liberty Hyde Bailey at Cornell University, O. J. Kerns at Illinois Agriculture Experiment Station, and Will B. Otwell, working with the Farmer's Institute, all developed youth programs that focused on agriculture issues. Then in the early 1900s, a wide range of youth development initiatives were begun by individuals such as Seaman A. Knapp from the United States Department of Agriculture, A. B. Graham, an Ohio school principal, A. F. Meharg of Mississippi State College, and William Hall Smith in the Midwest. Moreover, in 1904, Captain E. Miller, from Keokuk County, Iowa, developed a county organization for boys and girls that included officers and had educational programs for the participants. Many of today's programs are attributed to Miller's early efforts. Miller's program included life skills and learning by doing through projects, group meetings, exhibits, and community service projects (Cooperative State Research, Education and Extension Service 2000b). During this time, E. C. Bishop in Nebraska was promoting work with corn growing, sewing, and baking projects. In 1906, Seaman Knapp hired Thomas M. Campbell, an assistant to George Washington Carver at the Tuskegee Institute, who began organizing youth clubs among African American boys and girls. In 1909, Meharg and Smith, with recognition from Knapp, established an outline of a cooperative venture between county officials, the state land-grant colleges, and the federal government for agricultural programs for young men and women. In 1911, E. C. Bishop became the first person to be a full-time state club leader in Iowa (Cooperative State Research, Education and Extension Service 2000b). From 1905 to 1914, clubs were started in almost every state.

Today's 4-H Youth Development Program

4-H Youth Development continued to grow, and now it is an organization of over 6 million young people with programs in every county in the United States, Puerto Rico, and the territories. Today, the 4-H Youth Development program fo-

cuses on creating environments, within multiple systems, that foster and promote young people's ability to reach their fullest potential.

Historically, 4-H Youth Development was a program for young people in agricultural areas. However, today only 10 percent of 4-H members live on farms, with over 50 percent living in the suburbs and central cities of America. The program seeks to promote the positive development of all young people in all communities by offering a nonformal education program that offers experiential learning opportunities. The 4-H Youth Development Pledge provides the philosophical foundation for 4-H Youth Development. It states:

I pledge . . .

- My Head to clearer thinking [decision-making knowledge that is useful throughout life]
 - My Heart to greater loyalty [strong personal values, positive self-concept, concerns for others]
 - My Hands to larger service [workforce preparedness, useful skills, scientific and technological literacy]
 - My Health to better living [healthy lifestyles]
- For my Club, my community, my country, and my world.

This foundation fosters the positive development of young people and encourages their participation in their community through service. The programs available are diverse—with over 110 different programs to choose from—such as science and technology, earth sciences, and arts. “Today 4-Hers can be found building model rockets, organizing canned food drives for the needy, raising guinea pigs, delivering a speech before local government officials on issues critical to youth, and much more” (National 4-H Council 2001b). More specifically, in 2000, 4-Hers were involved in the following eight project categories:

597,685 in Citizenship and Civic Education
 996,307 in Communications and Expressive Arts
 542,679 in Consumer and Family Sciences
 1,346,314 in Environmental Education and Earth Science
 1,792,841 in Healthy Lifestyle Education

1,782,312 in Personal Development and Leadership
 2,790,250 in Plants and Animal
 1,248,245 in Science and Technology
 (National 4-H Council 2001a)

One example of 4-H Youth Development programming is a 4-H group that focused on Environmental Education and Earth Sciences. These youth each picked a specific environmental issue relevant to the area in which they lived, such as the invasion of zebra mussels into the Great Lakes, the effect of fertilizer on ground water, or issues facing rural communities experiencing urban encroachment. They conducted research for a year, finding and reading articles relevant to their project, talking to researchers and others involved with the issues, and finally discussing these issues as a group. Next, they each prepared a report outlining the problem and made recommendations about the best ways to address the specific issue. As a group, they prepared a report outlining the different problems they had studied along with their recommendations for addressing these specific issues. They were then invited to appear before their state legislative body to give their reports and recommendations. This experience offered these young people the opportunity to learn important life skills (e.g., public speaking, research skills, and problem-solving skills) and to contribute to their community.

4-H Youth Development has expanded over the years to include the International 4-H Youth Exchange (IFYE) program, offering young people the opportunity to travel abroad and live with a host family. This program offers an experience of immersion in the culture, language, and customs of the particular country. Young people are involved in a wide variety of activities during their time abroad (e.g., agricultural work, volunteering, helping conduct a 4-H club). These experiences are designed to increase a young person's "global awareness, develop independent study interests, and improve their language skills" (National 4-H Council 2001b). The IFYE program spans the globe, offering exchange opportunities in a wide variety of countries (e.g., Australia, Japan, Africa, Poland).

Volunteers

4-H Youth Development is a volunteer-driven organization, unlike other organizations where

young people interact with paid staff. Currently, there are more than 610,000 youth and adult volunteers (National 4-H Council 2001b). Volunteers are a critical part of the 4-H Youth Development program because they provide the essential day-to-day leadership for the community club program and support to the young people. They work directly with young people to identify a specific program area of interest, work with the young person either individually or as part of the club to complete projects, and offer young people the opportunity to demonstrate their knowledge through a public presentation, a county contest or recognition for a job well done.

Conclusion

From the earliest programs of corn clubs for boys and tomato canning clubs for girls to today's computer science clubs and environmental clubs for all youth, 4-H Youth Development has continually striven to promote the positive development of young people by offering them the opportunity to develop the critical skills needed for success in adulthood. 4-H Youth Development continually strives to reach its goal, expressed in its motto:

To Make the Best Better

Lynne M. Borden

See also: Community Youth Development; Cooperative Extension System (CES); Intergenerational Programs in Communities; Youth Development

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Freud, Anna

Anna (or Annerl) Freud (1895–1982), founded the field of child psychoanalysis and established the field of ego psychology through her seminal publication in 1936 of *The Ego and the Mechanisms of Defense* (1946). The work of Anna Freud transcended the theoretical. The majority of her work focused on the application of psychoanalytic techniques in families, schools, and clinics.

Anna Freud was the sixth child, youngest of three daughters, born to Sigmund Freud, originator of the theory and technique of psychoanalysis. Influenced by early readings of her father's work, her own analysis by her father, and her experiences as a teacher, she committed herself to extending her father's work in two ways. She suggested that the ego rather than the id is the salient structure of the mind in children, as the developing ego forms through experiences with the environment. Second, she proposed that the study of child development must be conducted through observation of children, in contrast to retrospective reports of childhood offered by adults.

Anna Freud established herself not only as a theoretician, but also as an applied psychoanalyst. She was instrumental in translating the tenets of psychoanalytic theory into strategies that could be used by laypeople to support the development of children and adolescents. This focus can be seen clearly from the thesis of her first book, *Introduction to the Technique of Child Analysis for Teachers and Parents* (1927), through her later endeavors, which included the establishment of the Hampstead War Nurseries in 1940. This clinic offered free psychoanalysis for disturbed children and established the world's first full-time training course in child psychotherapy to care for children who had been abandoned during the war and children who were poor.

Theoretically, the most well-known psychoanalytic contribution made by Anna Freud was her elaboration on adult mechanisms of defense and delineation of mechanisms of defense used by children in *The Ego and the Mechanisms of Defense* (1946). In this piece of writing, Anna Freud argued that psychoanalysis could only be appropriately applied to the study of the ego; in comprehending the unconscious, we must be able to understand the transformations that have been applied to id impulses in order for unconscious impulses and ideas to be expressed verbally. She suggested that

the ego serves to sustain the health of the developing child by defending first against objective anxiety caused by situations in the environment before the superego is formed, then against the strength of the id impulses, and finally against the protests of the superego.

In regard to children, Anna Freud suggested that what the child fears is punishment, or the withdrawal of affection and care, and she described five ego defenses that are adaptive during childhood:

- Denial in fantasy is the denial of reality through the conjuring up of a fantastical story or image, which protects the child from a knowledge of his helplessness and dependence;
- Denial in words and actions is used to confront fear through fantasizing the opposite to be true in order to alleviate the fear;
- Restriction of the ego is used to avoid a situation and channel energy and enthusiasm elsewhere, in an attempt to avoid the fear associated with a possible negative reaction from the environment;
- Identification with the aggressor is a method of mastering anxiety by assuming the opponent's qualities through introjection; and,
- Altruism serves by satisfying the child's desires and needs through another person.

Anna Freud published *The Psychoanalytic Treatment of Children* (1946) as a manual for understanding how the psychoanalyst could use concepts of child ego defenses to understand and treat the behaviors of children. This work was distributed to parents, teachers, and analysts in order to support the healthy personality development of children. From the 1950s to her death in 1982, she traveled internationally to deliver lectures on child development, education, parenting, and the justice system and children. The legacy and work of Anna Freud is carried on through training in child psychology programs and the Anna Freud Centre, in London.

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See also: Ego Development; Freud, Sigmund References and Further Reading

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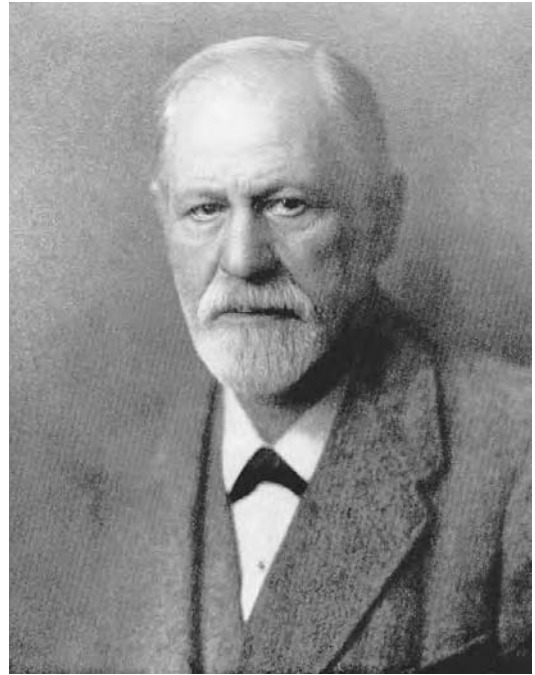
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Freud, Sigmund

Sigmund Freud (1856–1939) proposed the first and most comprehensive theory of personality development; he is known as the father of psychoanalysis. The central focus of Freud's work was on the relationship between the development of mental structures of the mind, id, ego, and superego (Freud 1923/1961; 1933/1964), and the levels of mental life, the unconscious, preconscious, and conscious (Freud 1917/1963; 1933/1964). Psychoanalysis is both a treatment technique and a theory. Both technique and theory are concerned with the formation and organization of individual development and adjustment as outcomes of the ability to negotiate and balance social stressors.

Sigmund Freud was born in Moravia but spent the majority of his professional life in Vienna, working out of Bergasse 19, now the Sigmund Freud Museum Vienna. In addition to his prolific contributions of scientific writing and meeting presentations, Freud built the field of psychoanalysis through the founding of the Vienna Psychoanalytic Society (1908) and the International Psychoanalytic Association (1910). Through his mentorship, he influenced the work of many who wrote in the psychoanalytic and neo-psychoanalytic tradition, most notably Anna Freud, Carl Jung, Alfred Adler, and Erik Erikson.

Freud's treatment technique, psychoanalysis, developed out of his work with Joseph Breuer, who had proposed that the "talking cure" could relieve individuals of anxiety and emotional symptoms (Breuer and Freud 1895/1955). Freud's rendition of Breuer's technique, free association, remains the core method of symptom reduction through psychoanalysis. This technique, according to Freud, allows the client access to the unconscious, or subconscious, where anxiety-provoking thoughts and experiences, which serve as the seeds of neurosis, are deposited (Freud 1926/1959). Theoretically, psychoanalysis alleviates the neuroses of clients: Once access is gained to unconscious thoughts and experiences that were associated with anxiety, the power of the neurosis is rendered obsolete. Through Freud's work with patients suffering from neuroses, he became passionate about laying out his theory of normal versus abnormal personality



Sigmund Freud (Library of Congress)

development.

Central to Freud's theory of normal personality development is based on his notion of the three structures of mind: the id, the ego, and the super-ego (Freud 1923/1961; 1933/1964). Clearly influenced by scientific developments in scientific fields such as physics and Darwinian theory, Freud posited that individuals were born with finite amounts of energy, which are transferred to specific regions of the body in a universal sequence (Freud 1933/1964; 1915/1957; Gay 1988). The transfer of energy is motivated by maturation and exposure to the environment in accord with the life instinct, which ensures the survival of the individual and the species. This life instinct (libidinal or sexual energy) is carried by the id through five stages of development: the oral, anal, phallic, latent, and genital stages, respectively (Freud 1905/1953; 1923/1961; 1933/1964).

The first three stages are all considered stages of infancy (Freud 1917/1963). According to Freud, these three stages are the most salient developmental stages because it is during this stage that the foundation of personality is formed. During the first stage, the oral phase, libidinal energy is centered on the oral region, or the mouth. In terms of normal personality development, the in-

fant learns to receive pleasure through the mouth (sustenance). In turn, this pleasure reduces the anxiety that the infant experiences from the need for nourishment. This experience begins the cycle of personality formation as a function of the ability of an individual to get her needs met by her environment. The ego, the second structure of the mind, forms out of the infant's interactions with the environment. While the sole function of the id is to transmit libidinal energy, the function of the ego is to interact between the demands of the id and environmental demands placed in the individual.

During the second stage, the anal phase, libidinal energy refocuses on the universal physiological task of the development of sphincter control. During the final stage of infancy, the third phase or the phallic stage, libidinal energy is transferred to the genital region, resulting in different experiences for male and female children (Freud 1925/1961; 1924/1961; 1925/1959; 1933/1964). The Oedipus and the Electra complexes, two of Freud's most controversial concepts, purportedly emerge as the central missions of this developmental phase. Normal personality development is insured when children achieve identifications with their same-sex parent. These identifications are the foundation of the child's superego, the moral or ethical province of personality.

During the fourth stage of development, the latent stage, libidinal energy is submerged. Libidinal energy stays submerged until the beginning of puberty, when the genital period begins. Last, during the fifth developmental phase, the genital stage, focused libidinal energy reemerges in the genital area—but now in mature form. Freud suggested that this stage marks human maturation, which is marked by the ability and the impulse to form heterosexual unions, thus enabling the life instinct to be passed on to progeny.

Freud's theory of psychosexual development describes the emergence of the three structures of the mind: id, ego, and superego, respectively (Freud 1923/1961; 1933/1964). The relational workings of the id, superego, and ego constitute the character or personality of the mature individual. Freud focused on the id as the core motivation in human functioning. However, he considered the ego the agent of adaptation. That is, the function of the ego is to reduce the anxiety caused by the intersection of libidinal energies and environmental

demands; reduction of this anxiety is the function of the ego. Specifically, the ego develops defense mechanisms in order to successfully reduce anxiety, thus allowing for optimal human adjustment (Freud 1926/1959). According to Freud, when anxiety overpowers the individual at a given stage of development, the individual may become fixated at that stage, resulting in an adult personality prone to neurosis. Freud's proposition that defense mechanisms influenced the organization of individual personality and behavior was adopted and developed by his daughter, Anna Freud (1936), and several of his students (i.e., H. Hartmann, E. Erikson, E. Kris, and R. Lowenstein).

Both the treatment technique and the theoretical frameworks proposed by Freud are taught worldwide through training programs in psychology and psychoanalysis. The legacy of Sigmund Freud is maintained by the Sigmund Freud Society and two Museums: the Freud Museum in London and the Freud Museum in Vienna.

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See also: Ego Development; Erikson, Erik Homburger; Freud, Anna

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Friendship across the Life Span

Friendship plays a major role in human development across the life span. Beginning with infancy, the nature and type of human friendships change in response to developmental needs and demands. At various developmental stages friends provide important resources that foster growth, enhance well-being, and contribute to general health. Friendships may give rise to healthy development, and the lack of friendships may present risks and hinder growth at different developmental stages.

Friendship

Most human development takes place in the presence of others. The nature of the friendships fostered, maintained, and terminated across individual life spans help shape every individual. While much has been and continues to be learned about the role of many different interpersonal relationships in shaping individual lives, the role of friends and friendship has only recently begun to enjoy the attention it deserves.

Harry Stack Sullivan was among the first to emphasize the importance of friendships and the quality of interpersonal life for individual development. He stated, "Personality results from the relatively enduring patterns of recurrent interpersonal situations which characterize a human life" (Sullivan 1953, 111). Sullivan placed great importance

upon the quality of friendships for healthy development.

Friendship and Early Childhood: Companions and Playmates

The dependency of the infant upon the caregiver excludes the kind of interaction that would be characterized as a friendship. Babies are aware of other babies, but it is not until early childhood that the beginnings of friendship emerge. Early friendships begin at around age 3. From early playmates children learn social skills, which provide foundations for future friendships. Friendships at this stage of development lack the intimacy and depth of meaning common to later friendships, but they remain significant.

Friendship at this stage centers on common activities and sharing (Furman and Bierman 1983), and the benefits of such friendships can be quite important. Children who enjoy playmates tend to be more cooperative, able to share, and capable of dealing with anger. These qualities may enhance the child's popularity and increase opportunities for future friendships. Children without playmates may be at risk for rejection, isolation, and loneliness. Early friendships allow children to learn about their physical being, the larger environment, and emotions, and to realize that they can be liked by and care for others.

The need for such early experiences may be glimpsed in the phenomenon of the imaginary friend. The nature of the relationship between the child and an imaginary friend has notable qualities (Gleason, Sebanc, and Hartup 2000). Compared to behaviors displayed by children interacting with objects such as stuffed animals, the interactions between children and imaginary friends were found, like real friendships, to be more egalitarian (Gleason, Sebanc, and Hartup, 2000). Some children may rely upon imagination to construct such friendships in order to fulfill a need.

Middle Childhood and Friendship: Toward Intimacy and Autonomy

As children enter school, the meaning of friendship changes. Shared activities remain important, but older children now begin to add a dimension of shared intimacy. Friends become valued as much for their ability to keep a secret or share feelings as for sharing toys or being cooperative. As children endeavor to learn more about who they

are, friends can serve as vital points of reference and reassurance. Friendships may contribute to the individual's understanding of social rules and gender roles, foster the desire for closeness, and aid in the development of intimacy and autonomy.

Children who enjoy the benefits of friendship during middle childhood set the stage for future interpersonal success. Children engaged in reciprocal benefits of friendship build a social reserve, which may serve to bolster self-esteem and help loosen family ties (Hart et al. 1997). Their unsuccessful counterparts often experience difficulties in social interaction, appear anxious and fearful, and possess lower self-esteem. Children who find themselves friendless and rejected may be more likely to be picked on and may experience depression and loneliness (Crick and Grotpeter 1998).

Preadolescence and Friendship: The Chum

During preadolescence, many individuals encounter a friendship unlike any other. This unique friendship, with a person who fills the role described by Sullivan (1953) as the chum, is built upon mutual support and shared thoughts and feelings; it represents the first truly intimate relationship outside the family. It is unlike anything that has gone before and provides a vehicle for individuation and separation.

The theoretical advantages of the chumship include the validation of self-concept, resolution of uncertainties about personality, facilitation of separation from the family, a safeguard against loneliness, enhanced social skills, easier transition to adulthood, and a sense of connectedness to humanity. The absence of a chum may give rise to an inability to solve interpersonal problems, feelings of rejection, low self-esteem, depression, aggression, and an inability to experience intimacy.

Adolescence and Friendship: Loyalty and Mutual Support

During adolescence, the nature of friendship again changes. Thomas Berndt and Bridgette Perry (1990) assert that the intensity of friendships is highest during this period. This may be due to the cognitive development that allows adolescents the ability to articulate thoughts and feelings in ways that are generally inaccessible to preteens. Compared to younger individuals, adolescent friends are more supportive, more intimate, compete less, and share more.

Adolescent males evaluate the quality of a friendship based upon action and deeds, while females place greater value upon interpersonal disclosure. For both males and females the criteria for friendship differ in two important ways. First, unlike children, adolescents report that friends must be loyal. Friendship rests upon commitment and genuineness. Secondly, friends must be willing to share thoughts and feelings. Intimacy, regardless of how it is expressed, is a valued feature of adolescent friendships.

For many adolescents the role of friendship as a source of activity, influence, and support increases dramatically. For others, parents may remain a primary source of support and emotional security. The degree to which adolescents report a preferred source of such security (parent versus friend) may have implications for the quality of future relationships (Freeman and Brown 2001). Parenting style and sibling relations may serve as springboards to dating intimacy and egalitarian friendships (Bigelow, Tesson, and Lewko 1999), yet U.S. adolescents still report the time spent interacting with friends as the most rewarding. While parents and siblings provide a source of reference regarding general interests, values and standards, academics, and career goals, friends provide an opportunity for experimentation and shared learning in a family-free environment. During this period, friends serve as vital sources of mutual validation through a shared experience that allows the individual to hone skills and gain confidence in preparation for the rigors of impending adulthood.

While there seem to be many positive aspects of adolescent friendships, the quality and nature of friendships must always be considered when speculating about potential outcomes. For example, research on poor-quality friendships in adolescence suggests such friendships give rise to antisocial behavior, sexual promiscuity, risk taking, and delinquency (Poulin, Dishion, and Haas 1999; Dishion 2000). Conversely, only about a third of adolescents actually experience negative outcomes in later life. There is, then, a buffering effect afforded by a close friendship.

Early Adulthood: Continuity and Connectedness

The role of friendship during this period of the life span has traditionally been thought to be a source of needed relief from the stress that arises from the



Teenage girls playing together (Laura Dwight)

demands of career development, marriage, and parenting. This notion falls short of giving adequate recognition to the importance of friendship to young adults. Friendships during this period of life can serve to prevent social and emotional isolation, as well as provide many of the benefits of earlier forms of friendship, including providing mutual enjoyment in shared activity, as well as serving as a source of information, trust, acceptance, and intimacy.

As young adults struggle with new challenges, friends provide much of the support and sense of belongingness once found in the family. As more young adults delay marriage, friends may provide needed contact that enhances the general life experience. For instance, isolation from friends and family can increase the likelihood of illness twofold in comparison with people who have friendships (House, Landis, and Umberson 1988). For those young adults who marry and begin parenting, friends provide an added physical, emotional, informational, and recreational resource that can benefit the individual, the marriage, and the parenting, as well as providing meaning, continuity, and connectedness to life.

Middle Adulthood: Support and Guidance

Friendships forged earlier in life, if nurtured, often emerge as the friendships that endure across the life span, and as adults age, such friendships can become increasingly important. Nevertheless, during middle adulthood individuals tend to spend less time in the company of friends than at any other time other than infancy. This may be due to the demands and constraints that typify this period of life for many individuals. Careers, families, and financial planning for the future tap energy and steal time that many need to maintain friendships. While the number of friendships declines, this does not mean friendships are less important.

Friendships are cherished and can continue to flourish in spite of less time shared. Jill Sutor and Karl Pillemer (1993) note that old friends continue to be important sources of emotional support and practical guidance. Similarity in age is no longer as important as a criterion for new friendships, which are more likely to form around common experience involving jobs, recreational interests, organizations, and the like.

Later Adulthood and Friendship: Enjoyment, Escape, and Successful Aging

As adults enter later adulthood and are confronted with important transitional issues such as retirement, health issues, and the inescapable reality of impending death, friendships continue to exert influence. Family remains an important source of affection and support, but friends may represent equally important sources of enjoyment and activity. Friends may replace family that is gone or too distant, thus ensuring needed social interaction, a sense of being appreciated, and a source of intimacy. In fact, friendship in later adulthood may be an essential element of successful aging.

Social and emotional support in advanced adulthood has been associated with better functioning and fewer cognitive declines (Seeman et al. 2001). Thus, continued interaction with friends in later adulthood may inhibit the effects of aging, enhance well-being, and even extend life. Whether one is a friend also serves to predict life satisfaction in later adulthood (Siebert, Mutran, and Reitzes 1999). Older adults often report enjoying time spent with friends more than time spent with family. Activities with close friends in later adulthood are often typified by shared confidences and mutual aid, but gender differences do exist. Women even at the oldest ages tend to maintain close intimate friendships, while men report a decline (Filed 1999). Considering the power and importance of friendships across the life span, it is possible that the decline in measures of friendship among older men is related to their shorter life expectancy in relation to women.

Conclusion

Throughout a lifetime, friendships represent important sources of support, self-esteem, well-being, socialization, and intimacy. Friendships may also be a mixed blessing; not all are alike, and any developmental benefits are dependent upon the quality of the relationship (Hartup and Stevens 1999). Friendship has been extolled by writers, philosophers, theologians, artists, musicians, poets, and scientists across the ages. Although human developmental scientists may have given the role of friendship short shrift in the past, this is changing. Researchers are currently enhancing understanding of this vital and exciting relationship. Science has learned that friendships operate across the life span; they provide people with the

tools to begin the first difficult but necessary steps away from family and toward autonomy; throughout our lives, friends help us better understand ourselves, reduce anxiety, provide us with the essential tools of intimacy, and enhance our physical, mental, and emotional health. Friends free us from isolation and connect us to humanity.

Research on friendship has helped encourage educators, counselors, therapists, and health professionals (Selman and Schultz 1990; Watts 1997) to pay greater attention to the relationship between friendships and well-being. Parents are learning to encourage children to foster friendships as an important element of continued growth. No other interpersonal relationship more eloquently represents the human need to belong and to share than does the relationship between friends. Voluntary, enduring, bound by common humanity, and motivated by reciprocal caring and support, friendship may be the highest form of human endeavor. Certainly it is one of the most satisfying.

Gerard Dismas Hoefling

See also: Adolescent Identity Formation; Old Age, Social Relationships in; Play and Play Partners; Social Support

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Full-Service Schools

Research in developmental psychology and other disciplines has shown that many youth experience multiple barriers to learning (e.g., poverty, substance abuse, teen pregnancy). Children and adolescents can greatly benefit from resources and opportunities for positive growth. Schools are increasingly recognizing that in order to improve academic achievement, they must address these multiple barriers to learning. Realizing that schools cannot do this alone, school administrators, teachers, and student support staff have begun to reach out to community agencies and institutions for resources and supports. Full-service schools embody this school-community collaboration by striving toward becoming a seamless entity that combines academic and socioemotional support services (Dryfoos 1993, 1994, 1996).

The term "full-service school" was first used in a 1991 Florida state piece of legislation that fo-

cused on the integration of services for youth. This legislation defined a full-service school as a school that “integrates education, medical, social, and/or human services that are beneficial to meeting the needs of children and youth and their families on school grounds or in locations which are easily accessible. Collaborating agencies include education, health care, transportation, job training, child care, housing, employment and social services” (Department of Health and Rehabilitative Services and Department of Education 1991). Since this legislation, Joy Dryfoos and others have strongly advocated for the development of more full-service schools.

Components of a Full-Service School

Full-service schools typically integrate quality education with health services, dental services, counseling and other psychological services, mentoring, recreational activities, parent education, child care, legal aid, and other parent support programs. Many of these services are provided by community agencies, while some may be provided directly by the school. Ideally, full-service schools represent a collaborative effort among many professions, including administrators, teachers, mental health care providers, and health care providers. The services provided by the school may be either school-based or school-linked. School-based services are provided within the school building, which may be advantageous due to the ease of access to services. School-linked services are provided off school grounds in either community agencies or hospital settings, and may provide access to a greater range of providers and services.

Dryfoos (1993) has identified several commonalities that exist across full-service school models. These commonalities or criteria include (1) a designated physical space for either a medical clinic or a counseling center within the school; (2) services offered by a variety of providers, such as social and mental health service agencies, health department, hospitals, and youth development agencies; (3) funding from a variety of public (state and federal) and private (community agencies, foundations, and so on) sources; (4) expanded hours of operation for the school, including before and after school, weekends, and during the summer; (5) an advisory board that includes members from all segments of stakeholders, including community members or parents; and (6) a program coordina-

tor who integrates the school and community services.

There are many different models of full-service schools; each responds to the unique needs of the specific community in which it is located. Often full-service schools are also called extended services schools or community schools, and may utilize nationally recognized models, such as the Children’s Aid Society (CAS) Community Schools, Beacon Schools, COZI, and 21st Century Schools. In these instances, the previously mentioned criteria for a full-service school overlap with the specific focus of the community school model.

Barriers to Implementation

Just as there are common components across different models of full-service schools, there are also common barriers to their implementation (Dryfoos 1993; 1996). These include the following.

Lack of Adequate Governance

Full-service schools that are reportedly successful also include some form of governing body that oversees the school’s services and activities. As the complexity of a particular full-service school’s model increases, so do the administration demands. Inter collaboration among service providers and stakeholders working with full-service schools create the need for cooperation and good communication (Walsh, Brabeck, and Howard 1999).

Turf Conflicts

The additional services provided by a full-service school necessitate the sharing of space within the school. Having outside individuals staff programs within a school may create territorial concerns regarding this space. For example, teachers working during normal school hours may be asked to open their classrooms after regular school-hours to community individuals, parents, and children. Communication and respect for all programs utilizing the same space is necessary to resolve this issue.

Lack of Continuity

With the introduction of outside individuals staffing a variety of programs, a stable group of staff is oftentimes difficult to obtain. Reasons for this problem vary, but often involve difficulties with work schedules due to the timing of different programs and services, compensation, and discontinuation of programs or services. Another

continuity issue involves the stability of the leadership of a full-service school. Many times the individuals who initially undertake the implementation efforts may need to be replaced for reasons such as promotion or job change. Replacing core leadership individuals may have a dramatic effect on the dynamics of the governing body as well as the overall mission of the school.

Controversy

The mission of a full-service school can be a radical change from what many communities and school boards feel the mission of a school should be. For instance, many individuals may resist using the school building for anything other than educational purposes. Education and communication will be key in these instances for helping community and school individuals come together.

Funding

Full-service schools are appealing for their cost effectiveness; the benefits of prevention and intervention are combined with usable and affordable space and relatively low program costs (Raham 1998). As stated previously, funding for full-service schools comes from a variety of sources, but the majority of the funding comes from grant sources. Long-term financial sustainability can be a great concern and necessitates that a full-service school has long-term financial goals and strategies from the start.

Evaluation

Since a full-service school represents a system of multifaceted services aimed at reducing a multitude of risks while also promoting the strengths of children, families, and the community, evaluation of its effectiveness is necessarily complex. However, research has yielded evidence that full-service schools have a positive impact upon students, families, and communities (Grossman 2002). For example the benefits of full-service school interventions include improvements in academic gains, school attendance, parental involvement, and access to health care. In addition decreases in suspensions, high-risk behaviors, and community violence rates have also been linked to full-service schools (Dryfoos 2000). Limitations of these research findings should be noted. Due to the complex nature of these interventions, many aspects of traditional research designs, such as random sam-

pling and the use of comparison groups, are simply not feasible; loss of study subjects over time also creates problems in some schools' evaluations. Fortunately, as the interest in full-service schools grows, the already growing body of research will continue to be supplemented.

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See also: Community Schools; Early Childhood Education; High School; High School, Advising Students in; National Association for the Education of Young Children (NAEYC); Transition from School to Work and Adult Life

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Functional Clothing Design

Although all clothing items have a function, the term "functional clothing" is generally used when describing garments and accessories that protect the body or increase physical body function. Broadly defined, the term "clothing" may be used to describe any product that is attached to or supported by the body. That item may be as simple as a pair of socks or as complex as a space suit. It may nestle inside a body part like a tiny hearing protector or totally enclose the body like a suit for chemical and biological protection.

Some clothing items may serve the same function as furniture or housing. What makes functional clothing items different from furniture or buildings is that they move with the body, creating a second skin, or in some cases a full portable environment.

Garments for Unique Purposes

Clothing is such a familiar part of our lives that most people think of it only in terms of making them part of the latest fashion trends or keeping them warm and dry. There are, however, thousands of items of functional clothing that cannot be found on the average retail shelf. Among these are the following:

- Scuba suits that provide underwater protection for divers
- Vests that keep bullets from injuring police officers
- Uniforms that provide high-heat protection for firefighters
- Racing gloves that help paraplegics propel their wheelchairs more effectively
- Gowns that protect medical personnel and patients from disease
- Vests that administer cardiopulmonary resuscitation (CPR)
- Gloves that protect butchers' hands from knife cuts
- Air-cooling vests that theme park characters wear under their giant costumes to keep them comfortably cool
- Inflatable splints and gel-filled braces that conform to an injured body part and help it heal

Increasingly, garments that *are* on retail shelves have become a fascinating combination of fashion and function. Garments for everyday wear as well as those for skiing, mountain climbing, windsurfing, and other active sports are created by functional designers who use the latest materials and unique designs to achieve a high degree of mobility, thermal comfort, and other protective functions.

Creating Functional Clothing

Successful functional design requires an understanding of the entire situation in which a clothing item will be worn: the people involved; the climate

and other hazards in the environment; the physical needs of the wearer for movement, sight, hearing, and so on; and psychological factors such as the potential for claustrophobia or distraction from completing a task. Some wearers may be concerned only with staying injury-free; for others, the cost of clothing may be of primary importance. Aesthetics and the psychology of clothing may play a role as well; although the look of functional clothing may not necessarily be that of the latest fashion, every item of functional clothing carries with it an image that is important to the wearer. Because of the growing number of lawsuits involving product safety, legal issues are also increasingly important to functional clothing designers.

It is impossible to become an expert in the many fields that need to be explored for the development of even a single functional garment. Those who want to become functional designers need to have a broad-based, well-rounded education. This will help them learn to communicate in the language of many disciplines and professions so that they will be able to gather information from experts as they work. Designers must also learn as much about the activity for which they are designing as possible by reading about the users and their activities, interviewing and observing users, and, if possible, becoming participants in an activity to learn firsthand the problems encountered.

Technology and the Evolution of Functional Clothing

The development of new materials and design forms is an important part of the creation of functional clothing. New technological developments may make new protective materials and garments possible, but they also may create new hazards. This cycle plays a significant role in the evolution of functional clothing.

For example, protective devices for soldiers advanced over the centuries from chain mail that repelled arrows to flexible undercover fabric vests that repelled bullets. As protective armor made each current weapon useless, new weapons were developed to defeat that armor. As each new missile was developed, designers worked to develop new garments to defeat that missile. When warfare began to include chemical and biological weapons, a completely new approach to protecting both soldiers and civilians had to be developed.

The same technology cycle can be seen in many

sports and service professions. Football helmets, built to provide better and better protection for the head, eventually became so protective that they were seen by players as useful weapons for inflicting injuries on opposing teams. Because “spearing,” or butting the helmeted head into an opposing player, caused paralyzing neck injuries, new game rules had to be set up to prohibit it, and new devices developed to protect the neck from increased stress. Some specialized suits developed to protect firefighters are so effective that they have changed the procedures used by firefighters wearing them; for example, they actually allow firefighters to walk into flame rather than fighting fire at a distance.

As more and more portable electronics are incorporated in our daily lives, items of functional apparel will increasingly involve wearable computers that pick up information from the body and its environment and trigger an appropriate response in a clothing item. There are already garments on the market that will automatically absorb heat

when the body is too hot and emit heat when the body is cold. Vests administer medications when needed, and future headgear may incorporate devices that read brain waves and tell your clothing how to behave to make you more comfortable. Designers have proposed protective suits for soldiers that will have “walk-home capacity”; when a soldier is injured or unconscious, the suit itself will rise and walk the soldier back to safety. As the future unfolds, designers will use technologies we have not yet dreamed of to make many exciting functional clothing items.

Susan M. Watkins

See also: Designed Near Environment; Dress and Human Behavior; Watkins, Susan M.

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G

Gambling and Gaming

Gambling involves the reasoned, strategic, thoughtful decision-making processes central to living life as a capable human being. Since no one can know the future, it is always necessary to negotiate decisions based on the dynamics of cultural, physical, political, social, and other elements of human ecology. Individual factors include one's resources, all likely results (outcomes) of any choice, and the likelihood of a preferred outcome of a particular action. Turning this serious model of life into transient play by attaching rules makes a game of it. Because the future outcome is unknown, choosing to begin a family, deciding on a particular career path, or spending money at a roulette game in a casino all represent gambles. Only roulette is a game. Sociologists (Bloch 1951) and leisure scholars (Bruce and Johnson 1992) have long established that gaming participants vary greatly in motivation and type.

Gambling involves risking something of value against a future predictable but unknown outcome. Gaming involves essentially the same model, consensually undertaken, bound and regulated by rules. Games, which are part of virtually every culture in one form or another, may be very informal, strongly ritualized, or even presented as a commercial product. Games may be complex or simple, and may involve chance, skill, or other characteristics. Commonplace games involve wagers of some kind to create risk, and usually conform to a basic structure.

Games are cultural inventions, common in most human groups, in most places on the globe,

throughout time. In ancient days, these games may have been a way to help understand the unknowable future. In this sense they are associated with religious endeavor. Certainly, they may have been desirable for the emotional, political, and social benefits of participation. Today, many games are provided to consumers as a commercial service, and are thus part of the so-called commodification of leisure.

Casinos, dog or horse tracks, electronic devices, and lotteries are probably the most likely places Americans will come into contact with legal, commercial gaming—although illegal, unregulated opportunity is often available, too. Very large numbers of people routinely participate in informal, opportunistic gaming, such as sport wagering or raffles, bingo games, and various lotteries without thinking of it as gaming.

Aside from necessarily being rule bound, games associated with wagering share a basic structure, which includes having predictable outcomes and a particular value at risk. Failure of these rules means that outcomes are not predictable, except to those aware of the fact. Authentic games involve good faith attempts being made to create a fair, level playing field. A fair game is said to be even-handed, giving all participants a reasonably even chance of winning, all wagerers a similar chance of picking that outcome. Even when games are designed to be more complex and difficult, and because of that more interesting to players, rules must uniformly bind the way the outcome is determined.

Games, and indeed much gambling, generally



Interior of a casino (Elizabeth Crews)

involve comprehensible odds and probabilities. For example, in a coin toss, there are two likely outcomes. One outcome is *desirable*—the choice that wins the bet—one not. Participants each have about a 50 percent likelihood of winning and of course of losing. Probability determines outcome risk, and odds, the second of the two features central to virtually all routine wagering, determines or describes the ratio of risk. It's easy to misunderstand many of life's gambles, but a crooked poker or other game is not a game at all since the outcomes are fixed rather than unknown. A bogus game fails the "unknown outcome" test. In commercial gaming, explained below, even though a game is fair, it may still raise questions about its social costs because of its impact on the good of society and the well-being of some individuals.

A substantial segment of American society has long exhibited a great ambivalence toward gaming and wagering, as indeed toward many forms of apparent pleasure. Risk involved in enjoyment has been censured; risk involved in business has been privileged. The presence of odds and probability as a model of life implies a mechanistic reality, devoid of external controls; gambling involves risking something of value against a future, predictable but unknown. Thus gaming stands as a contradiction both to some religious beliefs, and to commercial zeal, with its strong desire to control competing business, such as entertainment or goods provision.

Gaming as a Commercial Enterprise

Casinos, commercial settings that provide a social environment in which to play games, represent an opportunity to gamble, to put resources at risk, within a structured environment. Business may be seen as self-interest negotiated by market forces. That is, capital is put at risk in a competitive marketplace in the hope that the risk returns profit. Market forces that may act against the success of any venture include competition for available consumers, the ongoing burden of presenting the product and maintaining interest, lack of responsiveness to social change, and regulatory or repressive cultural apparatus that may be put in place, including selective taxation and imposed limitations to fair market access. To foster general activity in business, some politically imposed mechanisms attempt to help manage risk, as for example copyright and patent law. The principle of fairness

in a free market has been invoked to defend the commercial enterprise of casino gambling (Detlefsen 1996; Grinols and Omorov 1996).

A good business within market capitalism (as opposed to monopoly capitalism) offers a product or service that consumers freely desire and that will successfully compete with alternative goods or service. As is necessarily true of all capitalist business, commercial gaming sites exist to make a profit for the owners, all other concerns being deeply secondary. These sites sell a consumer group, usually called a population, what it is willing to pay for, at a cost it is willing to bear. In a more precise sense, wagering speaks to the wants, needs, goals, and desires of individual human beings in possession of disposable income. The provision of jobs and strengthening of the local economy are likely side effects, but they are certainly not the *raison d'être* of these or any other businesses. Investors acknowledge that the gamble of going into this, as opposed to that, venture is never rule bound in the sense that games are. Commercial leisure provision, while different from traditional smokestack industry, is part of a region's economic fabric, not a unique element (Walker and Jackson 1998).

The rules giving form to games in a commercial wagering setting are designed as much as possible to guarantee success to the business in its profit-making endeavour. The service, or product it might be said, for sale is the experience of gaming. As a mechanism to build market share by further entertaining consumers, occasional moderate to spectacular wins, especially in the face of small amounts of risk taking place, are typical and normal. These costs are legitimate expenses of doing business. All patrons bear these costs, along with providing the money that satisfies the self-interested profit motive central to the business's existence.

Leisure consumption of commercial gaming is not designed to be a fruitful way to invest resources, or to increase the wealth of the participant, any more than buying branded garments, eating at upscale restaurants, enjoying live entertainment, or buying too much car is. Gaming is leisure, or a recreation style, participation in which has a particular cost and should yield a particular benefit (self-actualization, or "re-creation" after odious toil). This benefit is consistent with such good effects as are associated with other

leisure or recreation options. However, the history of leisure and recreation in the United States is marked by evolving notions of their proper role in a human ecology context—within the always complex interaction of numerous factors. Historically, the leisure styles and modes of certain groups, members of religious organizations, ethnic community members, members of the working classes, recent immigrants, have been subject to active intervention.

The perception that gaming is a unique variant of the consumer economy, a perception that often involves a clear antigaming predisposition, has been cultivated by media misinformation and error (Donlon 1997a), and apparent bias from otherwise expert sources (Donlon 1997b). Reviewing the data shows that a profound effort to establish the existence of unique social problems associated with the gaming industry has generally failed. Using the broadest meaning of problem gamblers (gamers), studies cluster around a 5 percent presence—right around the margin of statistical error. Thus, the enormous majority of participants in commercial gaming are seen to suffer no ill effects (Stitt, Nichols, and Giacompassi 2000), nor do they contribute to so-called social costs, including crime (Reuter 1997; Curren and Scarpitti 1991).

Not all gaming is lawful. Principle illegal or currently unregulated types of gaming include numbers (a traditional form of lottery), horse books, sports books, sports cards, some electronic gaming, and floating, or unlicensed, casino games. The so-called juice, or business costs and profit for the bookmaker, called vigorish or vig, or skin, or a related term, provides for the housekeeping of the underground gambling system and what amounts to wages and other expenses. Little difference exists in how the game, or the profit motive, is carried forward, between lawful and unlawful games. The benefits or hazards of government intervention either are present or absent, that is all.

Regardless of the widely varied motivation, or motivations, involved in wagering (Bruce and Johnson 1992), gaming is spectacularly popular. The Bible does not seem to specifically condemn gaming, though some cults, congregational unions, and denominations see gaming as a unifying element. Indeed, casting a lot was suggested in the Bible as a way to settle argument without human bias. Cotton Mather's reason for censuring the activity is from Proverbs 16: 33, "the lot is cast

into the lap, but the decision is wholly from the Lord." While this might imply that God has the ultimate control, such scripture does not forbid playful indulgence in casting lots.

Social Costs of Gaming and Gambling

A national contest for the meaning of gaming and wagering has existed in the United States virtually since the arrival of European immigrants. Lotteries helped finance the Revolutionary War. That conflict itself stemmed in part from anguish about taxation without representation—including the particular irritant of the tax stamp attached to each new packet of playing cards. More recently, gaming activity exceeded \$50 billion in the United States by the turn of the last century, suggesting that its impact embraces both large numbers of people and an important part of the economy.

The civil rights of American citizens are considered sacred except in very special circumstances. In reality, human ecology is a complex, dynamic, interactive organism. Thus, the meaning of gambling and gaming is contested, negotiated, and fluid, in a way that has little to do with contributions from legal discourse and scientific research. Antigaming activists have for years sought the suppression of access to lawful gaming for American citizens, often claiming the presence of harmful side effects of its existence in communities. Yet harm, a compelling argument that can be used to justify limiting inherent rights, has not been established as associated with gambling, gaming, or wagering.

In 1996, a blue ribbon committee formed in Louisiana surveyed relevant research across the United States; it reported to the State Legislature of the State of Louisiana that the research to date failed to make possible a good-faith assessment of whether gambling causes social harm. Later, The National Impact Study Commission, created by the 104th Congress through Public Law 104169, signed by President Clinton on August 3, 1996, similarly determined that insufficient data existed to assess questions raised about legalized gaming. Generally, further research has been recommended in order to answer questions about the social and economic impacts of commercial gaming.

No statement claiming as fact that gaming has been shown to create unique social costs, or to be by its nature a social liability, can currently be

made in good faith, based on the body of research available at this time.

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Gay and Lesbian Studies

The terms "lesbian" and "gay" are used to describe individuals who identify themselves as having same-sex sexual attractions. The entry "Sexual Identity Development" in this volume by Loren Frankel and Ritch Savin-Williams provides a more detailed discussion of other terms used to describe sexual identity, as well as a cogent review of the formation of sexual identity. As noted there, sexual orientation and sexual identity are not necessarily aligned. Because homosexuality is socially stigmatized, gay men, lesbians, and bisexual individuals often are guarded about disclosing their identity. Individuals who engage in same-sex sexual behavior may nonetheless eschew a non-heterosexual identity. At the same time, some women adopt a lesbian identity for political reasons (Kitzinger 1987) or engage in romantic but asexual relationships (Rothblum and Brehony 1993). Although most gay men and lesbians come out in adolescence or early adulthood, many spend several decades or more identifying as heterosexual, not coming out until middle age or later (Jensen 1999). Despite variations in identity, homosexual behavior is historically (Bullough 1976) and culturally ubiquitous (Whitam and Mathy 1986), as well as widespread among nonhuman species (Ford and Beach 1951). Nonetheless, attitudes toward homosexuality have varied considerably across time and place. For example, in the early American colony of New Haven, homosexual behavior was punishable by death (Katz 1976), whereas same-sex sexual behavior in males is a rite of adult passage among the Sambia of New Guinea (Herdt 1994).

Prior to the work on human sexuality conducted by zoologist Alfred Kinsey, the prevalence of homosexuality was unknown, but it was thought to be relatively rare. In reports that brought homosexuality to the forefront of public consciousness, Kinsey and his colleagues reported that 10 percent of American males (Kinsey, Pomeroy, and Martin 1948) and 6 percent of American females (Kinsey, Pomeroy, Martin, and Gebhard 1953) had been in exclusively same-sex relationships for three years or more. As mentioned above, cross-cultural research has found that homosexuality is culturally ubiquitous, with about 5 percent of a population being actively gay, lesbian, or bisexual at any one time. Contemporary surveys of the general population in the United



Gay/lesbian pride march (Skjold Photographs)

States generally focus on same-sex sexual behavior with regard to identity, but they consistently find that about 3 percent of men and 2 percent of women acknowledge they have engaged in same-sex sexual behaviors. However, population-based surveys underestimate the number of individuals who have erotic, romantic, or sexually intimate attractions to people of the same sex without engaging in same-sex sexual behavior. Neither behaviors nor attractions provide a reliable proxy for estimating the size of the self-identified gay and lesbian population. Thus, the size of the gay and lesbian population in a society depends primarily upon the definition one uses to describe it (decreasing in size if one shifts from a definition based on same-sex attraction to one based on gay or lesbian identity, and shrinking still more if the definition is based on same-sex sexual behavior).

The terms “gay” and “lesbian” are used so often in contemporary literature that some mention must be made of their etymology. Although scholarly work on the origins of the word “gay” is virtually nonexistent, John Boswell (1980) traced the word to a linguistic predecessor of Catalan (twelfth-century Provençal) in which it is used to describe the art of poetry, which was known as the *gai saber*, usually translated as the gay, or joyous, science. The term *gaiol* appears to have meant “lover,” and to have been used to describe an openly homosexual individual. The use of the term “lesbian” for a female homosexual is based on the widely held belief that Sappho, a sixth-century B.C. Greek poet who lived in Mytilene on the island of Lesbos in the Aegean, was homosexual. Certainly some of her exquisite lyric poetry expresses passionate love for other women, though there is no hard evidence that Sappho engaged in sexual relations with other women, and it is well known that she was married and the mother of one daughter.

The terms “gay” and “lesbian” did not come into common usage until the latter half of the twentieth century. During the late nineteenth and early twentieth century, scholars referred to homosexuality as an inversion, referring to effeminate characteristics of gay men and masculine features of lesbian women. Childhood gender nonconformity is in fact strongly associated with adult homosexuality (Whitam and Mathy 1986); however, the “invert” concept included individuals who would now be considered transgender, transsexual, or possibly transvestite. Lillian Faderman (1991) also

brought out that the impression of inversion reflected, in part, the kind of role playing in which lesbian women as well as gay men adopted an exaggerated form of the complementary gender-typed schema they saw reflected in heterosexual culture.

In both Europe and America, the transition from predominantly agrarian to industrial societies led to a visible subculture of gay men and lesbian women in densely populated urban areas. As scientific advances drove developments in industrial technologies and medicine at the end of the nineteenth century, several philosophical domains of inquiry became sciences (e.g., psychology and sociology). As scientific evidence and reasoning gained sway over religion at the end of the nineteenth century, homosexuality came to be seen as an issue of pathology rather than morality. Thus some (Kraft-Ebing 1886/1965) who applied the process of scientific inquiry to human sexuality considered homosexuality an illness, and others (Ellis 1901) contended it was innate and hence not immoral. In “Three Essays on the Theory of Sexuality: I: The Sexual Aberrations,” Freud (the founder of psychoanalysis) argued that “the nature of inversion is explained neither by the hypothesis that it is innate nor by the alternative hypothesis that it is acquired” (1953, 141).

Although Freud was equivocal about homosexuality, subsequent psychoanalytic writers argued it was a mental illness. Thus, homosexuality was included in the list of psychopathologies when the original *Diagnostic and Statistical Manual of Mental Disorders* (DSM) was compiled in 1952 (American Psychiatric Association 1952), when psychoanalytic thinking was the dominant paradigm in psychotherapy. And in general one can say that historically, psychiatrists and psychologists have attempted to link homosexual behavior and gay or lesbian identity to developmental deficiencies. None of these theories have proven satisfactory. Because behavior reflects an ongoing, dynamic, and reciprocally influenced interaction between biology and environment, neither the innate nor acquired positions are adequate for behaviors as complex as same-sex attraction, gay or lesbian identity, and same-sex sexual behavior (cf. Savin-Williams and Diamond 1997).

Homosexuality was removed from the *DSM* with the seventh printing of the second edition (American Psychiatric Association 1974). Among

the reasons given for its elimination was the inability of experts to differentiate between the psychological adjustment of gay and heterosexual men based upon standard projective tests widely used in clinical testing (Hooker 1957). Although homosexuality was removed from the *DSM* in 1974, it continued to be listed in the World Health Organization's *International Classification of Diseases* until the publication of its tenth edition in 1992.

Although homosexuality is not a mental illness, the social oppression of gay and lesbian individuals increases the weight on adaptive functioning. A supposed connection between gay and lesbian sexual orientation and a tendency to be suicidal has been given prominent attention since 1989, when a social work activist (Gibson 1989) erroneously postulated that gay and lesbian adolescents could constitute up to 30 percent of all youth suicides. The error was greatly compounded by overgeneralizing from suicide attempt data to estimate completed suicide rates. Gary Remafedi (1999) noted that a consistent relation between sexual orientation and suicide attempts has been found most strongly among males; however, only two studies of sexual orientation and completed suicide have been reported. Neither study found that gay men or lesbian women are at higher risk of completed suicide.

Relatively recent epidemiological research has examined the relation between psychiatric morbidity and sexual orientation. These studies consistently have found that individuals who engage in same-sex sexual behaviors are, indeed, at increased risk for substance use disorders, mood disorders, and generalized anxiety disorders (Cochran 2001). The consistent findings of an association between increased risks of psychiatric morbidity and sexual orientation can be misleading. Among the recent major epidemiological studies, Cochran's data indicate only one has found a one-year prevalence of mental health disorders that included over half of the respondents in either the gay or lesbian group. Put somewhat differently, in nearly all recent epidemiological studies *most* gay men and lesbian women were not found to be suffering from mental illness, even though the overall risk of succumbing to psychopathology is significantly greater for gay men and lesbian women than for their same-sex heterosexual peers. The increased risks of psychiatric

morbidity can be attributed to the increased weight of social oppression and stigma that effectively grind against successful coping strategies. Thus, rather than suggesting that a gay or lesbian identity is causally related to mental illness and a tendency to be suicidal, contemporary research indicates the putative relation is mediated by levels of social oppression.

Chronic stressors for gay and lesbian youth include verbal and physical abuse from peers as well as adults (Savin-Williams 1994). As Savin-Williams noted, these stressors place gay and lesbian youths' lives as well as mental health at greater risk. Gay and lesbian youth must navigate a sequence of self-disclosures (if, when, and how) to close friends, family members, and parents, the outcome of which is anything but certain. In some cases, self-disclosure of a minority sexual orientation to a trusted friend is betrayed or results in interpersonal rejection. Parents who become aware they have a gay or lesbian child sometimes eject their child from the home. Although most gay and lesbian youth fare remarkably well despite these higher risks, the dangers of homelessness, drug abuse, prostitution, and HIV are considerably higher without family support.

Rejection by family members and friends, as well as choosing not to come out, has led gay and lesbian individuals to develop fictive kinships (Weston 1991). These warm, vibrant, and socially kinetic relationships enable gay and lesbian youth and adults to develop a sense of community and belonging and gives them a sense of connectedness with others. Gilbert Herdt and Andrew Boxer (1996) argue that the visibility of a positive gay-identified adult culture has enabled gay and lesbian youth to come out in more proactive and self-affirming ways than in previous generations. In recent decades, a translocal and indeed transnational gay and lesbian culture has developed. The rainbow and inverted pink triangle have been adopted as gay and lesbian cultural symbols—the former representing unity and the latter invoking the memory of gays and lesbians persecuted and killed along with Jews in the Holocaust. Local, national, and international organizations have developed to advance political causes and protect civil rights of gays and lesbians. Every summer, gay and lesbian communities celebrate the gay liberation movement on the anniversary of the resistance to routine police monitoring and perceived harass-

ment at the Stonewall Inn in June 1969 (the movement had begun well before, but nonetheless it is felt to be epitomized by that action).

Several recent developments in gay and lesbian studies are particularly noteworthy. For much of the twentieth century, Western culture was caught in a binary system defined by polar opposites, such as feminine and masculine (gender), female and male (sex), and homosexual and heterosexual (sexual orientation). Sandra Bem's politically well-timed and academically well-articulated development of the concept of androgyny (1974) broke through the intellectually staid dichotomy between feminine and masculine. Bem's concept of androgyny identified individuals with socially desirable feminine as well as masculine characteristics. Subsequent research revealed that androgynous individuals were better adapted socially and psychologically than either masculine-typed men or feminine-typed women. In the 1980s, bisexuality gained increased attention and social legitimacy as an identity in gay and lesbian culture as well as in the dominant heterosexual culture (Weinberg, Williams, and Pryor 1995), effectively destroying the binary system of only two sexual orientations. In the 1990s, transgender identity emerged as a concept to define individuals who live full- or part-time as members of a sex different than their sex of birth, frequently with hormonal support but without pursuit of (or desire for) surgical sex reassignment. Simultaneously, intersexed individuals and scholars who study intersexuality (Kessler 1998) began to question and confront the processes by which sex had been surgically reassigned when physicians deemed an infant's genitalia unsatisfactory for sexual functioning in their sex role at birth. Considered together, androgyny, bisexuality, and transgender identity, as well as intersexuality, have increased our awareness that gender, sexual orientation, and sex exist along continua that cannot be cleanly or clearly dichotomized into binary opposites without diminishing the genuine diversity of humanity.

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See also: Contemporary Men's Movement; Gender and Families; Gender Roles and Society; Sex-Role Stereotypes; Sexual Identity Development

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Gender and Environment

The goal of this entry is to introduce the reader to the notion that people's gender roles influence their attitudes and behavior toward the natural environment. The discussion highlights these connections, distinguishes the terms "gender" and "sex," and then explains how this field of knowledge contributes to a more complete understanding of the environmental connection between humanity and the natural world. This kind of understanding is needed if humans are to achieve a level of environmental conservation that will allow the earth to continue to support human life. Without the gender dimensions, we will not have a

clear and complete picture of the quality and consequences of the dynamic interaction between human beings and the environment. Moreover, problem solvers (e.g., government officials, international development experts) may apply the wrong solutions based on incomplete knowledge. A number of other factors, such as race, class, ethnicity, and religion, are also important, but this entry focuses on gender.

If one wants to understand the nature of the relationship between humans and their built and natural environments (human ecology), one must be careful not to lump humans into a homogeneous group. At the same time, looking at each individual would be impossible, so developing understandings through the exploration of subgroups is an extremely useful method that has been employed by scholars in many disciplines. Within humankind, one's gender identity is of singular significance. Gender influences every aspect of life, including humans' relations with the environment. Females and males experience and behave differently toward the environment, and taking these differences into account is both useful and necessary in environmental problem solving. As described below, the quality of environmental knowledge and protection bears a close connection to understanding gender roles in a given society.

The Connections Between Gender and Environment

The pairing of gender and environment is seen as unusual by many persons, but the connections between the two concepts are strong. When we move below the surface of the web of social relationships in a particular society, we can quickly begin to see that the different social roles played by females and males determine their environmental roles as well, in addition to influencing their attitudes about environmental concerns. If we examine the major environmental issues of the past two centuries in the United States, for example, we can identify patterns that are common to women but not men and patterns in men that are unusual in women with respect to their thinking and behavior toward the environment. White middle- and upper-class men typically champion movements to preserve wilderness or work to solve global environmental problems such as ozone layer depletion. To generalize, they most often operate at the national level and hold the top leadership posi-

tions in mainstream environmental organizations. Women, on the other hand, have taken leadership to improve local communities and neighborhoods, giving their attention to issues that have an immediate impact on their families and neighborhoods. Women like Jane Addams, Alice Hamilton, and Florence Kelley of Hull House in Chicago led early efforts to protect public health through urban cleanup. This type of endeavor resulted in the creation of the field of urban planning.

More recently, women have organized and led numerous local communities to fight toxics in their neighborhoods and on their local school grounds. While the examples are numerous, perhaps the most noted is Lois Gibbs, a young mother in New York in the 1970s who fought relentlessly to force the government to compensate and move her family and her neighbors when it was discovered that their school and associated land was severely contaminated by a buried toxic waste dump known as Love Canal. More recently, in the 1980s and 1990s, Verna Courtemanche led a successful fight against a toxic waste incinerator in Flint, Michigan, and Cheryl Graunstadt's efforts to fight toxic waste in the playground of her children's school resulted in the closing of the facility in Livonia, Michigan, in 1991.

To understand the connections between gender and environment, it is important to keep in mind that men's and women's social and environmental roles differ from society to society. For example, consider farming, a field of work that is deeply connected to altering the physical landscape. In North America, most farmers are men. Sub-Saharan Africa stands in sharp contrast; women perform 60 to 80 percent of the agricultural labor (along with the more usual women's jobs), depending on the country. In the United States, heavy labor has traditionally been seen as an exclusively male domain, although this perception and reality are slowly changing. In most of Africa, Latin America, and Asia, women's daily lives consist of a variety of physically demanding tasks such as hauling water, collecting and carrying firewood (fuel for heating and cooking), and vegetable gardening (which provides essential foodstuffs). In addition, they tend the house, cook food for the family (sometimes carrying midday meals to men and boys in the fields), and tend children. These social arrangements are also referred to as the sexual division of labor. The way the work needed to

keep the society functioning is divided among the available work force depends on gender. Although this is somewhat less the case in the United States today, normally tasks are assigned to workers based on their gender, along with a variety of other factors, such as their skill and training. In the national environmental arena, for instance, we can see that the heads of mainstream environmental organizations are White men, whereas the unpaid volunteers are typically more than 50 percent women (Taylor 1997, 48).

The Question of the Connectedness of Women and Nature

Many persons would attribute women's relationship to the environment to women's inherent connectedness to nature, which drives them to protect and love nature in a way that men do not. This thinking contributes to situations in which, because of this supposed inherent relationship, society simply expects protective behavior but neither recognizes it as valuable nor rewards it. In other words, while men are compensated and accorded prestige for their labors, where this type of thinking prevails, women typically are not compensated for their nature protection work, and they are criticized if they fail to act in a protective manner. Many researchers have disparaged this perspective, pointing out that it is rigid social structures that provide women no choices that place them in a regular, close, intimate relation with the environment rather than their innate nature.

India provides an instructive example with its Chipko Movement. While many stories about the origins of the movement are told, it seems that as government authorized loggers to cut down the forest (to make cricket bats), local women literally wrapped themselves around the trees to prevent this deforestation from occurring. The loggers were reluctant to attack the women, and so the trees were protected. Ultimately, the government supported their position and withdrew permission to cut the trees. Some observers would attribute these actions to women's love of the trees. Others point out that as fuel gatherers whose very lives depended on the use of wood, they were protecting not only the trees, but their livelihoods and families.

Defining Gender Versus Sex

The term "gender" is deliberately chosen and used here to refer to the kind of socially created roles

described above (women as farmers, men as farmers). “Sex,” on the other hand, focuses on an individual’s biological make-up, and is, for the most part, immutable. Sometimes people confuse the two or believe that they are tightly and irrevocably linked in theory and in practice. But, as we can see in the farming example, what is normal for one sex in one culture is normal for the other sex in a different culture. This helps to explain, by illustration, the notion of social construction of male and female roles. Appropriate female and male behavior is carefully culturally defined and taught beginning with the first moments of life. In the United States, choice of clothing colors for infants (pink for girls, blue for boys) alerts onlookers, as well as, ultimately, the children themselves, to their biological designation as well as to what are considered appropriate roles and behaviors. Psychological research has found that an infant dressed in pink for some subjects and blue for others is treated in dramatically different ways by those subjects (quiet and gentle when the infant is in pink, and rough and tumble if the infant is in blue). If particular behaviors were sex-linked, we would see fewer differences from place to place, but in the real world, the spectrum of difference in the social behaviors deemed appropriate for one sex or the other is vast indeed. While social scientists hold a social-construction perspective, it should be noted that some biologists such as Edward Wilson argue that much male and female behavior is biologically driven.

Different Roles Result in Differential Impacts from Environmental Degradation

Environmental degradation is not experienced the same way by all people, to put it mildly. Rich people, for example, most often live in areas that are not contaminated by toxic materials. Studies done beginning in the 1970s reveal that hazardous waste dumps and toxic waste incinerators are almost always sited in neighborhoods and communities of low socioeconomic status (which are often communities of color). Differences can also be found in the effects that degradation has on men and women owing to their separate gender roles. In sub-Saharan African countries, women are responsible for gathering firewood. It is a critical resource needed for cooking and heating. Gathering and hauling it home is heavy physical labor. That labor has significantly increased in recent years as a result of deforestation. Because trees

close to homes have already been removed, women often must now walk very long distances, sometimes more than ten kilometers each way, to find a suitable resource. Gathering wood may now take rural African women more than twelve hours per week when it used to take one hour, and women’s other tasks do not diminish. Thus, their work week is significantly lengthened, or other important tasks are left undone. In Bangladesh, it is estimated that some women and children now spend five hours *per day* gathering firewood as a result of deforestation. Given the small number of calories available for women’s consumption in typically poor developing nations where fuel gathering occurs, such enormous additional physical work burdens cannot help but have a negative effect on women’s health.

Water is another critical resource for which women bear primary responsibility. Globally water is diminishing both in quality and quantity. Identifying new safe sources has not kept pace with population growth. In most developing countries, women are managers and providers of water, an essential resource for drinking, cooking, cleaning, personal hygiene and sanitation, food cultivation, livestock maintenance, and myriad other purposes. In addition to securing sufficient quantities of water, they must also concern themselves with its quality. Availability of sufficient quantities of safe water is particularly problematic in some developing countries, forcing women and children to walk increased distances to meet family needs. They haul up to twenty kilograms in containers balanced on their heads or in cans strapped to their backs. In some countries, women and children spend up to eight hours per day in a quest for water. Often the only available water is polluted, giving them no choice but to use it. Water is taken from streams, rivers, lakes, and wells, depending on local resource configurations. Recently in Bangladesh, mass arsenic poisoning was traced to desperately needed, newly dug wells, giving people an impossible choice. As drought spreads, climate changes, and humans build dams and irrigation systems redirecting major water sources, finding enough water is a growing challenge. In some countries such as India, governments are moving to privatize water, raising the concern that access for poor women and their families will be reduced.

Because they are in frequent and close contact with water, women are more likely to suffer from

problems caused by water pollution. According to the United Nations' International Research and Training Institute for the Advancement of Women (INSTRAW) Office, 80 percent of all sickness and disease can be attributed to inadequate water and sanitation facilities. Before the AIDS crisis, 50 percent of hospital beds were occupied by persons with waterborne diseases, and some 25,000 died each day from those diseases. Approximately 6 million of the 18 million deaths annually from diarrheal diseases are among young children. In the United States, since 1960 breast cancer rates have increased from one in eight women to one in three over a woman's lifetime. The cause for this steep incidence increase has not yet been ascertained, but suspicions abound. Many activists and researchers speculate that such a dramatic increase can only be attributed to the significant and growing amounts of toxic chemicals in our built and natural environments due to manufacturing, transportation, mining, and agricultural production. It is seen as one of the consequences of a decline in overall environmental quality.

Some negative environmental impacts are shared between women and men, but men also confront specific consequences by virtue of their different social roles and physiology. Cancer rates track occupation. Occupational segregation, common in many United States job categories, places one sex or the other at increased risk. Some jobs with elevated cancer rates (farming, welding, painting, working with asbestos, and fighting fires) are primarily held by men, while hairdressers, usually women, have higher rates of bladder and salivary gland cancer. Recent European studies revealing dramatic drops in male sperm counts have caused alarm. Furthermore, the feminizing of the males in certain non-human species by chemicals that are endocrine disrupters is a worrying trend. As one example, endosulphan, a commonly used pesticide, has been shown to cause rat testicles to shrivel. One wonders whether these changes will be seen in male humans.

Seeking Solutions: The Role of Gender in Environmental Science

Gender also plays a role in the process of seeking solutions to environmental problems. Governments, research institutions, nongovernmental organizations, businesses, and citizens are striving globally to reduce the abundant environmental

threats facing humanity. Many solutions rely upon sound scientific knowledge derived from research. While members of scientific disciplines profess that science plays a neutral role and assert that scientists are trained and serve as unbiased observers, they largely ignore the fact that scientists are also human beings with perspectives and opinions. Many scholars have pointed out and critiqued the fact that science professions are staffed almost exclusively with White men. This cannot help affecting the choice of questions researched and approaches employed. In one famous example, male mammologists conducted studies of chimpanzees in their natural habitat. In their findings, they discussed at length the aggressive and warlike behavior of the male chimps. Subsequent studies by female scientists revealed that a significant component of the chimp society, not described by their male colleagues, revolved around cooperation between female troop members. Thus, "neutral" and "unbiased" scientists had missed a fundamental element of chimp social organization. Initially limiting the pool of scientists to males resulted in creating a very limited understanding of the behavior of this species.

Failure to recognize the significance of gender role differences can also be seen in the work of social scientists. As noted above, as key actors serving on international development program design and implementation teams, they often failed to take note of or to incorporate knowledge of men's and women's different roles in projects aimed at improving the environment. This failure has resulted in projects not achieving their goals of environmental conservation. An example from just one environmental sector, water, will illustrate the point. Before the 1977 United Nations Water Conference, women's role was not taken into account by development planners at either the national or local levels. In most, if not all, developing countries, women provide the water for household and vegetable garden use. Development projects designed to provide clean water within villages typically were designed to be used by male-sized human beings and were hard for women to use. The pump handles were too big and too high. Water points were located in open, public areas, making bathing difficult for women who required privacy. Men were trained to repair the pumps, but since they were not responsible for family water supplies, they had little incentive to repair them

when they broke down. Lack of sensitivity and knowledge of gender roles in water management meant many consequences. When the local pump was in disrepair, women and children had to walk several kilometers to secure water supplies, which were often of unsanitary quality (Rodda 1991, 52–54).

It is probably accurate to say that at least some of the most recent international development projects have taken the concerns of women into account, suggesting that awareness of the role of gender in environmental concerns is growing, even if much remains to be done.

Tracy Dobson

See also: Environmental Justice; Environmental Movement in the United States and People of Color; Environments of Children; Ethics: A Feminist Perspective; Gender and Families; Gender Roles and Society; Sex-Role Stereotypes

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Gender and Families

Gender refers to ways in which women and men are expected to act as female or male in society. A human ecological perspective recognizes how gender affects all aspects of family life, such as relationship development and satisfaction, parenthood, caregiving, the division of paid and unpaid work, and experiences of abuse. Because families exist within larger environments such as local neighborhoods, cities, states, and countries, they are affected by the values, rules, policies, and programs arising from those surroundings. Gender is one feature of those environments, created and sustained through informal interactions and official policies. For example, gender is constructed in the workplace when men earn more money than women for similar jobs and when supervisors expect male employees to put in longer work hours than female employees because they believe that careers should be more important to men than women. These gendered assumptions and practices in the workplace then affect behavior in families.

If a married father spends more time at work because this is what he believes or has been told he should be doing, he likely will spend less time with his children or doing household tasks such as making dinner. It also may seem logical to this couple that the father should have stronger ties to the workforce than his wife if he has the higher earning potential of the two. As a result of these factors, his wife will take on more responsibilities at home (regardless of her employment status), "doing gender" at home as well. A gender perspective therefore recognizes that gendered behavior within families is linked to gendered patterns outside of families.

Gender differs from sex. Sex refers to biological features of individuals such as hormones, chromosomes, and genitals, whereas gender refers to social aspects of behavior such as how women and men are expected to act, think, and feel (Coltrane 1998, 7). People sometimes make assumptions about families on the basis of sex rather than gender. For example, it is often assumed that women



Couple at home sharing responsibility for household chores (Michael Siluk)

are better than men at raising children because of women's biological capability to bear children. This sex-based assumption ignores the influence of social norms, observations of others, social interactions, and individuals' personal ideas, beliefs, and preferences about parenting. A gender perspective acknowledges the role of society in creating differences between women and men rather than assuming that differences develop from a biological basis (Walker 1999, 439). In addition, the current view on gender focuses on gender as a *characteristic* created or constructed in institutions and interactions rather than as a static *role* into which women and men are socialized from a young age. The concept of gender *role* is problematic because it views gender as unchangeable (Walker 1999, 439). In addition, it ignores variations among women and men, the influence of the larger societal context, and the way the creation of gender results in inequities between women and men (West and Zimmerman 1991, 16).

Because gender is constructed, the meaning of how women and men should act has changed over time, reflecting factors such as sociohistorical context (Coltrane 1998, 7). After World War II, employed wives were under tremendous pressure to leave their jobs so that returning soldiers could resume their careers. Men's employment was seen as much more important than women's employment at that time. Toward the end of the twentieth century, however, it had become more normative and acceptable for American mothers of young children to work. Fifty-one percent of mothers of newborns were in the work force in 1988, compared with 31 percent in 1976 (Baber and Allen 1992, 176). Increased attention by some organizations to family policies such as parental leave and on-site child-care services has further supported these changes. Yet in spite of these changes, traditional ideas of gender still prevail. When there is an increased demand for traditional work done in the home (e.g., caring for a child with a disability), women, rather than men, are under tremendous pressure to do this work, regardless of their employment status (Walker 1999, 449).

Social norms about marriage and motherhood further combine with gender to affect women's and men's experiences in families. Marriage and motherhood appear to increase women's but not men's family labor (Walker 1999, 453). Family labor includes caring for children and other dependent

family members (e.g., elder care), in addition to tasks such as cleaning and cooking. Women appear to do more family labor in relationships that are socially sanctioned. For example, they are more likely to do more family labor in marriages than in cohabiting relationships because the former is more formally sanctioned than the latter. Gender is more than just women doing more family labor, however. Rather, for a woman to do it and for a man to *not* do it is to reproduce what many people believe are essential characteristics about women and men (West and Zimmerman 1991, 30). Thus people "do gender," and gender is reproduced.

Doing gender typically reproduces female subordination and male dominance (West and Zimmerman 1991, 31). Nevertheless, because gender is not fixed, it can be constructed in different ways, and some researchers have begun to investigate this possibility. Some heterosexual families try to rewrite their gendered scripts, which is difficult in a world where gendered patterns of behavior are deeply internalized. These patterns include women being more responsible for monitoring emotions and relationships in a family, resolving conflict from a position of less power, and maintaining their independence as much as possible without threatening their husbands' status (Blaisure and Allen 1995, 6). When people do not do gender in the expected way, they can be judged to be immoral or incompetent as women and men (Risman 1998, 6). Because this is a powerful method of social control, family members may find it easier to fit back into gendered patterns despite other intentions. Nevertheless, there is evidence of some people doing gender in different ways.

One study of well-educated European American couples in feminist marriages revealed that equality was achieved by various "acts of vigilance" (Blaisure and Allen 1995, 10). Acts of vigilance included public acts of equality, such as a wife keeping her maiden name and both individuals monitoring their emotional and instrumental contributions to the relationship. Another study found that couples who developed egalitarian family roles did so through various pathways (Risman 1998, 106). For example, some couples had egalitarian relationships as a result of previous unsatisfying relationships they did not want to replicate. Other egalitarian relationships emerged due to external forces such as a disability or the loss of a job.

Additional structural conditions such as women with high levels of education and high income-earning potential might be necessary prerequisites for such families to exist (Risman 1998, 101). Gay and lesbian couples also are less likely to organize their lives in gendered ways because they do not have the ease of creating gendered patterns of behavior on the basis of a person's sex category. Research has found that lesbian couples are more likely to share housework since obviously one person is not delegated to the housekeeper role on the basis of her sex (Baber and Allen 1992, 207).

Gender is constructed in individual, interactional, and structural ways to create environmental constraints and opportunities that usually benefit men more than women. Gender does not, however, affect families' lives in isolation. More research is beginning to explore how gender interacts with other characteristics such as race, ethnicity, sexual orientation, and social class to affect diverse family experiences (Coltrane 1998, 8). For example, unlike European American middle-class women, working-class women and women of color historically have had much stronger ties to the workforce because of the necessity of their incomes to their families' economic well-being. Thus, their experiences as wives and partners may be different from their European American middle-class counterparts. Current research also finds that factors such as race and social class affect women's experiences of mothering (Walker 1999, 448). Since gender is constructed, these findings are what one would expect, and they serve to make more complete our understanding of all the factors that create gender.

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See also: Contemporary Men's Movement; Gay and Lesbian Studies; Gender Roles and Society; Sex-Role Stereotypes; Work and Families

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Gender Roles and Society

Gender roles are based on the different expectations that individuals, groups, and societies have of individuals based on their sex and based on each society's values and beliefs about gender. Gender roles are the product of the interactions between individuals and their environments, and they give individuals cues about what sort of behavior is believed to be appropriate for what sex. Appropriate gender roles are defined according to a society's beliefs about differences between the sexes.

Understanding the term "gender roles" requires an understanding of the term "gender." "Gender" is a social term that is often confused with the term "sex." Sex and gender are different concepts. Sex is a biological concept, determined on the basis of individuals' primary sex characteristics. Gender, on the other hand, refers to the meanings, values, and characteristics that people ascribe to different sexes. Ann Oakley (1972) was one the first social scientists to distinguish the concept of gender from the concept of sex. According to Oakley, gender parallels the biological division of sex into male and female, but it involves the division and social valuation of masculinity and femininity. In other words, gender is a concept that humans create socially, through their interactions with one another and their environments, yet it relies heavily upon biological differences between males and females. Because humans create the concept of gender socially, gender is referred to as a social construction. The social construction of gender is demonstrated by the fact that individuals, groups, and societies ascribe particular traits, statuses, or values to individuals purely because of their sex, yet these ascriptions differ across societies and cultures, and over time within the same society.



Female construction worker doing non-stereotypical work (Michael Siluk)

Gender roles are the roles that men and women are expected to occupy based on their sex. Traditionally, many Western societies have believed that women are more nurturing than men. Therefore, the traditional view of the feminine gender role prescribes that women should behave in ways that are nurturing. One way that a woman might engage in the traditional feminine gender role would be to nurture her family by working full-time within the home rather than taking employment outside of the home. Men, on the other hand, are presumed by traditional views of gender roles to be leaders. The traditional view of the masculine gender role, therefore, suggests that men should be the heads of their households by providing financially for the family and making important family decisions. While these views remain dominant in many spheres of society, alternative perspectives on traditional beliefs about gender roles have gained increasing support in the twenty-first century.

Different disciplines offer a range of perspectives on gender roles. An ecological perspective on gender roles suggests that gender roles are created by the interactions between individuals, communities, and their environments. That is, while individual people play a role in constructing gender roles, so too do the physical and social environments within which people operate. A biological perspective on gender roles suggests that women have a natural affinity toward the feminine gender role and that men have a natural affinity toward the masculine gender role. The biological perspective does not, however, suggest that one role holds any inherently greater value than another role. A sociological perspective toward gender roles suggests that masculine and feminine roles are learned and that masculine and feminine gender roles are not necessarily connected to males' and females' biological traits. Sociologists study the different meanings and values that masculine and feminine gender roles hold in society. Related to the sociological perspective, a feminist perspective on gender roles might assert that because gender roles are learned, they can also be unlearned, and that new and different roles can be created.

The feminist perspective points out that gender roles are not simply ideas about appropriate behavior for males and females but are also linked to the different levels of power that males and females hold in society. For example, maintaining economic control over themselves and their fami-

lies is one way that men experience greater power in society than women. Because men are expected to be the primary breadwinners for their families, women often find themselves to be in poverty if their marriages dissolve. In this example, a feminist perspective would assert that men tend to hold more power in their marriages than women since men are less likely to lose power or social status if their marriages dissolve.

Gender roles can be linked to expectations of males and females in realms outside of the family as well, such as work (Williams 1995). In the workplace, men and women are often expected to perform different tasks and occupy different roles based on their sex (Kanter 1977). Even in the early twenty-first century, many corporations operate from a perspective that favors traditional beliefs about gender roles by, for example, offering parental leave benefits only to mothers and denying such benefits to fathers. In addition, because the traditional perspective toward gender roles remains predominant in many corporations, the positions that women and men hold within corporations are often segregated by sex. Women are more likely to be expected to work as secretaries, and men are more likely to be expected to work as managers and executives. Also, men are presumed to be more ambitious and task-oriented in their work, while women are presumed to be more interested in and concerned about their relationships with others at work.

As these examples demonstrate, gender roles are sometimes created on the basis of stereotypes about gender. Gender stereotypes are oversimplified understandings of males and females and the differences between them. Individuals sometimes base their perceptions about appropriate gender roles upon gender stereotypes. Gender stereotypes tend to include exaggerated or erroneous assertions about the nature of males and females. For example, a common gender stereotype about males is that they are not emotional. Females, on the other hand, are commonly stereotyped as being irrational or overly emotional. Political movements such as the feminist movement continue to work to deconstruct gender stereotypes and offer alternative visions of gender roles that emphasize equality between women and men.

Finally, gender roles are often discussed in terms of an individual's gender role orientation, which is typically described as either traditional or

nontraditional. A traditional gender role orientation emphasizes differences between men and women and assumes that each sex has a natural affinity to particular behaviors. Those who maintain a traditional gender role orientation are likely to be influenced by the rules and rituals of the generations that came before them, by their parents and grandparents. Individuals with nontraditional gender role orientations are more likely to believe that an individual's behavior is not or should not be determined solely by her sex. Individuals with nontraditional gender role orientations are more likely to believe in the value of egalitarian relationships between men and women and in the power of individual human beings to determine what roles they wish to occupy and the extent to which those roles are or should be associated with their sex.

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See also: Contemporary Men's Movement; Gay and Lesbian Studies; Gender and Families; Sex-Role Stereotypes; Sexual Identity Development; Work and Families

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Gesell, Arnold Lucius

Arnold Lucius Gesell, a noted American psychologist and pediatrician, was born on June 21, 1880, in Alama, Wisconsin, and died on May 29, 1961, in New Haven, Connecticut. Gesell studied, through the use of observation and innovative recording on film, the physical and mental development of children from birth to adolescence. His books influ-

enced child rearing enormously in the United States, particularly in the 1940s and 1950s. He was the director of the Clinic of Child Development at Yale University (1911–1948), where he and his team collected a vast quantity of information and data on child development. The information he published had a huge influence on both parents and educators around the globe.

Gesell first studied psychology at Clark University, and was influenced by one of the earliest American psychologists, G. Stanley Hall (1844–1924). He received his Ph.D. in 1911, was appointed an assistant professor at Yale University, where he established the Clinic of Child Development, and served as the clinic's director between 1911 and 1948. He became convinced that medical training was essential in his studies of child development, therefore studied medicine and received his M.D. from Yale in 1915. Gesell's team studied large numbers of children (about 12,000), which led them to several conclusions, known collectively as Gesell's maturational theory. The findings of the research demonstrated that all development in babies, children, and adolescents was similar and consisted of orderly processes. Children must reach quite specific maturational stages in their development before their learning will influence their behavior. Both physical and psychological development of children occurs in a predictable and patterned manner, which was termed maturation. Maturation follows specific sequences (not necessarily linear). All children will go through these stages at their own pace, but the sequences remain the same. Behavior was regarded as a function of structure, whereas the role of the environment was viewed as a secondary influence.

Gesell was also very interested in retarded development, as he believed an understanding of normal child development was absolutely essential to understanding developmental abnormality. The results of the research were published as *Infancy and Human Growth* (1928) and contained developmental schedules, using 195 items of behavior in the areas of motor skills, adaptive behavior, language development, and self-help and social skills. Ten years later, the schedules were revised and were used widely to evaluate children as early as four weeks of age. The schedules and tests were widely used to determine school readiness. There was criticism of the schedules by some experts, but Gesell's influence had become substantial. His

advice to parents and caregivers can be summed up: The best approach to child rearing consists of providing careful guidance, rather than using excessive permissiveness or rigid rules.

Gesell published a large number comprehensive works; many of these were best-sellers. Key publications were *An Atlas of Infant Behavior* (1934); *The First Five Years of Life* (1940); *Infant and Child in the Culture of Today* (1943) and *The Child from Five to Ten* (1946), both with Frances L. Ilg and Louise Bates Ames; and *Youth: The Years from Ten to Sixteen* (1956).

Gesell's influence on pediatricians and psychologists and educators of his day was enormous, and his influence only began to wane when the works of Jerome S. Bruner and Jean Piaget became prominent. At that time Gesell was also criticized for basing many of his conclusions on observations of children of White middle-class families. The critics suggested that not enough attention had been paid to individual and cultural differences.

Child development research and theoretical concepts shifted to consider the balance between internal child characteristics and the influences of the quality of the environment, including health and nutrition, on a child's well-being, which shape physical, mental, spiritual, moral, and social development. This ecological approach focuses on the quality of the relationships with people and of the environments the child experiences. Children's interactions within their homes and communities have come to be seen as having an equal impact on their physical development and maturation. Despite the development of the view that a child is at the core of human and natural systems that shape development, which has been called "the ecology of child development" (Bronfenbrenner 1978), the importance of Gesell's role as a pioneer in developing advances in observing and measuring child behavior remains undiminished.

Until his death, Gesell served as a consultant for the Gesell Institute of Child Development in New Haven, Connecticut.

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Grandparents Rearing Grandchildren

Since 1990, there has been a sudden and rapid increase in the number and proportion of U.S. grandparents with primary responsibility for the care of their grandchildren. Media and political attention to this phenomenon, policy and programmatic response to the newly defined constituency, and academic research on the topic have also increased rapidly. The complexity of the phenomenon, and its connection to a wide array of more traditional research topics, make the phenomenon of grandparents rearing grandchildren a rich arena for further academic research.

Household Demographics

A large number of U.S. grandparents have primary responsibility for care of their grandchildren. Over 5.5 million United State grandparents had their own grandchildren under 18 years of age living in their households at the last census (U. S. Census Bureau 2000). Of these grandparents, 42 percent had primary responsibility for care of the grandchildren who lived with them (U.S. Census Bureau 2000). In 1997, 2.5 percent of U.S. households were headed by grandparents caring for grandchildren with no biological parents of the children present in the home (Casper and Bryson 1998). Over 5 percent of U.S. grandparents provided custodial care to their grandchildren at some time during the 1990s. (Fuller-Thompson and Minkler 2001).

The proportion of U.S. children being reared by grandparents increased suddenly and substantially during the 1990s. Between 1970 and 1997,



Grandparent helping child with homework (Elizabeth Crews)

the proportion of U.S. children living in households headed by their grandparents rose from 3.2 percent to 5.5 percent. During that same period, the greatest component of the increase (from 1.8 percent to 3.7 percent of children) was in households that also included one or both biological parents of the grandchildren (Casper and Bryson 1998). But from 1990 to 1997, the proportion of U.S. children living in households headed by their grandparents, but with no biological parent present, rose from 1.4 percent to 1.8 percent—after changing negligibly from 1970 to 1990 (Casper and Bryson 1998).

Many broad demographic characteristics of grandparents rearing grandchildren resemble Americans with grandchildren under 18. Most are married—73 percent in 2000 (U.S. Census Bureau 2000). Women are more commonly the caregivers—62 percent overall in 2000 (U.S. Census Bureau 2000), and if only one grandparent is doing the rearing, it is almost always the grandmother (Casper and Bryson 1998). More than 80 percent are above the poverty level (U.S. Census Bureau 2000). Most are between the ages of 45 and 60, and

the mean age is under 60 (Fuller-Thompson and Minkler 2001). Most are employed: In 2000, 55 percent were in the labor force (U.S. Census Bureau 2000).

Analysis of key demographic trends related to grandparent-headed households will be fruitful areas for future research. Three of those trends will be particularly important.

The first is trends in care for all children not living with a biological parent. It is not clear how much the increase in custodial grandparenting reflects a rising proportion of children not living with biological parents, and how much it reflects a shift in the proportion of those children living with their grandparents. A definitive comparison is needed of the trend in custodial grandparenting with trends in total children not living with their biological parents, and to specific components of that total (adoption outside the family, foster care outside the family, homelessness, independent living, and institutional care).

The second is the decreasing size and increasing geographic dispersion of U.S. families. Large extended families whose members live close to

each other can provide significant social resources to a parent with diminished capacity or willingness to care for children, and to children whose parents are neglectful, abusive, or impaired. Those resources include respite for parents and children alike, and several alternatives for kinship care if children are no longer cared for by their biological parents. Decreasing family size and increasing geographic dispersion are reducing the average availability of those social resources per nuclear family. Analysis is needed that examines the impact of that change on the proportion of grandparents rearing grandchildren—through more removals of children from their parents' custody, through reduced alternatives to grandparents for kinship care, and through other less direct effects.

The third is the decreasing ratio of children to living grandparents with their own households. Declining fertility rates have reduced the ratio of grandchildren to grandparents. Increasing life span has increased the average number of children's living grandparents. More years of healthy life and greater wealth and income among older generations have made grandparent-maintained households more common. Statistically, therefore, there is more opportunity for a grandchild to be cared for by grandparents. At the same time, more grandchildren provide a grandparent with more statistical opportunity to become a grandchild's caregiver. This greater statistical opportunity is reflected in data: Custodial grandparenting is more likely the more grandchildren grandparents have (Fuller-Thompson and Minkler 2001). Analysis is needed that teases out the relative effects of these opposing statistical processes, and explains how mediating family and social processes lead to those effects.

Circumstances

The general description, grandparents rearing grandchildren, refers to situations that vary significantly on many dimensions. When comparing any two grandparent-headed families, one finds that the differences are often more numerous than the similarities.

One dimension is the legal status of the custody grandparents have. Some have physical care and control, but no legal custody. Many have temporary guardianship that must be renewed periodically. Some become foster parents. When the parental

rights of the biological parents are relinquished or terminated, grandparents may obtain permanent guardianship, or may adopt their grandchildren. "The legal status *obtained* depends on whether the biological parents are struggling to *maintain/regain* custody, whether the grandparents hope to return the grandchildren to one or both biological parents at some later time, the relative financial and legal advantages of a particular status *to the grandparents* in the state in which *they* reside, and the legal and procedural barriers related to obtaining different statuses."

Another dimension is the role of biological parents in the grandchild's life—or roles, since they usually differ for the mother and the father. One or both parents may be competing with the grandparents for custody. The parents may be present in the child's life—from one extreme in which the parents are living with the grandparents themselves to the other extreme in which they have only occasional irregular contact with the child. The grandparents may simply be providing care during a particularly difficult period of the parents' lives, or they may be maintaining custody in the family with the hope of returning the grandchildren to one or both parents at a later time. Or the parents may be completely absent from the life of the grandchildren.

Household composition is extremely variable. Most analyses that consider this dimension distinguish households according to whether one or both grandparents are present, and whether a biological parent is present. But many households have a step-grandparent, or a live-in partner of a biological grandparent. Some households contain great-grandparents, who may help with care of the grandchildren or may need care themselves from the grandparents—or both. Some households have juvenile or disabled aunts or uncles of the grandchildren still living at home. Some households contain aunts, uncles, or grown siblings of the grandparents. And a few households have more distant relatives or non-relatives (such as friends or boarders) in them.

The duration and permanency of significant caregiving is highly variable. In some cases, it begins in infancy; in others, not until late adolescence. It may endure until the grandchildren reach adulthood, or it may be temporary until family circumstances change. In some cases, custody is never in question. In other cases, the grandparents

may struggle for custody and perhaps lose custody to one or both parents after a time (or, rarely, to the child welfare system). Periods of full-time caregiving may be intermittent, especially if legal custody is never granted.

Grandparents who rear grandchildren vary dramatically in their ages. Most, at any one time, are under the age of 60, but ages vary from the 30s to the 80s. Most custodial grandparents take on that role before the age of 55, but there are no data on the distribution of age at which custodial grandparents no longer have legal responsibility for their grandchildren.

The situations that lead to grandparents rearing grandchildren also vary significantly. Sometimes increasingly frequent child care becomes full-time child care. Sometimes a presumably temporary caregiving arrangement, to accommodate changes in the biological parents' lives, becomes permanent. Sometimes grandparents arrange to care periodically for their grandchildren to provide them respite from a difficult home environment, and eventually decide (or are asked) to take formal legal custody. Sometimes grandparents obtain custody after children have first been placed with some other member of the family, or with a foster family outside the family, or in an institution. The stories of many grandparents rearing grandchildren include the sudden, unexpected telephone call (sometimes from another state) demanding immediate decision on grandparental custody versus placement of the grandchildren outside the family due to removal of custody from biological parents. And of course some grandparents face situations where the biological parents die or are incapacitated.

Examination of these variations, their social etiologies, and the differential results associated with them will provide rich research opportunities. One basic type of research needed is basic descriptions of the situations of custodial grandparents. Studies of families (as contrasted with secondary data analysis) have typically focused on what are called skipped-generation households—those in which the biological parents play little or no caregiving role. (See, for example, Burton 1992; Dressel and Barnhill 1994.) Much descriptive work remains to be done on custodial grandparents in other situations.

Another basic type of research needed is documentation of the relative frequencies of categories

in the dimensions listed above. With the exception of current age, nationwide data on the relative frequency of categories remain to be developed for all the dimensions listed above. Much additional research is also needed on the various precursors of custodial grandparenting. Investigation of family dynamics, effects of public policies, and other social variables has barely begun (see next section). Investigation of pathways leading to different types of custodial grandparenting situations has not yet begun.

Investigation of outcomes for grandparents and grandchildren has barely begun for the custodial grandparents in general, as well as for a narrow set of categories of custodial grandparents (see second section following). Preliminary investigation of differential outcomes remains to be done for most categories; thorough investigation of differential outcomes remains to be done for all categories.

Causes

Research to date has focused on proximate causes. Research on custodial grandparents has documented a list of family and personal dysfunctions associated with skipped-generation families: substance abuse, teen pregnancy, divorce, single-parent households, mental and physical illness, criminal behavior and incarceration, and child abuse and neglect. (See, for example, Minkler 1998.)

Placing proximate causes in family and cultural context will be a rich mine for future research opportunities. A handful of examples will show the variety of research opportunity.

First, historically African American grandparents have played a relatively large custodial role in their grandchildren's lives (Sudarkasa 1981; Wilson 1989). This historical role is reflected in higher current custodial grandparenting rates among African Americans than among European Americans (Fuller-Thompson, Minkler, and Driver 1997; Szinovacz 1998). Future research can examine the family dynamics that have maintained the overall historical role and the specific changes in that role that have accompanied changes in the larger social context.

Second, kinship care generally, including custodial grandparenting, has been more common among Hispanic families than among European American families (Harden, Clark, and Maguire 1997). Future research can explore how this tradi-

tional difference continues and changes, as specific Hispanic ethnic groups and families become more integrated into the larger U.S. society and economy. Results will provide insight into the relative importance of culture, of socioeconomic conditions, and of policy on the occurrence of custodial grandparenting.

Third, research on custodial grandparenting in other ethnic groups (Arab Americans, Asian Americans, recent African immigrants, Native Americans, and the many different nationalities and specific cultures contained in those general categories) has been very limited to date. Comparative research will provide insight into the range of variations that public policy, child welfare agencies, and support programs must address; it will also provide additional insight into the effects of American society on family dynamics of families of from different cultures.

Finally, Valerie King and Glen Elder (1995, 1997) have explored how past and current intergenerational relations in a family specifically affect current grandparent-grandchild relationships. Their findings are integrally related to the etiology of custodial grandparenting in particular families, and research linking these two topics could be especially fruitful.

The effects of changing child welfare policies remain to be carefully explored. As mentioned above, many custodial grandparents received a phone call that suddenly required them to choose between taking on the care of their grandchildren or allowing them be placed with strangers in the foster care system. During recent decades, there has been a decreasing threshold of official tolerance for unhealthy physical and emotional conditions of child rearing, a greater public willingness to report such conditions, and an increasing effort to recruit extended family as caregivers when children are removed from the care of their biological parents. These policies have been noted, but their effects on custodial grandparents barely examined, and not yet carefully analyzed. Differences among the fifty states in child welfare laws, policies, and enforcement, and in the availability of supportive programs and services, provide a wealth of potential data. Those data can be used to examine the differential effects of specific policies and services, and combinations of them, on rates of custodial grandparenting and on decisions of individual grandparents.

Grandparents' decision-making processes remain to be examined carefully. Studies that explore in some detail the ways custodial grandparents have come to their decision to take on the care of their grandchildren (Climo, Terry, and Lay 2002; Gibson 2002) have involved small samples. Studies that test their findings with larger samples, and with samples from different ethnic groups, are potential next research steps. Studies that compare custodial grandparents with grandparents in similar circumstances who chose not to rear their grandchildren also remain to be done. Such studies are essential to understanding custodial grandparents' decisions.

Finally, comparative studies with biologically intact families remain to be done. The cited proximate causes of custodial grandparenting occur in other families, in which one or both biological parents continue as their children's primary caregivers. Studies comparing such families to families of custodial grandparents will provide insight into the way individual, family, cultural, and societal level processes interact on the way to custodial outcomes.

Grandparent and Grandchild Outcomes

Research has generally reported poor outcomes for custodial grandparent and grandchild alike. Several studies have documented high rates of physical symptoms and illness among grandchildren reared by grandparents. (See, for example, Dowdell 1995; Minkler and Roe 1996.) Studies have also reported relatively poor self-reported health and high rates of depression among custodial grandparents. Results from earlier small-scale studies have been validated, in the case of depression, by the finding by Esme Fuller-Thompson, Meredith Minkler, and Diane Driver's finding that clinical depression occurs twice as often among custodial grandparents as it does in grandparents not providing custodial care to grandchildren (1997).

Several analyses have also reported disproportionately high rates of poverty among custodial grandparents. Lynne Casper and Kenneth Bryson (1998) demonstrated, however, that poverty is concentrated in families where grandmothers are rearing grandchildren with no grandfather and no parents present in the household. Other categories of households had much lower rates of poverty. In custodial grandparent households with both

grandparents present and no parents present, the rate of poverty was lower than for parent-headed households; although, at the same time, absence of health insurance was more common in this category than in all other household categories they examined.

Research opportunities lie in exploring how these outcomes develop. Studies to date have either not been comparative, or have compared conditions at one point in time only. Comparative longitudinal studies are a needed next step. It remains to be discovered to what extent poor outcomes simply reflect the already well-known correlation between such outcomes and unstable family situations, and to what extent (and how) they may directly result from custodial grandparenting (or specific categories of it). It also remains to be discovered how well circumstances prior to the custodial grandparenting decision predict outcomes for health and wealth, and how the effects of those prior circumstances compare to (and interact with) the direct effects of custodial grandparenting.

Also, grandparent and grandchild outcomes for custodial grandparent families are routinely compared to those for the general population, or among categories of custodial grandparent families. But custodial grandparenting occurs when biological parents cannot parent, will not parent, or are legally prohibited from parenting. Appropriate comparisons, very much needed, would contrast outcomes for custodial grandparent families with outcomes when other arrangements are made for the grandchildren.

In research on outcomes, a potentially rewarding approach is to treat custodial grandparents' reported experience as one set of variables alongside other more objective variables. People in situations judged equivalent by researchers typically report quite different experiences. And people in situations that appear quite different may have the same emotional reactions. Jacob Climo, Patterson Terry, and Kim Lay (2002) reported a framework for categorizing custodial grandparents' emotional experience that helped explain much of the stress described by the grandparents they studied. What seems clear is that the information just is not there yet to allow helping professionals to advise families when decisions have to be made about whether grandparents should be the ones to care for grandchildren. In fact, it would be unfortunate

if the limited research done so far were allowed to influence these decisions.

Patterson Terry
Jacob Climo

See also: Adoption; Child Abuse; Family Diversity; Foster Care

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H

Hall, G. Stanley

Granville Stanley Hall (1844–1924) is most well known for his seminal work, *Adolescence* (1904), in which he advanced the idea that adolescence was a separate and important period of the life span. The emphasis of Hall's work and writing was on the biogenesis of the developing adolescent with respect to the reciprocal impact of peers, families, schools, societies, and historical time on individual adaptation and achievement. In addition to laying the foundation of adolescent science, Hall's work also inspired movement toward a psychology that takes into account the interrelations between individual development and social settings. Hall's orientation to the field of psychology was inherently developmental and applied, making him an important precursor of the field of human ecology.

Hall is considered the father of American psychology. His myriad contributions to the field earned him this title: Hall received the first Ph.D. in psychology in America (1878) from Harvard University; established the first psychology journal, the *American Journal of Psychology* (1887), in addition to *Pedagogical Seminary* (1891), the *Journal of Religious Psychology and Education* (1904), and the *Journal of Applied Psychology* (1917); founded the American Psychological Association (1891); and served as the first president of both the American Psychological Association and Clark University.

The framework for Hall's conceptualization of life span development was influenced by Charles Darwin's theory of evolution and Ernst Haeckel's interpretation of embryonic recapitulation. Hall's

interpretation of Darwin was based on the theory of biogenesis, the theory that individual development mirrors (in compressed form) the development of the species, thus suggesting that the beastlike qualities of children resemble prehistoric man and that adolescence resembles the transformation of primitive man that resulted in modern man, or, in the individual, in mature, adultlike behavior.

Hall was the first to suggest that adolescence was a unique period of the life span, proposing that childhood was an extension of embryonic development, and that adolescence marked a transition period between primitive development, childhood, and human development, adulthood. Although Hall's interpretation of evolutionary theory has been subject to debate (see Lerner 2002), he successfully established adolescence as a distinct period of the life span characterized by both continuity of development and unique developmental characteristics.

While Hall was generally concerned with human development, he was specifically focused on the biogenesis of adolescence, or the emergence of and relationship between genetically determined physiological changes and adolescent development. Hall authored the first text on adolescence, which was a two-volume work appropriately entitled *Adolescence*. Borrowing the name from a movement in German literature, Hall described adolescence, lasting from puberty to full adult status, as a period of *Sturm und Drang*, or storm and stress (see Muuss 1982). Hall chose this characterization of adolescence because he believed that

during this stage, individuals vacillate within a wide emotional range. This emotional volatility translates into a wide range of behavior—from behavior that is infused with energy and enthusiasm to behavior that is marked by apathy, indifference, and lethargy. Thus he saw the adolescent as likely to be in a constant state of turmoil, resulting in unpredictable behavior and relations with others.

Hall's work on adolescence earned him the title "Father of Adolescence." Despite his interest in the second decade of life, Hall's wide range of publications demonstrated his dedication to persons both young and old. His life span interests are underscored by publications such as *The Contents of Children's Minds Upon Entering School* (1883) and *Senescence: The Last Half of Life* (1922). Until Hall's death he remained dedicated to the advancement of psychology as a science.

In tribute to Hall's contributions to the fields of psychology and education, the G. Stanley Hall lecture series was established at Clark University in 1980 as an annual forum for renowned experts to lecture on the latest information in their field. Hall's life work is archived at the Robert H. Goddard Library, Clark University, Worcester, Massachusetts.

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Head Start

Head Start is an early childhood development program for low-income families whose programs and emphases reflect an ecological approach to development of the whole child, an approach that involves meeting children's educational, health, and social services needs, and including the children's families in the program. The Head Start program was founded in 1965 to provide poor children, ages 3 to 5, with the same kind of opportunities as middle-class children. Run by the Administration for Children and Families in the Department of Health and Human Services, Head Start is a center-based preschool that usually offers a half-day preschool during the school year. It is funded at \$6.2 billion in fiscal year 2001 and is estimated to serve 916,000 children and their families during that time period. The program awards grants to public and private agencies, but each community is generally expected to contribute 20 percent of the total cost of its Head Start program (U.S. Department of Health and Human Services 2001).

Head Start is America's oldest and largest early intervention program. The program was founded in the 1960s as a part of the War on Poverty that was launched by the administration of President Lyndon Johnson. A committee of fourteen experts formed a plan for the formation of Head Start. The committee identified six components that the program should consist of: early childhood education, health screening and referrals, mental health services, nutrition education and hot meals, social services for the child and the family, and parent involvement. The aim is to provide comprehensive, high-quality services to improve physical and mental health, cognitive skills, social and emotional development, relationships with family and others, social responsibility, and a sense of dignity and self-worth for both the child and the family (Zigler and Styfco 1996). The diverse backgrounds of the founders of the program—education, child development, mental health, and pediatrics—contributed to creating the whole-child approach that Head Start has taken. In spite of this ecological emphasis, Head Start was, and still is, portrayed publicly and politically as a program aimed at increasing the IQ and school readiness of economically disadvantaged children (Vinovskis 1999).

Initially, Head Start was designed as only one of many means to combat poverty, but expectations grew extremely high as the program gathered pub-



Children attending a Head Start program (Elizabeth Crews)

lic and political support; it was believed to reverse the developmental trajectory of the lives of poor children single-handedly. However, a study by the Westinghouse Learning Corporation evaluating the Head Start program was published in 1969. It found that gains in IQ scores of children that participated in the program were small and that such gains faded in the early grades of school. Despite the fact that the study was methodologically flawed, despite the fact that it found some noncognitive benefits of the program, support for Head Start decreased considerably following the release of the report; enrollments dropped dramatically, and throughout the 1970s and 1980s there were no funding increases for Head Start. As more studies have failed to find beneficial effects of Head Start on children's IQ scores, opponents of the program argue that it offers nothing more than low-quality child care. They argue that the money that is used for Head Start would be better spent by offering vouchers to poor families to use for schools of their own choice (Scarr 1998).

Supporters of the program have pointed out that the gains achieved by Head Start can be expected to fade when children are placed in poor

schools after their Head Start experience. Although they insist that Head Start has positive effects on children's development, they admit that the program is not yielding the results it could be. But criticism and loss in support have made advocates of the program focus on how to improve the services of Head Start, especially on how to ensure that the program is providing high-quality services. Proponents of the program point to evaluations of intensive and extended intervention programs that have yielded positive effects on educational and social development of economically disadvantaged children. They argue that if Head Start invests considerably and consistently in high-quality services, and aims at serving all eligible children, it will succeed as an effective intervention program (Ramey 1999).

Advocates of Head Start emphasize that the program was never designed to ensure that poor children could overcome all of the obstacles of poverty, and that no intervention program can achieve such a goal. This is especially true today, as poverty represents a much more serious problem than it did when the program was designed in 1965. Single parenthood, crime, and drug abuse

plague many more poor families now than was the case over three decades ago. Many supporters of Head Start argue that the program must be adapted to the new reality that low-income children and their families face, for example, by offering more services to the whole family.

Following the debate over the effects of the Head Start program, various changes have been made to it. The recent emphasis that has been placed on ensuring the quality of the services is reflected in the Program Performance Standards included in Head Start's 1994 reauthorization legislation. The standards define services that Head Start Programs must provide to the children and families they serve in order to receive federal funding. These standards are aimed at improving the quality of the staff, the management of the programs, and the facilities. The Early Head Start Program that was launched in 1995 has also expanded services. Early Head Start provides services similar to those offered by Head Start to low-income pregnant women and to poor families with children under the age of 3. It aims to provide high quality child and family development services to promote healthy development of the children and their families.

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See also: Attachment; Childcare: Issues for Infants and Children; Early Childhood Education; National Association for the Education of Young Children (NAEYC); Public Policy and Early Childhood

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Healthy Indoor Air

In the United States, a typical person spends about 90 percent of his time indoors. Thus, health, comfort, and well-being are strongly influenced by the complex issue of the quality of indoor air. A building may have a wide variety of air pollutants resulting from the products used to construct and furnish the building, as well as from the activities of the occupants. The heating and cooling systems of a building can contribute pollutants. Other pollutants may enter from the external environment. Building conditions, such as temperature and humidity, influence the production of pollutants. The concentration of pollutants in a building is directly related to the ventilation of the structure. Finally, any of these factors may vary dramatically over time.

In recent years, the importance of indoor air quality has gained greater public awareness. As our society puts increasing emphasis on environmental issues, we become more concerned about the effects of hazardous products and pollution in our buildings, and especially our homes. Attention to good health and understanding the role of the built environment in supporting healthy lifestyles are issues gaining prominence.

If we spend most of our time inside buildings, about half of that time is spent in our homes. Indoor air quality in the privacy of a home is a very different issue than in a public space. Laws and regulations are often used to control and improve the quality of air in public spaces. Yet, our home is generally regarded as a private space we control—our home is our castle. The quality of residential indoor air, and its impact on health and safety, is largely up to the individual.

Identifying Indoor Air Quality Problems

Indoor air quality problems are not always obvious. Some pollutants can be smelled or seen, while others are odorless or invisible. Poor air quality may simply be annoying or unpleasant, or it may lead to serious health problems. Irritated eyes and noses, headaches, dizziness, tiredness, asthma, viral infections, and respiratory diseases may result from indoor air pollutants. Serious effects of poor indoor air quality, such as lung cancer, may take years to develop. People react differently to air pollutants, depending on their age, sensitivity, health status, and the type and length of exposure. Children, whose developing bodies are smaller and

who breathe in a proportionally larger volume of air, are especially vulnerable.

A home with unusual, strong, or lingering odors; stale or stuffy air; or a noticeable lack of air movement could have indoor air quality problems. Health problems or symptoms that improve after leaving the home are an indication of indoor air quality problems. Excessive humidity or the presence of molds or mildew are additional signs of air quality problems. Remodeling and other home improvement projects, weatherizing, or moving new furniture into a home can increase undesirable air quality conditions. Chemicals used in cleaning, maintenance, and hobbies can contribute to air quality problems.

Finding the source—or sources—of pollutants in the home is the first step. The removal or reduction of pollution sources is usually the most cost-effective way to address air quality problems. The second approach is to understand how the home is ventilated and to apply this knowledge to decreasing the concentration of pollutants in the home.

Indoor Air Pollutants

Most indoor air pollutants fall into one of the following categories:

- **Combustion By-Products.** These pollutants are from appliances that burn fossil fuel (such as gas, oil, wood, or coal), appliances such as furnaces, water heaters, ranges, space heaters, wood stoves, and fireplaces. Tobacco smoking in the home is another source of combustion pollutants. Examples of pollutants include carbon monoxide, nitrogen and sulfur oxides, formaldehyde, and tiny breathable particles. The type of venting system and the maintenance of the appliances are critical factors in their pollutant potential. Any combustion by-products not vented to the outside of the home can lead to air quality problems.
 - **Biological Contaminants.** These pollutants are from living or once-living organisms, including molds and other fungi, animal dander, pollen, and insect residues, such as feces from dust mites and cockroaches. These contaminants can cause odors, lead to allergic reactions, trigger asthma attacks, and cause infectious diseases and respiratory problems. Many biological contaminants
- increase in damp, humid, or poorly cleaned spaces. Good maintenance practices can control moisture and reduce the need for chemical products like pesticides and disinfectants, which could add other pollutants to the air.
- **Building Materials and Furnishings.** These include manufactured wood products, carpeting, paints, varnishes, waxes, and adhesives. Examples of pollutants include a wide variety of volatile organic compounds (VOCs), sometimes called organic solvents or petroleum distillates. Many VOCs used in manufacturing of products for the home will evaporate when the product is new or during hot and humid conditions. Building materials with lead and asbestos, no longer used in new construction, are found in older houses. They disintegrate or become airborne as the materials wear or are disturbed in remodeling.
 - **Household Products and Chemicals.** These products are used for maintenance, cleaning, personal grooming, and hobbies. Some products, such as sprays, can release chemicals or particles into the air during use. Others outgas, or emit chemicals, as the product dries, cures, or ages. Household products having petroleum distillates or other volatile organic compounds (VOCs) usually create more unhealthy emissions than water-based products. These products are sometimes referred to as solvents, or solvent-based. However, many “everyday” household products can generate indoor air pollutants if used improperly or without adequate ventilation.
 - **Radon.** This is a radioactive gas that occurs naturally in rocks and soils in many areas. It enters the home through cracks and other openings in contact with the ground. Sometimes ground water, such as from a well, is the source. Depending on the structure of the home, and the ventilation patterns, levels of radon can rise to become a health risk. Radon is invisible and odorless, causes no immediate symptoms or health effects, and is detected only through specific testing. It is recognized, however, as a major long-term cause of lung cancer.

Ventilation

Even in homes with few sources of pollutants, ventilation is needed for good air quality, especially in seasons when windows and doors are shut. Home ventilation is usually measured in air changes per hour (ACH), or how many times per hour the volume of air in a home is replaced with outdoor air. Many factors can affect the ACH rate: the structure of the home; weather; opening or closing of doors and windows; heating, cooling, and ventilating equipment; and the use of fans.

Many homes leak air—at construction joints, for example—which many help maintain air freshness, but wastes energy used in heating and cooling. Newer homes tend to have tighter construction, resulting in greater energy efficiency but pollutant buildup as well. Tighter homes are more susceptible to back-drafting, a situation in which indoor air pressure is lower than outdoor air pressure. With back-drafting, combustion gases, such as those from a fuel-burning furnace or water heater, may not be fully exhausted to the outside, or outdoor pollutants, such as radon, may be pulled into the home.

The answer, however, is not to build homes that are more loosely constructed with higher air exchange rates. The cost of inefficient use of energy supplies to heat and cool our homes, as well as the environmental impact of excess energy production is too significant. Rather, the multipronged solution is to look at the following:

- Reduced need for ventilation through better control of indoor air pollutants
- Cost-effective heat-recovery mechanical ventilation when appropriate to the season and climate
- Controlled ventilation that adjusts to times and spaces with higher pollutant production, such as the use of an exhaust fan with a gas kitchen range
- Greater use of natural ventilation in appropriate climates and seasons.

Solving Indoor Air Quality Problems

Poor indoor air quality in homes is not an easily remediable problem, but rather a complex, multifaceted issue that defies a simple solution. Some indoor air quality problems create significant health and comfort concerns and can even be life-threatening. Other air quality problems are merely

inconvenient. Variation in individual sensitivity complicates the issue. Diagnosing air quality problems is technically difficult, and the severity of the problem may or may not warrant the expense.

Achieving good indoor air quality in a home requires a two-part approach. First, the home must be designed, built, and furnished to minimize pollutants. This includes the products used in the structure and furnishings, construction techniques, and systems to heat, cool, and ventilate. Second, people need to understand the issues and risks of indoor air quality, and their own roles and responsibilities. Good air quality requires a commitment to manage and maintain the structure of the home to prevent indoor air pollution.

Action Recommendations

Each home is a unique system. Preventing, diagnosing, and treating air quality problems will vary. However, some general recommendations can be made, which can help provide healthy indoor air quality.

Vent all fuel-burning, combustion appliances to the outside. Maintain this equipment in good condition, with regular, professional inspections.

Do not allow tobacco smoke in the home.

Practice good housekeeping to minimize pest problems and reduce the need for pesticides. In particular, clean up food spills and waste.

Practice good home maintenance to control moisture and dampness. Fix leaks and drips. Check drainage around the home. Prevent standing water. Use exhaust fans during high moisture activities, such as showering or cooking.

Where possible, choose building materials and furnishings with low or no VOCs (volatile organic compounds). Ventilate new materials, such as furniture and carpeting, before bringing them into the home.

Choose water-based products, where possible, for use in cleaning and maintaining the home, as well as for personal grooming and hobbies. Follow manufacturer's directions when using household chemicals. If solvent (VOC) products must be used, provide adequate ventilation.

Test the home for radon. If the test reveals elevated levels of radon, take action to reduce levels.

For an older home, test for lead and asbestos hazards before beginning any renovations. Identify and control lead hazards in homes built before 1978, especially if young children are in the home.

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See also: Air Quality; Asthma; Indoor Air Pollution; Mold and Health; Radon; Smoking and Tobacco Use

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Hermeneutics and Human Ecology

The word hermeneutics comes from the Greek word, *hermeneuein*, meaning to interpret. Hermeneutics commonly refers to the theory and methodology of textual interpretation and analysis, with specific reference to Hebrew Scripture (Edgar and Sedgwick 1999). The term "hermeneutics" is currently applied more frequently to other types of textual research and is associated with philosophical, theological, artistic, and literary interpretation. A broad definition of hermeneutics that includes these additional disciplines views hermeneutics as a qualitative method of analysis that is concerned with the study of methodological principles of interpretation and explanation. Within the discipline of human ecology, hermeneutics is considered an important research method for obtaining in-depth understanding of the multiple layered interactions of humans and their surrounding environments (Brown 1993).

Hermeneutics is emerging as a unique discipline in the field of social research. Traditionally thought of as having to do with textual research, it has been expanded to encompass a wide range of symbolic human activity. Three disciplines above all, theology, philosophy, and literary interpretation, have specialized research methods that use a hermeneutical approach. With foundations in German phenomenology and existential philosophy, hermeneutics gives insight into human experience and the process of thought that shapes beliefs.

Hermeneutics has come to be known as an epistemological study of cultural science focusing research on interpreting texts, signs, symbols, ritu-

als, images, and fine and useful art products created by humans. The meanings of these creations are obtained through a process that seeks understanding of the historical context in which these artifacts were created. Researchers seek this understanding from several perspectives, above all the intention of the original author and the sociocultural context of the readership for which it was intended. In this form of philosophical theory or epistemology, importance is given to the individual consciousness of both the creator and the consumer. A third perspective, that of the researcher, must also be accounted for, since the researcher's own goals, perspectives and imagination are intrinsically involved in the process of understanding.

A hermeneutical analysis is a process of coming to "know" what the author of a text is trying to say. The process is often described as involving a critical circle, in the sense that it requires researchers to enter into a dialectical relationship with the material, asking questions, reading, reflecting, gaining understanding and then testing understanding by returning to the text. It is a circular process also in that understanding the whole requires understanding the parts, while understanding the parts require an understanding of the whole. The process of reflecting and testing is framed within the cultural constructions of the location and period in history within which the text or artifact was created. As an analytical process it is a breaking down and breaking open of one's old way of understanding. The manipulation is not of the text but rather of the understanding of the researcher. Coming to an understanding is an open-ended process, any result being itself subject to interpretation. In essence, it is making explicit the assumptions of an author in the context of the larger assumptions of the time and place where the work was created. It is believed that the depth of such understanding can exceed that of the original author's understanding of her own work.

Regarded as an interpretive science, hermeneutics rejects mono-methodological empiricism, meaning it makes no claim to deliver absolute knowledge that can be verified by empirical methods. Regarded as a soft science, hermeneutics places value not on explaining once for all what a text means but on gaining understanding. As an interpretive science it seeks to establish shared understanding and mutual agreement about the practice of human life as a way of improving one's

experience, thus placing the process within the conceptual framework of epistemological research. As a special component within epistemology, hermeneutics can be viewed as an art of understanding. Epistemology, the theory of knowledge, concerns itself with what is meant by knowledge and what can be said about what is known. Hermeneutics differs slightly from epistemology's tendency toward reductionism by presenting an understanding of theory that expands possibilities rather than reducing them. Such an understanding challenges the empirical nature of the more traditional hard sciences, which are seen as being necessary but insufficient (Howard 1982).

Hermeneutics in Relation to Human Ecology

The application of hermeneutics can be seen on two levels in human ecology. As a research method, it expands the aims of more traditional social sciences. Human ecology as a science has four aims: construction of correctness, construction of truth, construction of valuability, and construction of meaning. Each of these aims requires a depth of knowledge about human behavior that extends past observable or measurable behavior. To achieve this level of understanding, research must focus not only on hard, empirically based scientific knowledge, but on the soft, subjective, or behavioral sciences.

An ecological research framework utilizes hermeneutical techniques of analysis that can complement quantitative research. All human activity revolves around the ability to interpret and understand the behaviors of another and the symbols and language of the culture. Where a researcher's use of observation or a survey instrument may record and document behavior or beliefs, hermeneutical analysis of a subject's perception is needed if one is to secure the more encompassing understanding needed for predicting future behavior. Ultimately the true value of human ecology research rests within its ability to predict behavior as a means of improving the social conditions that support human existence.

Hermeneutics also complements the philosophy of ecological research, in that it encompasses a broad perspective on understanding human behavior within multiple environments. Interpretation of behavior extends beyond what may be seen as true or rational criteria or what is actually observed. As a science of interpretation, hermeneu-

tics forces the researcher to uncover the prejudices created through social, cultural, and behavioral environments. It looks to the norms, the language, and the traditions of the subject to gain understanding of the prejudice or perception by which behavior and beliefs are shaped. Such investigation can uncover distorted understandings on the part of the subject that cause misinterpreted situations or perpetuate social injustices.

The second level of application of hermeneutics in human ecology research is found within the researcher. Hermeneutics as a method of epistemological study recognizes that researchers approach their subjects with preconceived knowledge. Epistemology requires the researcher to bracket, or lay aside, what is known or believed and allow the data to speak on its own. Hermeneutics, however, brings the knowledge and experience of the researcher into the full process of analysis. As in the model of the critical circle developed by Martin Heidegger (1889–1976), the German philosopher, interpretation of the researcher, which is to contribute to understanding, requires the researcher to have already understood what is to be interpreted. The dialectical process triggers questions as to what the researcher knows, allowing deeper insights into the possible meaning of behavior. The intersubjectiveness of this emerging knowledge is then tested for validity and works toward creating mutual understanding.

On a deeper more personal level, researchers test their own construction of knowledge for evidence of distorted perceptions or misunderstandings. The process of testing prejudgments creates within the researcher the possibility of transforming his own preconceptions. Hermeneutics requires researchers to become reflective about themselves and about the people they are trying to understand. Hermeneutics as a method of research has the potential of reshaping the researcher's own distorted or inadequate assumptions, which result in misinterpreted situations. When researchers enter the full hermeneutical process, they become so changed, they are never able to view the world with their old naïveté. The new level of understanding they gain is ethically important, since human ecologists are expected to be prescriptive in improving human well-being (Brown 1993).

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See also: Participatory Action Research; Philosophy of Human Ecology

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High School

High school, typically grades 9–12, is compulsory secondary education that is designed to provide children with the intellectual and social skills they need to succeed in the adult world of employment, relationships, and civic responsibility. High school curricula today generally cover college preparation and vocational education, as well as subjects such as health, physical education, home economics, art, and music. These classes are designed to prepare students not only for work, but also for the roles they will assume in their families and communities generally (Hopkins 1983).

For most adolescents, the high school years bring change and maturation in virtually all areas of life, physical and mental, social and emotional. A high school's responsibility goes beyond simply providing information; the school is a place for adolescents to mature and to progress toward autonomy, forming a sense of identity and developing intimate relationships with peers and adults (Fenzel and Blyth 1991). For example, often a significant part of an adolescent's high school experience is participating in extracurricular activities such as band, sports, debating club, and the like. These activities can be demanding of a student's

time, but they have many advantages relating to a student's personal development. Students learn to function as part of a team, have an opportunity to establish closer working relationships with adults, make friends with others of like interests, and find activities in which they can excel (Steinberg 1997)

High schools vary on many criteria that can affect a student's high school experience—large versus small schools, public versus private, single sex versus coed, and so forth. For example, large schools typically have a greater variety of classes and extracurricular activities for students to elect. However, because of the greater number of students, the rate of participation in such activities is actually often lower than in small schools (Hopkins 1983). In general, though, even when the school is relatively small, the high school setting involves several different teachers and classes and is therefore much more impersonal than the typical elementary school setting, resulting in greater anonymity for the student (Fenzel, Blyth, and Simmons 1991).

Social life in high school often revolves around groups, or cliques (e.g., the drama clique, the jocks, and the popular group), usually based on common interests and attitudes. These groups and labels may stay relatively constant throughout high school. Interaction within this type of status system provides many social lessons. Teenagers learn to identify the various groups and their reputations in the school. The system allows adolescents to learn the positive and negative effects of different reputations, particularly because a reputation in school is not limited to the student body. Teacher and administrator interaction may be positively or negatively affected by one's reputation, and different school and community resources may become available or unavailable accordingly (Newman and Newman 1990).

Although many students join cliques, as high school progresses the boundaries between groups often fade. "The teenager may still be known as a popular, brain, jock, or druggie, but many middle adolescents are 'freelancers' or 'floaters,' at home in different groups and with different kinds of friends" (Steinberg and Levine 1997, 327). As teenagers mature, the general mentality changes from conformity to individuality, and peer approval diminishes in importance. Teenagers begin to feel comfortable doing things to please themselves rather than concentrating on pleasing friends.



Groups of high school students just before classes (Elizabeth Crews)

Part of the reason for the development of the clique system in high school is the higher level and focus of classes. Students begin to choose clear paths toward goals (e.g., a student interested in medicine will take advanced science courses) and find friends taking the same path. Tracking of students based on ability levels contributes to this phenomenon. Tracking is typically based on academic ability, with gifted students taking honors classes, slower learners taking lower-level classes, and most adolescents taking average classes. Supporters of academic tracking claim that it allows teachers to design their lessons to match the students' interests and abilities. Problems with tracking can arise, however, when students are labeled according to their track. For instance, students in the remedial track frequently are considered to be stupid by those in higher tracks and even, perhaps, by teachers and administrators (Steinberg and Belsky 1991). Not surprisingly, these students often suffer from low self-esteem. For this and other reasons, tracking tends to increase the differences among groups over time (Steinberg 1993).

Academic performance and course choices af-

fect which college students will attend or what job or further training they receive, and so are significant and formative in human ecological terms. Dropping out of high school decreases the likelihood of employment by about 20 percent (Eccles 1991). Some factors that contribute to a student's decision to drop out of high school include school-related reasons such as expulsion and suspension or dislike for school, economic reasons, and for girls, pregnancy or marriage (Santrock 1996). Lower grades and academic achievement are also evident in dropouts previous to leaving school (Eccles 1991). Overall, however, high school graduation rates have increased continuously since the 1940s (Santrock 1996, 553). Because of the implications that academic performance in high school has for a student's decisions about the future and for society at large, academic success is listed as a major source of stress for adolescents and rates of success are considered of critical importance by the nation as a whole.

The quality of education in U.S. high schools has engendered much debate. Critics have at times called for a return to the basics and more academic

rigor, and at other times rallied for a curriculum that is diversified and practically oriented. More recently, the demand for training in higher-order thinking has increased to meet the demands of an increasingly complex and competitive world (Hopkins 1983).

Lea Bornstein

See also: Catholic Schooling: The Achievement of Poor and Minority Students; Community Schools; Extracurricular Activities; Full-Service Schools; High School, Advising Students in; Transition from School to Work and Adult Life

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High School, Advising Students in

Many schools, especially middle schools and high schools, are structured in ways that make it difficult for students to develop stable relationships with teachers. Researchers have noted that middle school students tend to have few positive interactions with teachers outside of instruction and feel less secure with their teachers than do elementary school children. Yet studies of social support demonstrate that perceived support from teachers is a significant predictor of young adolescents' motivation and academic success (Doll and Lyons 1998, 357). Advising programs have proliferated in

many schools as an institutional antidote to the lack of opportunities for students to form close relationships with teachers. Advising programs have been endorsed by leading professional organizations as a promising way to allow every student to be known by a caring adult.

It is estimated that about two-thirds of the schools in the United States that include grade seven have one homeroom or group advisory period, although there is no accurate national data about the precise prevalence of advising. In one survey of approximately two thousand school principals, advising programs were found most frequently in schools in the Northeast, in urban areas with higher percentages of minority students and school families below poverty (MacIver and Epstein 1991, 593). Calculating the frequency of advising programs is further complicated by the fact that there is no universal definition of advising. Advisors at some schools meet weekly with students and cover administrative tasks, while other advisers meet daily and provide social and emotional support. The only common denominator is that the students are a captive audience and that the advising occurs during the school day, usually drawing on teachers to be the advisers. Although the content varies in terms of the emphasis on educational or social goals, ideally the adviser provides emotional grounding and acts as a role model. Usually advisers are primarily responsible for a small group of ten to fifteen students.

In alternative public schools and private schools, well-planned advising programs have made a difference in students' engaged behavior and student performance, and financial and staff resources are allocated to sustain this type of support. These schools are less constrained by the economics of providing the smaller teacher-student ratios that allow the teachers to take on this additional responsibility. However, the larger advising movement in public schools has not been consistently executed, adequately funded, or sufficiently evaluated to ensure similar success. Teachers and administrators in such schools sometimes resist efforts that are seen as being too big a drain on resources or as destabilizing to the system.

As with many other educational reforms, advising was adopted in many schools with little attention to the infrastructure required and without any means of evaluation. Advising programs, for example, require a significant reallocation of re-



High school student with advisor (Elizabeth Crews)

sources, time, and staff professional development to expand teachers' roles. Moreover, few programs evaluated their efforts. Indeed, a survey of 1,900 schools showed that 47 percent of schools initiated advising in fifth through ninth grade, yet what little outcome data there is on their efforts is largely consigned to unpublished reports (Galassi, Gullidge, and Cox 1997, 335; Rappaport 1999, 116). The published data are usually brief surveys and do not capture how the advising relationships influence students' behavior. Primarily, information available focuses on the logistical steps for implementing advising and examines how schools prioritize what gets covered in advising. Although there are frequent references to the importance for advisers of understanding child development and group dynamics, there are no guidelines to assess successful and failed advising efforts (Ayres 1994, 14; Rappaport in press).

Enhancing the capacity for large public schools to promote teacher-student relationships through advising is a complicated process. There are predictable challenges and decisions that schools usu-

ally confront when making the effort to institutionalize caring and enhance student engagement by implementing an advising program. The success of the advising process appears to depend, to a large extent, on whether or not there is a leader who champions the cause and tenaciously works through the obstacles and handles the logistics. This leader can keep the process energized and strategize about how to overcome the structural impediments that inevitably arise when institutional inertia impedes the school innovation. Ideally students should be assigned to advisers who will already see them during the course of the school day in academic courses, homerooms, or cocurricular activities. Also ideally, schools would have the resources to choose staff members to participate in advising according to each school's values and priorities. But in reality resources are limited, and public schools are under pressure to keep a tight schedule and prove that time is spent on learning, in accordance with state directives. Advising programs can only succeed in such an environment with active, consistent leadership.

Advising is easier to implement if the school examines the rules and roles of advisers. It is useful to explore the school's unconscious and conscious resistance to setting aside time for the advising period and to analyze the school climate. It is usually recommended that schools allocate anywhere from six months to two years of preparation before starting advising, in order to assess teacher skill level, outline increased responsibilities, and develop the advising curriculum. But despite this preparation, advising programs still often have difficult beginnings or are eventually dropped. It is often acknowledged that of all the innovations introduced in middle schools, adviser-advisee programs are the most difficult to implement and to maintain.

In examining the difficulty of sustaining educational innovations, it is crucial to pay greater attention to the individual questions, needs, and opinions that arise among teachers in response to the innovations. Many schoolteachers have a level of discomfort about being advisers. Their reluctance may derive from multiple concerns: They are inadequately prepared, they lack the necessary skills, they are not clear about what is expected from them, there is inadequate staff development, they are reluctant to take time away from teaching subject matter, and they don't want to be forced to share with students (Cole 1994, 3). Some staff members are reluctant to emotionally invest in students. Some worry about balancing sympathy to students' barriers to learning with the necessity of upholding stringent academic standards. Also, some teachers see it as problematic and contrived to create an artificial emphasis on emotional bonding, as it erodes formal boundaries and detracts from emphasis on the teachers' tasks of imparting knowledge and necessary skills.

Providing ongoing opportunities for supervision and reflection often can allow teachers to resolve difficult situations and use their insight to respond more empathetically to the emotions their students are experiencing. Defining the content of the curriculum highlights the importance of establishing consensus about the objectives of advising. The curriculum can provide the scaffolding to foster a connection with students. It may include orientation to the school, time management, and instruction in expectations of courses and graduation requirements, community-building exercises, role playing, portfolio presentation, and monitor-

ing academic progress. There may be tension between teachers and administrators, as there is an administrative effort to standardize the curriculum so that all students are equally exposed to core information, and seasoned teachers want flexibility to craft the support in ways that are responsive to students' emotional needs.

The balance between enough structure and responsiveness to students' requests becomes particularly difficult for teachers who have difficulty with class management, organization, and ground rules in their ordinary classrooms. Ideally, matching a skilled teacher who needs extra support with a teacher who is not as adept but can function as a support, can build the skills of the less competent teacher, although often schools do not have sufficient personnel for that kind of pairing and may also worry that a staff member may feel insulted. Regardless, for advising to be successful, schools need to install a reliable system for receiving and dealing with feedback from students and providing structure and support for advisers. Baseline and follow-up data are useful to collect to determine how well advising programs are operating and to identify the beneficial effects.

One concern is that disengaged students who are angry and hostile in class are apt to use advising also as an arena to interrupt and express their frustration, undermining the group's progress. It is unclear whether many teachers are comfortable with the challenge this kind of behavior presents to their authority and can redirect the negativity toward constructive goals. It may be that advising is a critical vehicle for institutionalizing care, but that it is not sufficient for students who see this outreach as a meaningless overture from adults that they have difficulty trusting. The effort of school communities to foster healthy development and engage students in their learning may be enhanced when fortified by strong curriculum, attentiveness to student and staff concerns, support around particularly difficult situations, and recognition of the limitations of advising. Challenges still remain, such as identifying the optimal number of times for advising groups to meet during the week, determining whether to maintain an adviser for extended period or to offer students the opportunity for exposure to different adults, proposing mixed groups of students of different ages or maintaining same-grade advising groups.

Despite all the problems and challenges, advis-

ing seems a direction that should continue to be pursued. Adequately supported and investigated advising may be an effective way to nurture children and adolescents in the school context, fulfilling the expectation that every student be known by a caring adult.

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See also: Catholic Schooling: The Achievement of Poor and Minority Students; Community Schools; Full-Service Schools; High School; Transition from School to Work and Adult Life

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Hispanic Immigrant Experience

Many environmental risks and hazards characterize the experiences of Hispanic families immigrating to the United States. One important psycholog-

ical source of these problems is in the cultural and linguistic differences between Hispanic and U.S. society. These cultural differences sometimes manifest themselves as problems in child and family functioning. For this reason, this entry is divided into two parts: the cultural experience of Hispanic families and the effects of cultural differences on the family system.

The Cultural Experience of Hispanic Families

A sizeable percentage of today's immigrants to the United States are from Latin American countries (Lollock 2001). Ways of life in these countries are very different from the United States. In most of these countries, the prevailing cultural orientation places the needs of the family over those of the individual, and respect and obedience are valued as critical aspects of parent-adolescent relationships (Santisteban et al. 2002). Familism, the use of one's family as a referent and source of social support, is an important Hispanic value (Vega and Gil 1999). As in many traditional communities and smaller neighborhoods, communities and extended families automatically provide social support to their members, and the entire community monitors children's activities and school performance. Teachers and peers' parents are usually neighbors who often meet at the local grocery store, post office, or church. These ways of life do not match those of life in the United States, particularly in larger metropolitan areas where most Hispanic immigrants reside.

Compounding the effects of immigration are the extended separations that characterize the experience of many poor Hispanic immigrant families. Often, poor Hispanic immigrant families do not come to the United States all at once; rather, parents may send their children to reside with extended family members while they make permanent living arrangements (Suárez-Orozco and Suárez-Orozco 2001). In some cases, the parents immigrate first, work long and hard to raise money to care for their children back home, and eventually are sufficiently financially secure to send for the children. In either case, these children may be separated from their parents for months or years before the family is finally reunited in the United States. Attachment and relationship problems may develop in these families as a consequence of these extended separations. In particular, occasionally children left behind feel abandoned and may har-



Immigrant children (Tim Boyle/News-makers/Getty Images)

bor considerable resentment against parents who view themselves as having sacrificed much to give their children a better future.

After they arrive in the United States, Hispanic immigrants encounter mismatches between American culture and their culture of origin, along with language problems and other differences. As a result, they are often excluded, and may also exclude themselves, from mainstream social institutions such as English-speaking clubs, neighborhood organizations, and conventional leisure activities (e.g., sporting events). A number of problems can result from this exclusion. For example, immigrants often leave important sources of social support behind in their native countries and find that support is not automatically provided in the United States (as it was at home). Moreover, Hispanic immigrants may have trouble finding sources of support in the United States because of cultural and language barriers between themselves and their more acculturated neighbors. Even in Hispanic neighborhoods, Hispanics who have been in the United States for some time become accustomed to living without abundant and tightly knit support networks. In fact, they learn to enjoy their autonomy and privacy. In turn, unavailability of cultural support may prevent recent immigrant families from seeking help from others in times of need or crisis (Pantin et al. in press).

Lack of social support makes parenting a difficult task for any parent, and it is a specific problem for Hispanic immigrant families. Without many

friends, extended family members, or other sources of support, parents may respond to typical parent-child distancing in early adolescence by making somewhat desperate overtures toward their adolescents (Henricson and Roker 2000). Adolescents, particularly those who have acculturated to American society, are likely to reject these overtures. Isolated Hispanic parents may then become overwhelmed, feel hopeless, and withdraw from the adolescent, thereby paving the way for adolescent drug involvement and related problem behaviors (De la Rosa, Vega, and Radisch 2000).

Lack of awareness of U.S. culture is also a problem for Hispanic immigrant parents. Although they may understand the ultimate risks of drug involvement, risky sexual behavior, and school failure, Hispanic immigrant parents often do not understand that, in the United States, parents must play an active role in monitoring their adolescents' activities (and often must do so without help; cf. Steinberg, Fletcher, and Darling 1994). Without well-informed family and friends to educate them about U.S. ways and the risks that children face in the United States, Hispanic immigrant parents often experience difficulties making the transition from community-based supervision in the native country to individualized monitoring in the United States. They may unwittingly contribute to the development of problems in their children simply by not knowing how to parent effectively in U.S. culture.

Additional risks are introduced into children's social worlds by the tendency of many Hispanic

immigrant families to settle in poor, disadvantaged urban areas. Poverty, persistent disadvantage, and lack of opportunity are associated with negative outcomes for children and their families. In particular, neighborhoods with low levels of community activism and high levels of apathy may be particularly problematic for Hispanic (and other) youth (Sampson and Raudenbush 1999). Immigrant children and adolescents living in poor areas are often exposed to large amounts of peer and community drug abuse, crime, and violence. These experiences may lead some youngsters to believe that these behaviors are usual or normative. This community context poses two sets of risks: (1) crime, drugs, and neighborhood apathy, and (2) a lack of support for parents. Furthermore, lack of support for parents is often a consequence of neighborhood apathy and disorganization (Sampson, Raudenbush, and Earls 1997).

Even more problems often confront families who come to the United States as political or economic refugees. Recurrent memories of traumatic experiences in the native country may plague parents and children for years after they have settled in the United States (Suárez-Orozco and Suárez-Orozco 2001). Moreover, refugee families may be ostracized and rejected by others, even by other Hispanic families, because of their refugee status. These stressors compound the negative effects of cultural differences and language barriers on families' adjustment.

The Effects of Cultural Differences and Conflicts on the Family System

Children from immigrant families tend to master English and to adopt American values and behaviors long before their parents do (Szapocznik and Kurtines 1993). This phenomenon, known as differential acculturation, has the effect of bringing the cultural mismatch between American society and the culture of origin into the family. Traditional Hispanic parents expect their children to respect them and defer to parental authority, while rapidly acculturating children (and particularly adolescents) desire independence, time alone with peers, and freedom to make their own choices (Szapocznik et al. in press). Within the parents' native-country value system, adolescents' attempts at independence and self-direction are seen as deviant and disobedient, whereas in the context of the adolescent's Americanized beliefs, parental de-

mands for respect and compliance are seen as unreasonable and overly controlling. The cultural mismatch is subsequently played out within the family boundaries, with cultural differences adding to typical parent-adolescent conflict (Felix-Ortiz, Fernandez, and Newcomb 1998).

Differential acculturation represents a risk for problem behaviors in children because it creates (or adds to) conflict, and weakens bonding, within the family (De la Rosa, Vega, and Radisch 2000). Cultural conflicts within the family make it less likely that adolescents will seek advice or support from their parents. Instead, youngsters from such families are more apt to seek social support from their peers. Too much reliance on peers as a source of encouragement may lead to associations with negative peers (Loeber et al. 2000). Immigrant children or adolescents experiencing cultural conflicts with their parents may seek out antisocial or aggressive peers as a way of rebelling against the obedience and deference that is generally expected in traditional Hispanic families (Szapocznik et al., in press).

The same cultural forces that drive immigrant children and adolescents away from their parents also undercut parental authority and investment. In traditional Hispanic cultures, the family hierarchy is extremely important; parents hold positions of authority and wisdom, while children and adolescents are expected to be respectful and obedient. Adolescents, in particular, may pull away from these types of traditional norms. In turn, traditional Hispanic parents may not know how to interact with acculturated, independence-seeking adolescents. Often, they attempt to restore the conventional Hispanic parent-child hierarchy through excessive control, thereby provoking rebellion from the adolescent (Szapocznik, Scopetta, and King 1978). In turn, parents often interpret the adolescent's resistance as deviant and make stronger or more aggressive attempts to restore parental authority. Conflict tends to escalate, as this sequence is repeated time and time again. When parents realize that continued attempts to reach the adolescent in the only way they know how (i.e., trying to reassert parental authority) are only pushing the adolescent further away, they may become frustrated and feel helpless. Through these sequences of mutually unpleasant interactions, differential acculturation and its effects may lead Hispanic immigrant parents to believe that

any advance they make toward their adolescents will backfire. At this point, parents often pull away from their adolescents, thereby increasing risks for problem behaviors (cf. Loeber et al. 1998). Adolescents in turn feel that their parents are not a trustworthy source of support, and as a result they seek refuge in groups of other rejected children. Given the kind of problems Hispanic immigrant families face, especially with adolescent children, it seems crucial to have professionals who understand the dynamics involved who can offer help to both parents and children.

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See also: Acculturation; Adolescence in a Cultural Context; Children from Immigrant Families; Colonias, Las; Leadership, Latino; Parent Education Programs for Immigrant Families; Parenting Styles

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Holistic, Developmental, Systems-Oriented Perspective

The holistic, developmental, systems-oriented perspective on human behavior (as presented, e.g., in Wapner and Demick 1998, 1999, 2000, in press-c) is an extension and elaboration of Heinz Werner's comparative-developmental theory (1940/1957; Werner and Kaplan 1963). Both the original theory and the elaborated approach have been termed organismic, such as cognition, affect, valuation, and

action, are considered in relation to the total context of human activity) and developmental (in that it provides a systematic principle governing developmental progression and regression, so that living systems may be compared with respect to their formal, organizational features).

Historically, the elaborated approach draws on the organismically oriented work in the field theory of perception (e.g., Werner and Wapner 1952) and the applicability of the organismic-developmental perspective to the analysis of language and symbol formation (e.g., Werner and Kaplan 1963). In contrast to classical psychophysics, which studied the senses, what is called the “sensory-tonic field theory of perception” argued that, no matter how diverse the source of stimulation to the organism, all stimulation was sensory-tonic in nature. Thus, a balance, or harmony, of forces between the state of the organism and the stimulation from an object was assumed to define a stable state of the system. With respect to symbol formation, Werner and Bernard Kaplan argued that symbolic activities initially emerge out of bodily-organismic (sensorimotor) activities; primordial symbol usage includes the physical act of (communicative) pointing, motoric imitations (e.g., flickering of eyelids to represent flickering lights), and vocalizations (e.g., cries, calls, expressions of pleasure); and the early connection between sensorimotor bodily experience and symbol usage has never been completely lost.

On the most general level, the current elaborated approach can be described in the following ways:

Holistic, insofar as we assume that the person-in-environment system is an integrated system, whose parts may be considered in relation to the functioning whole

Developmental, insofar as we assume that progression and regression may be assessed against the ideal of development embodied in the orthogenetic principle (which changed from dedifferentiated to differentiated, for example, having a general word for all living things to having several words on animals, trees, and plants, instead) and that development encompasses not only ontogenesis (the development of an individual organism), but additional processes such as phylogenesis (i.e., the evolutionary

development of a species), microgenesis (i.e., the evolutionary development of a percept or idea), pathogenesis (i.e., the development of both functional and organic pathology), and ethnogenesis (e.g., changes during the history of humans).

Systems-oriented, insofar as we assume that the person-in-environment system, which includes three aspects of the person, the biological (as seen in an individual's health), the intrapersonal (as seen in an individual's response to stress), and the sociocultural (as seen in the roles an individual assumes) and three analogous aspects of the environment: the physical, whether natural or built; the interorganismic, involving animals as well as other human beings; and the sociocultural, as seen in the laws of society, or the unwritten rules of a group.

Corollary notions include certain theoretical assumptions:

Transactionalism: The person and the environment mutually define, and cannot be considered independent of, one another. Similarly, the person-in-environment system's experience—consisting of cognitive, affective, and valuative processes—and action are inseparable and operate contemporaneously under normal conditions.

Multiple modes of analysis, including *structural analysis* (part-whole relations) and *dynamic analysis* (means-ends relationships).

Constructivism: The person-in-environment system actively constructs or construes her experience of the environment.

Multiple intentionality: The person-in-environment system adopts different intentions with respect to self-world relations, that is, toward self or world-out-there.

Directedness and planning: The person-in-environment system is directed toward both long- and short-term goals related to the capacity to plan.

Multiple worlds: The person-in-environment system operates in different spheres of

existence, such as home, work, and recreation.

Analysis focused on *process rather than achievement*.

These theoretical assumptions have powerful heuristic potential for the design and conduct of a wide variety of empirical studies. Initiated almost three decades ago, work in the area of environmental psychology (Wapner, Kaplan, and Cohen 1976) led to the examination of the paradigmatic problem of critical person-in-environment transitions across the life span (see Wapner and Demick in press-b). This in turn led to research in quite diverse problem areas including adaptation to adoption (one example is Demick in press-a); adult development and aging (e.g., Wapner and Demick in press-a); cognitive style development (e.g., Wapner and Demick 1991); parental development (e.g., Demick in press-b); and psychopathology (e.g., Demick and Wapner 1980). (See Wapner and Demick in press-d for a comprehensive review.) These studies have all demonstrated a clear need to study the active, thinking, feeling, valuing individual in all his everyday life complexity.

Methodologically, the approach is typically concerned with describing the relations both among and within the parts (person, environment) that make up the integrated whole (person-in-environment system), as well as with specifying the conditions that make for changes in the organization of these relations. Thus, the approach is committed to the complementarity of explication (description) and causal explanation (conditions under which cause-effect relations occur) rather than being restricted to one or the other. Accordingly, the preferred method of research involves the flexible drawing from both quantitative and qualitative methodologies, depending on the level of integration and nature of the problem under scrutiny (cf. Maslow 1946).

Finally, the approach serves not only as a powerful heuristic device to analyze and open new significant problems in psychology but also to integrate, at a very basic level, the field of psychology that is most apt to suffer from disruption and fragmentation. Such attempts have the potential to lead toward a unified theory-driven science of psychology that cuts across aspects of persons, of environments, and of their interrelations.

Jack Demick

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Homelessness

Homelessness, the condition of human beings who lack stable shelter, has become a persistent problem in the United States. More precisely, the legislation authorizing significant federal help for the

homeless notes that a person is considered homeless who “lacks a fixed, regular, and adequate night-time residence” (Stewart B. McKinney Act, 42 U.S.C. § 11301, et seq. 1994). This definition includes people who are living in homeless shelters, as well as those living on the streets or in other public or private places that are not intended for sleeping purposes. However, families that are doubling up with friends or relatives, because they cannot afford or locate suitable shelter on their own, would not be considered homeless, although their housing situation is certainly precarious. In fact, many people become homeless when such temporary and often difficult situations are terminated by the host household.

In the 1980s, homelessness among families surfaced as a relatively new occurrence. Families with children are among the fastest growing group of this population, constituting some 40 percent of people who become homeless (National Coalition for the Homeless 1999a). This new group of unhoused people had no place in traditional views of the homeless, who were seen as skid row denizens or Bowery bums—single men, some of them alcoholic, living on the streets or in inexpensive rooming houses.

It is very difficult to get a precise count of the number of homeless individuals and children. Estimates vary from about 600,000 to 750,000 Americans who are homeless on any given night (U.S. Department of Housing and Urban Development 2000; National Coalition for the Homeless 1999b). Over the course of a year about 2 million people experience homelessness for some period of time (National Alliance to End Homelessness 2000).

Along with the problem of ascertaining exactly how many people are homeless comes the difficulty in knowing with certainty the demographic characteristics of this population. A study sponsored by the U.S. Conference of Mayors (1998), which surveyed homelessness in thirty cities, found that children under 18 accounted for 25 percent of the homeless population; male single homeless adults made up 45 percent of the homeless population, while single women made up 14 percent of this population; that the overall homeless population was 49 percent African-American, 32 percent Caucasian, 12 percent Hispanic, 4 percent Native American, and 3 percent Asian. Homelessness is neither a small nor a simple problem. But of all the needs that result from the ways that

families and children interact with the built environment, the need for safe, secure, and affordable housing is perhaps the most critical.

Causes of Homelessness

There is no single cause of homelessness. It is widely acknowledged that it results from the interplay of various personal and contextual factors, including political and economic trends and constraints.

At the most basic level, a family may become homeless because of a loss in income due to unemployment, the illness of a wage earner, or illness on the part of another family member that requires a caregiver to give up a job. It is often noted that a significant percentage of the homeless population, estimated at around 20–25 percent (cited in National Coalition for the Homeless 1999a), suffers from some type of serious psychological illness. Other personal factors that may contribute to homelessness include a fire, in which a home or apartment is destroyed, without insurance that can allow the family to replace the dwelling or its contents, substance abuse that disables a wage earner, or domestic violence and divorce that forces a woman to leave her home, even if she does not have another place to live.

In addition, contextual factors, factors over which individuals typically have no or little control, contribute to homelessness. The structure of the U.S. economy, with a persistent group of households living in extreme poverty, is a key contributor to homelessness. Prior to the passage of the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (referred to as the federal welfare reform law), cash assistance for poor families with children was an entitlement. The new welfare program, Temporary Assistance to Needy Families (TANF), provides only temporary assistance to poor households. Even though many studies reveal that welfare caseloads have declined, and many people have found work, the work is often at very low wages, and families find it difficult or impossible to meet basic needs, such as medical care and food, in addition to housing (National Coalition for the Homeless 1999b).

Other changes in the social safety net, particularly during the years of the Reagan presidency, have also contributed to family homelessness. For example, initiatives involving deinstitutionalization of long-term psychiatric patients continued



Homeless person in the United States (Michael Siluk)

during this era. Although efforts to reintroduce such people into the mainstream of society were praised, a lack of adequate discharge planning and follow-up with sufficient community-based programs have been cited as contributors to homelessness.

Despite the significance of such factors, however, at the heart of homelessness is a serious housing problem. Several key ways in which the housing market and the overall economy operate create situations leading to homelessness. First, rents in the United States have increased faster than incomes, and there are a large number of households whose incomes cannot cover the cost of decent housing. According to the National Low Income Housing Coalition (2001), in no jurisdiction is a worker earning the minimum wage able to cover the cost of an apartment at what the U.S. Department of Housing and Urban Development (HUD) calls a fair market rent.

Second, there are simply not enough low-cost units to satisfy the demand for this housing on the part of low-income households, with about twice as many such households as affordable units available (Daskal 1998). This situation has resulted, in part, from a loss of over 435,000 private low-cost

and HUD-subsidized units during the 1990s (U.S. Department of Housing and Urban Development 2000; Joint Center for Housing Studies 1999).

Third, federal funds for housing low-income households are far below the need, and the number of assisted housing units being added to this inventory slowed dramatically during the last quarter of the twentieth century. Between 1977 and 2001, new federal budget authority for low-income housing declined from \$64.5 billion to \$26.7 billion (in constant dollars) (Dolbeare 2000).

Fourth, while housing for the poor remains inadequate, housing subsidies for the wealthy, due largely to the homeowner's deduction—the ability of homeowners to deduct the interest and property tax portions of the housing payments from their gross income in calculating their income tax liability—results in over \$73 billion in lost federal revenues (Dolbeare 2000).

Impacts of Homelessness on Families and Children

The effects of poor-quality housing on families and children has been studied extensively (for a review, see Bratt forthcoming). There is also a growing body of research detailing the specific

detrimental effects of unstable housing situations and homelessness. Psychiatrist Matthew Dumont has stated: "Of all life's grating events, of all the stressors which drive people crazy, the loss of one's home ranks at the top. . . . Homeless children are subjected to the interruption of their school, the loss of their friends, malnutrition, and infection. The loss of a child's home is nothing less than an invitation to chronic illness" (cited in Smizik and Stone 1988, 229–230). The relationship between homelessness and a range of medical problems, including psychological difficulties, has been noted by a number of researchers (see, for example, Blau 1992; Wright, Rubin, and Devine 1998; Bassuk et al. 1999).

Exploring various factors influencing high school completion rates, one study found that disrupting the physical location of a young child (7 years or younger) or an adolescent (12–15) "has a strong negative and significant effect on achievement" (Haveman, Wolfe, and Spaulding 1991, 144). Another study noted that "instability impacts the emotional, behavioral, and cognitive development of children, with homelessness exacerbating that impact" (Schmitz, Wagner, and Menke 1995, 315).

When researching the impacts of homelessness, the researcher must keep in mind that there is always the possibility that problems existed prior to the individual or family losing their home. Thus, it is difficult to precisely identify causality. However, it is logical that, at the very least, long-term homelessness is likely to exacerbate an already problematic situation.

Strategies to End Homelessness

In most communities, the first response to homelessness usually comes from private charitable and religious organizations. During the 1980s there was a proliferation of homeless shelters, soup kitchens, and other community-based efforts to assist the homeless. Numerous state and local governments have also responded, usually by assisting charitable organizations to provide emergency assistance.

The Stewart B. McKinney Homeless Assistance Act of 1987 was the first and continues to be the only major federal response to homelessness. Among the key aspects of the act were the establishment of the Interagency Council on the Homeless, which brings together the heads of fifteen federal agencies to coordinate programs aimed at the

homeless; creation of the Emergency Food and Shelter Program; authorization of various emergency shelter and transitional housing programs; establishment of several programs aimed at providing health care services to the homeless; creation of various adult and youth education programs, and other initiatives. Various amendments to the act have strengthened and expanded the scope of the original legislation (see National Coalition for the Homeless 1999d).

Two major criticisms have been leveled at the McKinney Act. Although researchers generally acknowledge the positive contributions of the federal legislation, and the hundreds of thousands of homeless people who have been assisted, programs have never been funded at nearly sufficient levels to address the full range of the problem. For example, funding has fluctuated from a low of \$350 million in the late 1980s to a high of \$1.49 billion in fiscal year 1995. Moreover, programs funded under the act have received various cuts through the years, and some programs have been eliminated altogether. There still does not appear to be a consistent group of programs that grow in a predictable fashion from year to year.

The second major criticism of the McKinney Act is that it has been a Band-Aid that serves only to alleviate some of the worst symptoms of the problem, while leaving the underlying causes—poverty, an insufficient number of jobs at decent pay, and a lack of affordable housing—untouched.

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See also: Child and Family Poverty; Financing Homeownership; Homeownership as a Tool for Building Family Capital Assets; Housing; Housing Policy; Mental Illness in the Family

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tween households and their environment. Secretary Mel Martinez of the U.S. Department of Housing and Urban Development testified before the U.S. Congress, "Homeownership plays a vital role in creating strong communities by giving families a stake in their neighborhoods and helping them to build wealth" (Martinez 2001, 2). For most families, their house is their most valuable asset. Public policy has sought to influence the larger environment by increasing the number of homeowners and therefore helping families build home equity.

Home equity is the market value of a house, less the amount that is owed on any mortgages or loans on that house. In 2000, "Home equity accounted for 44.4 percent of the typical household's total net worth—far more than any other investment" (National Association of Home Builders 2001, 31). Most home mortgages in the United States are amortized over a fixed period time—typically fifteen to thirty years—during which the owner pays interest and some increasing part of the principal each month. At the end of the mortgage period, the loan will have been completely paid. Mortgage payments become forced savings that increase family net worth over time by regularly paying for more than just the interest on the loan. Mortgages leverage the family's down payment to give them use of a home long before they have paid the full price. In addition, home values typically increase (appreciate) over time, while the family continues to pay the mortgage on just the original purchase price.

Federal tax policy favors household capital formation through homeownership by allowing families to deduct mortgage payments and local property tax payments from their federal income tax liability. Most state tax policies have similar provisions. Home equity becomes a valuable source of capital for other investments that can be accessed through home equity loans (a type of second loan on the house whose interest is also tax deductible). Or the owner may refinance the home mortgage with a new mortgage based on the current home value and interest rate. When a family sells their appreciated home after living there two of the five previous years, the family is allowed to retain that appreciated value tax free (up to \$250,000 for an individual or \$500,000 for a couple). The political/economic environment encourages homeownership, which in turn allows households more choice in dealing with their household finances and their economic environment.

Homeownership as a Tool for Building Family Capital Assets

Homeownership is a fundamental building block of household net worth and family stability in the United States, as well as a point of interaction be-

Alternatively, families often use the accumulated housing capital to finance other needs. They may take out a home equity loan or refinance with a new loan to pay for higher education for children, for home remodeling, or for living expenses during retirement. This kind of loan could be taken out and repaid several times during a lifetime. Recently, reverse mortgages that allow older persons to withdraw equity in their home while continuing to live there have gained in popularity. Reverse mortgages allow older owners with high home equity to receive a lump sum or regular payments based on the appreciated value of their home while they still continue to live in the home. With a reverse mortgage, the lender gets paid from the proceeds of the sale of the house when the owner moves out or sells the house.

These positive effects of homeownership, however, do not accrue evenly. Purchase, maintenance, and remodeling costs vary from region to region and neighborhood to neighborhood. Houses appreciate more in value in some locations than others, and values fluctuate over time. Many other interrelated factors also affect the ability of any particular owner family to accumulate wealth. Both the near physical environment and larger economic environment affect the appreciation of home prices.

Low-income families who are not homeowners may be doubly disadvantaged: low current income to pay rental costs and no opportunity to accumulate equity through the special mechanisms available to owners. Two of the most often cited barriers to home ownership for lower-income families are poor credit records and the lack of a down payment. Government at any level may intervene to reduce these barriers.

To alleviate credit problems, the federal government, as well as many local lenders and local development organizations, now supports homebuyer education programs that teach participants about the home-buying process, money management, credit repair, home maintenance skills, and related topics. Federal programs have encouraged lenders to make mortgage loans to higher-risk customers by providing mortgage insurance and by setting target numbers of loans to disadvantaged customers. Homebuyer education programs can help participants find special programs to help them get started on building home equity.

Down payment assistance is available to buyers

of limited means through a variety of federal, state, and local government programs. The qualifications and terms for such programs vary. Down payment assistance may be in the form of an outright grant, a loan forgiven over time if the family remains in the home, or provision for “sweat equity” programs that allow families or their sponsors to contribute the value of their labor to help construct their new house. Where down payment assistance takes the form of a loan, it may be interest free or at a reduced rate. Nonprofit organizations often are involved in delivering these programs to low-income households.

Homeownership, thus, is a tool available to families to improve their economic condition. Because ownership is viewed as increasing neighborhood stability and contributing to economic activity, policies at the local, state, and national levels have also supported homeownership.

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See also: Financing Homeownership; Homelessness
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Hospice

See Death: A Family Perspective; End-of-Life Decision Making

Household Appliances: History and Development

Conceptually, an appliance is a material resource used to replace other material resources (e.g., the electric refrigerator replaced the icebox) or used to extend or replace the human resources (the body and the mind) needed to perform household work. Appliances initially designed to relieve the homemaker of time-consuming physical labor not only have been improved to decrease physical inputs but have become increasingly automatic, thus reducing the user's mental involvement as well.

Household appliances have evolved from simple to complex devices powered by electricity or gas, or a combination of the two. Items that once may have been considered luxuries and found only in the homes of the wealthy are now commonplace. According to data from 2000, over 70 percent of the households in the United States included all the following: a refrigerator (99.9 percent), range (60 percent electric, 40 percent gas), microwave (95.6 percent), clothes washer (93 percent), and clothes dryer (58.5 percent electric, 20 percent gas) (Appliance 2001).

The emphasis in this article is on appliances that facilitate cooking and storing food, and laundering clothing and other textiles. The evolution of dishwashers is closely related to that of clothes washers, while devices used to clean household furnishings and surfaces have not changed significantly since early in the twentieth century. Sources of further information about the history and development of household appliances are provided at the end of the article. The Smithsonian Museum of Science and Technology in Washington, D.C., and the museum at Johnson and Wales University in Providence, Rhode Island, have excellent collections, which include examples of household tools that preceded the electric or gas appliances featured here, as well as examples of appliances described in this article.

Dramatic developments in household appliances that began early in the twentieth century, with the commercialization and widespread distribution of electricity, have gathered momentum with each passing decade, except for the years during and immediately following World War I and World War II. Between 1900 and 1920, simple devices such as the hand iron, toaster, phonograph, and table fan came into widespread use in U.S. homes, representing the beginning of significant

adoption of labor-saving devices and lifestyle transformation. The vacuum cleaner replaced the hand-powered broom and carpet beater, and the refrigerator replaced the icebox (Public Broadcasting System 2000).

Other electrical appliances developed during that period included the spin dryer, dishwasher, range, and clothes washer (Public Broadcasting System 2000). However, these appliances were not adopted widely until the late 1940s following the Great Depression of the 1930s and World War II in the early 1940s. Concurrently, additional appliance innovations were becoming available, accompanied by changes in lifestyles. Appliances became more complex, increasingly relieving the user of physical and mental involvement in task performance. The word "automatic" became common in the nation's vocabulary with reference to clothes washers and dryers, dishwashers, cooktop temperature controls, oven cleaning, and refrigerator and freezer defrosting. In the 1970s and 1980s the microwave oven revolutionized cooking and meal-times, much as the automatic washer and dryer had changed laundry practices and expectations during the 1950s and 1960s. Also, beginning in the 1970s appliance manufacturers increased efforts to use materials and processes with low environmental impact during manufacturing, consumer use, and disposal at the end of the life cycle. Further, manufacturers have encouraged consumers to select appliances that are more efficient in the use of energy or water and to recognize the effect of user behavior on appliance resource use. With the rapid advances in controls and sensing devices during the 1980s and 1990s, appliances became available with even more capabilities and simultaneously greater safety and efficiency in resource use.

The appliances available at the beginning of the twenty-first century perform the same basic functions as their forerunners but have convenience and safety features that exceed the expectations of consumers as recently as a decade before and are more efficient in the use of scarce environmental resources. Examples include the cooktop elements that turn off if there is no pan or if the pan boils dry, the refrigerator or freezer that defrosts as needed, the dishwasher or washing machine that senses load size and degree of soil and adjusts the amount of water and the cycle settings accordingly, or the hand iron that shuts itself off if not used for several minutes. Additional examples are



Gas range (Laura Dwight)

the microwave oven that cooks according to programs established during manufacturing, the Internet-ready appliance that can have programs added or deleted and malfunctions diagnosed from the factory, and the appliance with capability for voice recognition and response. Manufacturers are designing models to support the needs of individuals in various niche markets, such as those with limitations in vision, mobility, physical dexterity, and language comprehension.

Appliances that perform several steps in a process are classified as large or major appliances, have a life expectancy ranging from 8 to 19 years (Appliance 2001), and are considered to be consumer durables. Major appliances typically represent a large investment for a household, although, as a percentage of household income in the United States, the purchase price of appliances in the United States has decreased, even as the quality of performance has increased.

All major appliances operate on electricity, or gas, or a combination of the two. Electric ranges and most clothes dryers operate on 240-volt alternating current and have wattage ratings of approximately 1,500 watts or less. Gas ranges and clothes dryers require both gas (generally natural gas, al-

though some are manufactured to use or can be converted to LP gas) and 120-volt electricity.

The category of small or portable appliances includes food mixers, blenders, toasters and toaster ovens, coffeemakers, and hand irons, to name a few. In comparison with major appliances, portable appliances are designed for one or only a few purposes, have limited capacity, are powered only by electricity, and represent a relatively small investment. All portable appliances operate on 120-volt alternating current electricity; they can be divided into three categories: heating appliances, motor appliances, and motorized heating appliances. Portable heating appliances such as coffeemakers, toasters, and hand irons, generally are rated at approximately 1200 watts. Portable motor appliances such as food mixers, food processors, and blenders have wattage ratings that range from approximately 100 watts for a food mixer to approximately 600 watts for a blender or food processor. A bread machine, with a motorized mixing/kneading paddle and heating element for baking, is an example of a motorized heating appliance and is rated at 500 watts. Aside from cosmetic attributes, changes are few in the portable appliances (toaster, coffeemaker, blender, electric

skillet) found in the majority of homes in the United States.

The following sections include highlights in the history of major appliances used in cooking, refrigeration, and laundry. Information was gleaned from the Web site of the Association of Home Appliance Manufacturers and other sources.

Cooking Appliances

A kitchen range has a surface for cooking and one or more compartments for baking and broiling. The cooking surface and baking/broiling compartments also are available as separate, built-in units. Early in the 1900s, the electric range appeared on the market. Approximately twenty years later, the original open-coil units were replaced by sheathed (Calrod) surface units on the surface and in the oven. In 1963, the pyrolytic, self-cleaning oven was introduced, followed in 1967 by the catalytic, continuous-cleaning system. In 1968, glass-ceramic topped cooking surfaces (smooth-tops) were introduced, and in 1978, magnetic induction cooktops entered the market. (With magnetic induction food cooks with heat created in the cookware, not the cooktop). By the 1990s cooktops and ovens featured digital controls, electronic technology used in microwave ovens.

First introduced for the household in 1955, the microwave oven was a heavy, bulky, 240-volt appliance designed to be built-in. Microwave cooking was something of a curiosity until the introduction of the smaller, 120-volt countertop microwave oven in 1967. In the 1970s, microwave ovens appeared with variable power settings, programmed cooking, and recipe storage. Gradually, the microwave oven has been accepted as a complement to the range rather than a substitute.

Refrigeration Appliances

Refrigeration appliances are available as refrigerators, freezers, or refrigerator-freezers. Typically sold in small, under-counter models, refrigerators provide storage for fresh foods and ice cubes (and possibly already frozen foods) for relatively short periods. Freezers are intended for freezing and storing food for several weeks to several months. The most common of these appliances, refrigerator-freezers have a fresh food section and a fully insulated freezer section for freezing and storing food.

Electric refrigerators were introduced in 1914, and by 1944 were in over 85 percent of U.S. house-

holds. In the decades following World War II, a number of features were added to increase convenience, safety, and energy efficiency. In the 1950s, new features included automatic ice makers and defrost systems, magnetic door gaskets, forced air refrigeration, and condenser coils underneath rather than on the back. In the 1960s, in-the-door ice and water dispensers were introduced. During the next three decades, refrigerator and freezer manufacturers increased the energy efficiency and discontinued the use of chlorofluorocarbons (CFCs) in refrigerants and insulation. During the 1980s, computer control of refrigerator/freezer temperatures and defrost cycles was introduced, followed in the 1990s by water filtration systems for ice and water dispensers. Beginning in 1980, the Energy Guide label was mandated for all refrigerators and freezers sold in the United States.

Laundry Appliances

The task of laundering is a good example of how washing and drying clothes and other household textiles have been revolutionized. For centuries, wet clothes were rubbed by hand with soap, perhaps on a metal washboard to loosen the soil, then twisted or put through a wringer (pair of rollers) to remove the dirty water, rinsed once or twice, with the water wrung out by hand after each rinse, and then hung to dry. As Susan Strasser noted, most early clothes washers “dispensed only with the rubbing; the few who owned them saved little time and not much labor” (1982, 116). Change commenced with the introduction of the spinner-type clothes washer in the 1920s and a front-loading machine in the 1930s. In the late 1940s, a top-loading washer with oscillating agitator was introduced and became the national standard. Developments in laundry appliances during the decade of the 1950s included washers with push-button programmed cycles and automatic dispensers for bleach and fabric softener, automatic dryness controls on clothes dryers, and a combination washer/dryer. In the 1970s, washers and dryers with electronic touch controls were introduced. During the 1990s, to encourage consumers to use less water in laundering, front-loading washers were reintroduced, and a top-loading washer with nutating agitation appeared. The Energy Guide label is required for clothes washers, but not for dryers because of little variation across brands and models.

Conclusion

The development of household appliances continues to evolve as manufacturers seek innovative, practical, cost-effective techniques to provide appliances that serve the needs of consumers at all ages and stages of life. Consumers are encouraged to consider a household appliance as a material resource (a tool) that, in concert with human resources (the body and mind) facilitates household task performance. Further, adoption of some appliances may in fact require a greater investment of financial resources and human capital (skills and knowledge) than is warranted by needs now or in the future.

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See also: Consumption, Ethical; Energy Efficiency in the Home; Energy and Home Usage; Energy: Standards, Codes, and Labels

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Household Appliances, Shopping for

Shopping for household appliances can be confusing, and selection factors may be complex, especially without a knowledgeable person to explain product characteristics. Classifying appliances according to basic purpose, relative size or capacity, style, and brand, and learning to interpret appliance information can facilitate decision making.

Each appliance has a purpose in household production. Appliances such as food blenders, toasters, and coffee makers typically perform a

single function and are classified as portable or small appliances. Those such as refrigerators and washing machines perform multiple parts of a process and are classified as large or major appliances. An appliance may come in more than one style and be available in multiple brands, with each brand having several models that vary by style and number of features.

Three steps make up the process of appliance selection:

Decide the task, or tasks, to be performed in light of present and future needs of the household.

Find out what is available. Learn about the brands, styles, and features as described in advertising or consumer magazines or as shown in retail shops or at home shows. Friends and neighbors also are a good source of information.

Comparison shop, in stores or on the Internet, to become familiar with products and the range of prices. Compile the information gathered in comparison shopping within a framework that includes the ten points that follow. Several of the labels or statements generally found on a display model, in advertisements, or on a Web site are explained.

1. Brand name. Is the brand well known, with a reputation for good quality, performance, and durability? Is the brand nationally distributed or only available in a particular region? Selecting a nationally distributed brand may be important for a geographically mobile household.
2. Features desired. What capabilities should the appliance have that increase safety, efficiency in use of water and energy, or user friendliness in operation? For example, should the hand iron have an automatic safety shut-off? Should the dishwasher have extra insulation for quieter operation, a setting for washing partial loads, or an energy-saving, non-heated drying option? Are the controls easy to see, comprehend, and set?
3. Warranty provisions. The warranty is a written contract provided by the

- manufacturer (or sometimes, the retailer) to protect the consumer if the appliance should fail or malfunction. Warranty provisions vary, but any warranty should state, in easy-to-understand language, the extent of coverage (the entire product or only one or more specific components or systems), the length of time of the coverage, and the responsibilities of the company and the consumer, including additional costs for coverage, if any. Manufacturers' warranties apply only to defects in quality or performance incurred by the first owner, not to subsequent owners or to appliances used in rental properties. Retailers' warranties vary, and may duplicate coverage provided by the manufacturer. The warranty period begins at the date of purchase, not the date of installation or first use. The sales slip, with model and serial numbers of the appliance, name of the seller, name of the purchaser, date of sale, and selling price, is important in making warranty claims. Keeping both the written warranty and the sales slip is important as long as the appliance is in the household.
4. Dealer's reputation. Is the dealer known and respected? If shopping electronically, is there a local dealer who could show the appliance or answer questions and assist with delivery and installation?
 5. Service. Who will provide service during or after the warranty period? If installed and used as directed, appliances usually are reliable but may need service at some time. Some dealers do not provide service; others service only the products they sell. In addition, independent service companies may be authorized to perform warranty work for one or more brands, or none at all. If authorized to provide service during the warranty period, the provider is reimbursed by the manufacturer to the extent specified in the written warranty. Service not covered by the warranty or service performed by an unauthorized provider is charged to the consumer.
 6. Price. Does the purchase price include delivery and installation? What about disposal of the old appliance if the new one is a replacement model? What is the cost of accessories, if any, that will be needed to realize the full benefit of the appliance? Will payment be made in cash or installments? What is the difference in total price if paid in cash or installments? Are there other payment options or sources of financing that will cost less? What is the anticipated life expectancy of the appliance? What would be the estimated cost per year of owning and operating the appliance? (Cost per year equals total cost divided by life expectancy in years. Total cost equals the sum of purchase price, delivery, installation, accessories needed, disposal of old appliance, and estimated costs for operation and maintenance for the life of the appliance.)
 7. Installation considerations. Generally, space and other installation considerations are associated with major appliances, but these considerations apply to portable appliances as well. Specifically, consider these questions:
 - How much space in height, width, and depth will the appliance occupy when in use and when not in use? Will space be needed for ventilation around the appliance? Are there narrow doors or hallways, or stairs or sharp corners that might interfere with delivery and installation? Measurements of the appliance, including space needed around it, generally are included in the specifications available with the appliance or on the Web site.
 - Is the floor strong enough to support the weight of the appliance? This is particularly important if the new model is to replace one that is considerably smaller and lighter in weight. Weight of the appliance should be available on the specification sheet or on the Web site.
 8. Nameplate information. The nameplate may be permanently attached or stamped into the body of the appliance; it generally provides the name and location of the manufacturer, the generic name and the model and serial numbers of the appliance, and utility requirements. Refrigeration appliance nameplates also include the type and amount of refrigerant required. Other nameplate information may include safety

precautions and indications that the appliance meets voluntary or mandatory safety or performance standards. Following are more details about these items:

Electrical requirements. Appliances sold in the United States operate on alternating current (AC) at a frequency of 60 Hz and pressure of 120 or 240 volts. Portable appliances, refrigerators, freezers, microwave ovens, gas ranges, gas cooktops, gas ovens, washing machines, and a few clothes dryers operate at 120 volts on standard household circuits with current-carrying capacity of 15 or 20 amperes (approximately 1800 to 2400 watts, maximum). Electric ranges, electric cooktops, electric wall ovens, and most electric clothes dryers operate on 240 volts and require individual or “dedicated” circuits designed to carry the load indicated on the appliance nameplate. Will the household electrical system accommodate the appliance being considered, or must alterations be made, or other options considered?

Gas requirements. Gas appliances sold in the United States typically are manufactured to operate on natural gas, although conversion to LP or bottled gas may be possible. Gas burners are rated in BTU, or British Thermal Units, a measure of the gas burned per hour. In general, it can be assumed that the higher the BTU rating of a burner, the faster the heating time.

Water requirements. The pressure of the household water supply, important to satisfactory operation of dishwashers and washing machines, is indicated as psi, or pounds per square inch. If household water pressure is outside the range indicated on the nameplate, shoppers should inquire about potential problems in appliance performance. The quantity of water necessary to operate an appliance is an important environmental consideration. For example, a top-loading automatic washing machine with oscillating agitator uses significantly more water for a normal cycle than a top-loading machine with nutating agitation or a front-loading (horizontal axis) washing machine. Water quality, indicated by the amount of dissolved minerals (degree

of hardness) or presence of dissolved iron, may affect satisfaction with performance or life expectancy of appliances such as dishwashers and washing machines, as well as automatic ice makers. Water hardness appears as a hard, white scale on the inside of an appliance and may build up in the operating components, blocking the flow of water. Water hardness also is indicated by a white deposit on glassware, dishes, or clothing, or as white flakes in ice cubes. Dissolved iron shows up as brown streaks on the inside of appliances or as spots or streaks on clothing.

9. **Energy standards.** Because of the need to conserve, or better manage, the supply of electricity, gas, and water, the U.S. government has established the EnergyGuide label and the Energy Star programs to encourage consumers to buy appliances that perform well with lower energy input. In addition to selecting energy-efficient appliances, consumers have a responsibility to adopt effective energy management practices when using appliances.

The EnergyGuide label, mandated by law, provides information about the estimated annual operating cost or kilowatt-hour use of dishwashers, refrigerators, refrigerator/freezers, freezers, washing machines, air conditioners, and furnaces, based on laboratory tests and the national average cost per kilowatt-hour of electricity or cost per therm (100,000 BTU) of natural gas. When comparing operating costs using the EnergyGuide label, one needs to recognize that (1) the estimated annual energy use established under laboratory conditions may vary from household conditions, because of user behavior and other factors, (2) the national average cost per kilowatt-hour of electricity (or therm of natural gas) varies over time, and (3) appliance style and features affect energy use.

The Energy Star label indicates that a product has been manufactured to exceed the minimum federal standard for energy use. A manufacturer may apply for the Energy Star for all models in a line of

products, some models, or none at all, since this is a voluntary program.

10. Other assurances of performance and safety. Other organizations, governmental and nongovernmental, have established standards, and where appropriate, consumers should look for the designations that indicate appliances have met those standards:

AGA Star. This designation given by the American Gas Association assures consumers that a product sample has been tested and found to meet performance and safety standards established by the manufacturers of gas-fired appliances.

ANSI. The American National Standards Institute administers and coordinates the U.S. voluntary standardization and conformity assessment system. To facilitate development of standards, ANSI establishes consensus among groups such as the Association of Home Appliance Manufacturers (AHAM). An appliance nameplate with “ANSI/AHAM” indicates evaluation according to procedures established by AHAM and adopted by ANSI.

CSA Mark. This symbol was originally granted by the Canadian Standards Association to indicate that an electric appliance met Canadian standards for safety. The CSA mark has been adapted to indicate a broader scope that includes testing and certification of gas-fired as well as electrical products that meet both U.S. and Canadian standards.

Good Housekeeping Seal. This seal indicates a limited warranty that assures consumers an appliance will perform as represented. If an appliance that bears the Seal or is advertised in Good Housekeeping magazine is defective within the first two years of ownership (whether purchased or received as a gift), Good Housekeeping will replace the product or refund the purchase price. This warranty does not cover problems caused by abuse or by failure to follow the manufacturer’s instructions for installation, use, or service.

IEC 750. This test procedure, established by the International Electrotechnical Commission, provides consistency in

measurement of power output (power or wattage available for cooking) of microwave ovens. Theoretically, the higher the power output, the shorter the cooking time.

UL Mark. The Underwriters Laboratory (UL) mark on an appliance indicates that a sample of the product has been tested by UL and has been found free of potential safety risks. UL personnel conduct periodic unannounced inspections of a manufacturer’s facilities to assure that a product bearing the UL mark continues to be manufactured to meet the safety standards of the original sample tested by UL.

These ten points have not been presented in any particular order. For some shoppers, price may be most important; for others, features, installation specifications, or energy use may hold top priority. Careful consideration of the needs of the household, now and in the foreseeable future, along with comparison shopping using information from a variety of sources, can help make shopping successful.

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See also: Consumer Economics/Consumer Education; Consumption, Ethical; Energy Efficiency in the Home; Energy and Home Usage; Energy: Standards, Codes, and Labels; Household Appliances: History and Development

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Housing

Housing can be considered a product, an environment, a service, and a process (White 1986). As a topic of academic study, housing encompasses many aspects, all connected in some way with the objective of increasing the quality of life. Major topics include the physical design of houses, the acquisition of housing, social and psychological aspects of housing, economic aspects of housing, political and legislative processes related to government housing policy, and the delivery and management of housing in the marketplace. Housing as a focused field of study is centered on relationships among homes and neighborhoods and the well-being of people and their communities (American Association of Housing Educators 1982). The many aspects of housing are also considered in a multitude of disciplines, including family and consumer sciences, sociology, psychology, social psychology, economics, business, environmental sciences, human development, gerontology, urban planning, and architecture.

Shelter is a basic human need. "Living situations affect individual and family development and quality of life. Housing is influenced not only by personal factors, but also by external forces. . . . [H]ousing provides physical shelter and symbolic meaning for people" (White 1986, 190). The housing environment includes small- and large-scale settings and the interaction of people within each and among all of them.

Early examination of housing in the United States focused on the home as a social institution. By the mid-1800s, a "suitable home environment" was considered essential for the proper upbringing of children. That environment included both affective and physical characteristics. It was thought that moral values could best be instilled while living in dwellings and among possessions that exemplified beauty. A connection was made between "base people and a sordid environment," and both were contrasted with virtuous people and exemplary surroundings (Handlin 1979). After the Civil War, interest in the home continued. Activists Catharine Beecher and her sister Harriet Beecher Stowe, in *The American Woman's Home*, agreed

that a proper home was essential to Christian living, but added the importance of home design that would economize time, labor, and expense.

Throughout the century, the examination of housing was driven by value-laden goals. Many nineteenth- and early twentieth-century social reformers focused on the evils of slums. Efforts were made to eliminate slums through legislation and by setting minimum standards for light, air, and occupancy. In addition, building codes were developed to establish standards for plumbing, electricity, heating, and materials.

A concern for housing was an integral part of the new discipline of home economics. Ellen Richards wrote a book entitled *The Cost of Shelter* (1905) wherein she emphasized sanitation, safety, and the social and economic aspects of housing. Early home economists recognized relationships between environment and the welfare of the family; to take one example of their work, they provided designers and consumers with guidelines for efficient kitchen design (Coveney and Hunt 1984).

The U.S. government became directly involved in housing during the 1930s, as a result of the financial and economic disasters of the Great Depression. Federal programs included regulation of housing finance, establishment of the mortgage guarantee system, and the development of public housing.

In 1965, the U.S. Department of Housing and Urban Development (HUD) was created (P.L. 89-117). Its mission is to assure decent, safe, and sanitary homes and suitable living environments for every American. The creation of HUD brought most federal housing policies and programs under one roof.

The same year that HUD was created (1965), the American Association of Housing Educators (AAHE) was formed. Its founders "broadly conceived the term 'housing'" to include appropriate aspects of social psychology, planning and design, home management, interior design, and economics. The diversity of housing professionals who joined together in the organization included home economists, interior designers, sociologists, urban planners, and architects. AAHE "promotes excellence in planning, development, delivery, and service of decent, safe, sanitary, affordable, ecologically sound, and appropriately designed housing for all people. . . . The organization is a major forum for



Aerial view of a development of similar style houses (Michael Siluk)

professional dialogue among educators, researchers, policy makers, and practitioners in the field of housing” (AAHE 1997, 42). The organization holds annual conferences and publishes a scholarly journal, *Housing and Society*.

Housing is also an emphasis of the Cooperative Extension System (CES) of the U.S. Department of Agriculture. Many states have Extension Housing Specialists who are university-based researcher-educators. Housing specialists work with Extension County Agents to provide research-based information and programs for consumers, community leaders, local government officials, and professionals involved in the housing industry.

Housing continues to be an important element in the well-being of individuals, families, and communities. Programs of HUD and other departments of the federal government, state and local governments, and a multitude of nonprofit and for-profit industries are involved in housing issues. They encourage homeownership, address issues of affordable rental housing and decent public housing, and invest in neighborhood and community development.

Within housing as a topic of academic research, six broad categories have been identified by the

AAHE (Weber 1992): (1) private market/public policy interface; (2) public policy; (3) technology applied to housing; (4) environmental and safety issues; (5) behavioral aspects of housing; and (6) housing consumption.

Housing education at both undergraduate and graduate levels is available at selected institutions of higher education across the country. The scope of housing education varies, depending on the mission and goals of the department and institution at which it is offered.

Housing curricula may include such topics as housing needs through the life cycle, living patterns, social and psychological interactions between people and their housing, cultural influences on housing, fair housing and housing discrimination, housing markets, housing finances, housing management, public policy in housing, housing and interior design, neighborhood and community planning, and housing interactions with ecosystems and the environment. Housing courses are also an integral part of many interdisciplinary programs, and are relevant to public administration, real estate, finance, social welfare, urban planning, environmental studies, gerontology, and other related fields.

Careers in housing are many and varied. People with an undergraduate degree in housing qualify for housing-related positions in both private industry and government. Positions in the private sector include real estate development, housing design, interior design, residential sales, real estate appraisal, home insurance, home building and remodeling, equipment and furnishings sales, mortgage and construction lending, and housing management. In the public sector, typical careers involve housing development and regulation, building inspection, code enforcement, and the administration of a multitude of affordable housing programs. A growing nonprofit housing industry offers careers in affordable housing development, consumer education for housing and finance, grants writing and administration, and public policy advocacy.

Typical housing-related careers for those with graduate housing degrees include administrative positions with government and nonprofit organizations, Extension service, and teaching and research positions in higher education.

Carmen D. Steggell

See also: Cooperative Extension System (CES); Financing Homeownership; Homelessness; Homeownership as a Tool for Building Family Capital Assets; Housing: Cultural Influences on Historical Styles; Housing and Older Adults; Housing Policy

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Housing: Cultural Influences on Historical Styles

Historical housing styles are a reflection of the contributions of various ethnic groups and cultures to a society. The study of housing from across-cultural perspective increases an awareness, appreciation, and understanding of various ethnic and cultural groups. Knowing the contributions that a culture has made to U.S. architecture is important in the preservation of that culture for future generations. It also increases the interconnectedness of our society and heightens one's awareness of and appreciation for differences in various cultural and ethnic groups (Jackson 1997). This is an important area of study in human ecology.

When looking at a historical home or building site, it may be possible to see many different cultural influences in that one house. Historical houses are a reflection of various groups and the ecological dimensions of their environment. The cross-cultural architectural influences that might be observed in historical houses include Native American (Indian), African, European (English, French, Dutch, Spanish, and German, to name some of the most important), and Chinese.

African Influences

People who came from West Africa between 1673 and 1848 greatly influenced architecture in the Americas. The occupational classifications of the Africans, especially those who were living in the Caribbean region, were warehouse Black, house Black, craftsmen and artisans, and field-workers. Many of the Africans had great influence over the historical architecture due to the absenteeism of European landowners, especially in the Caribbean. West African influences, as seen in historical architecture, are wattle and daub, rubble walls, tabby construction, gable and hipped roofs, porch, the shotgun house, and the use of adobe. One of the first permanent types of homes built along the southeastern coast of the United States were homes made of wattle-and-daub construction. These small rectangular homes were built by the people who had come from West Africa and also

from Europe. The wattle-and-daub construction can be traced to the Ika district on the Niger River located in West Africa (Sobel 1987, 119). The wattles are sticks that were woven like a basket and then covered with a plaster, or daub (often animal dung). This type of construction is still found in West Africa, the Caribbean, Mexico, and Central and South America.

Rubble, or “rubbed-up,” walls represent another method of wall construction that was used by the Africans but also known to the Europeans and the Native Americans of the Southwest. With this method of construction, stones are placed in a trench, which marks where the foundation is for the house. Then the mortar is placed between and around the rocks and the stones. Rocks and stones are piled upon one another to form the walls of the building. Locally available field stone was used and set in a lime mortar. Rubble walls can be observed on various historical architecture structures throughout the United States and the Caribbean.

Tabby construction was a type of building method that was used by the people who came from West Africa, Spain, and Europe. In this method of construction a cementlike mixture is made up of sea shells, lime, water, and stone, which are applied over a wooden frame that has been filled with stones. The tabby is made by pouring the masonry mixture and small stones and shells into a wooden mold. The exterior walls are then plastered.

A gable roof was used on many historical houses. In this roofline, the roof has two peaks at opposite ends of the house. This roof style was used by the West Africans as well as the Europeans. The location of the front door on a house with a gable roof can be related to one’s culture. Most of the Europeans built their houses with the doors located on the sides without gables. It was characteristic of houses found in parts of rural West Africa to locate the doors on the gable ends of the house, as seen in shotgun houses.

The shotgun house style was brought from the island of Haiti by the Caribbean Blacks to New Orleans in the early nineteenth century. The traditional size of the house was 13 feet or 14 feet wide by 64 feet long. The ceiling height followed the steeply pitched roofline, which was 12 feet tall. Why is this house called a shotgun house? The shotgun house has a door located at each gable end of the house, an arrangement that reflects African

influence rather than European. If one were to stand in the front door of the house and point a gun, one could shoot straight through the house and out the back door. This style of house was actually shaped by several influences. The shape of the house was influenced by Africans who came from Yoruba and Caribbean Indians who lived in Haiti. The framing of the house reflects French influence. The concept of the shotgun house moved from New Orleans to various parts of the United States. These houses are found within our cities, and they were also used by farmworkers and in the oil fields, lumber camps, and railroad yards (Upton 1986, 43–45). Excellent examples of restored shotgun houses can be found in Galveston, Texas.

One of the most important architectural features of many historical houses found in the southern part of the United States and throughout the Caribbean is the porch or gallery. Where did this architectural feature come from? Many people would say it was of European origin; in fact, however, it was an idea that was brought from the tropical rain forests of West Africa to the Americas. The verandah, porch, or gallery is widespread in the indigenous architecture of the West African rain forest. It was very important in the social and ceremonial life of the extended African family. Stanley D. Dodge reports “that an eighteenth century etching shows the King of Dahomey, which is an ancient West African kingdom, entertaining slave traders (Europeans) on the palace verandah,” (Dodge 1922, 12–13). The enslaved people who were brought from the west coast of Africa to the Americas contributed to American architecture through their knowledge of building skills, their skill as artists, and their response to the kind of warmer climate found in the southern part of the United States and the Caribbean.

Chinese

Adobe brick, which is made of soil, straw, and water and then dried in the sun is a building material that is still used in the southwestern part of the United States today. Adobe bricks were used over three thousand years ago by the Chinese. The West Africans used this type of building construction over two thousand years ago. The people from West Africa introduced the adobe brick to the Spaniards, who brought this building concept to Latin America. The Mexicans who were living in

the southwestern region of the United States introduced it to the Native American Indians. For the most part, Chinese influence on American housing is found in the interior of the house, but the adobe brick is an exception, one most people are not aware of.

Spanish-Mexican Culture

The Spaniards came to the Americas from Spain, and they have certainly had an important influence on our historical architecture, especially the architecture of California and certain areas of Florida. Mexican culture is not purely Spanish, however; Mexico is multicultural, composed of Spaniards, Native Indians, Europeans, and Africans. The Mexican people who lived in the Southwest of the United States, which was once part of Mexico, have had significant influence on the historical architecture of this part of the United States.

Spanish-Mexican influences on historical architecture show themselves in (a) elaborate wrought-iron grillwork; (b) vivid colored ceramic tiled floors and walls; (c) balconies that extend from some smooth plaster facades; (d) white-washed plaster exterior walls; (e) arched doors and windows; (f) vigas (crossbeams for supporting the roof that are exposed on the interior of the structure and extend through the exterior walls); and (g) rajas (split pine logs laid on top of the vigas creating the ceiling) (Birdsong and Goodman 1986, 21). These cultures used the adobe brick extensively as a building material. An inner courtyard is another Spanish-Mexican cultural influence that is seen in the traditional houses influenced by these cultures. Surrounding the courtyard and also used on the front of the homes were the portals, which were long, narrow roofed porches supported by heavy vertical posts. Spanish culture is reflected in the pitched red clay tile roofs, as seen on some of the historical Spanish-style houses in Florida and California. Roof styles used by the Spanish-Mexican cultures were flat, pitched, and hipped. A hipped roof has tiles that come down on all four sides of the roofline.

It has been said that the most important architectural feature on historical Mexican architecture is the door, or exterior entrance. The heavy wooden doors have typically been beautifully hand carved. In contrast the front entrance to a Spanish-style home will have beautiful iron grill-

work in an elaborate design. California mission architecture reflects the influences that were brought to California by the Spanish missionaries who settled in California and built beautiful mission churches.

Native American Indian

The oldest example of historical architecture found in the United States is the Taos Pueblo, located in the northern part of New Mexico. Taos Pueblo is a pure example of Native American architecture. The flat roofline is supported with vigas. Traditional pole ladders were used on the exterior of the structure to get from one level of the building to the next level. Rubble walls were another type of construction used by the Native Indians. Situated high above the Puye Cliff Dwellings on the mesa is an excellent example of rubble wall construction in the ancient ruins of the Santa Clara Indians of New Mexico. This type of construction exhibits cross-cultural influences and is seen in many historical buildings found across the United States.

English

English culture has left its mark on the architecture of the United States. The English built a simple rectangular house with Early Georgian and Queen Anne details. These houses were referred to as Wrenstyle. The Wrenstyle was usually two stories high with a hip roof. The facade was symmetrical with a centrally located door with a fanlight (a half-moon-shaped, round, or oval window with glass panes in a fan shape) over the door. There were two windows on either side of the door.

The half-timber house, known as English Tudor, was a popular English architectural style. The lower floor of the house was usually made of brick or stone, and the second story, which overhangs the first story, was made of a combination of wood and plaster. The roofline features many gables, and the house may have multiple massive chimneys.

European architectural pattern books influenced early nineteenth-century architecture, and many of these pattern books came from England. The Georgian house is an English style, named after George I, II, and III of England. Formal balance was used in this architectural style. The front door became the focal point, with identical number and sizes of windows on either side of the

door. The house has a hipped roofline, with usually two chimneys equally balanced on either side of the front door. An outstanding architectural feature of this house is the pediment (an arched or triangular decoration) that is located above the door. The pediment is constructed out of wood and may be in various designs (triangular, scrolled, broken triangle, and half-moon).

Many of the fine details that can be observed on historical homes have come out of England. These details include elaborate cornices (decorative strips where walls meet roof); pediments, columns, and pilaster strips (decorative flat columns located on either side of the door); string courses (bands of brick or stone between the first and second stories of the house, which may be in a contrasting material or color); quoins (vertical rows of stones set at external corners); and fanlights. A popular historical architectural style that came out of England was the Victorian Style. This style was named after the eighteen-year-old princess Victoria who became Queen Victoria of England in 1837. The style is noted for its elaborate gingerbread trim and fretwork. An interesting thing to note is the word "gingerbread"; it came from a Medieval French word, *gingimbrat*, which meant preserved ginger. In the translation of the French word into English, the last syllable was mistranslated. The English translation came to be used for a ginger-flavored cake that was cut into fancy shapes (Brown 1981, 5). The gingerbread design was a direct result of the English invention of the fretsaw in 1865. The fretsaw permitted a board to be pierced and cut in a decorative manner. This technique was used on eaves and bargeboards. A bargeboard is a board ornately carved and attached along the projecting edge of a gable roof. Some of the best examples of restored Victorian houses are found in Galveston, Texas.

Dutch

The most outstanding influence of Dutch culture on historical architecture in the United States is the gambrel roof. It is said that the Dutch who settled along the Hudson River got the idea of the gambrel roof from looking at the ships. The gambrel roof is an inverted ship hull. The easiest way to remember what the gambrel roof looks like is to think of a traditional barn roof. Most gambrel roofs have dormer windows, windows that are set into the roof. The Dutch Colonial house has a gam-

breel roof with dormer windows. The windows of the house were shuttered.

French

The French brought their architecture to the Americas. Some of the features of American architecture that reflect French influence are the central upper story balcony, dormer windows, mansard roof, steep gable roof, ornate cast-iron grillwork, turret (a tower protection), wooden shutters, and French doors. Some of the historical French houses found in the United States would be the French Normandy, French Plantation House, French Manor House, French Provincial, and the French Town Houses that one can see in the city of New Orleans. The French used brick, stone, and stucco to construct their homes. Usually the stucco was white or tinted a pale color.

Conclusion

Studying historical housing from a cross-cultural, ethnic perspective increases one's knowledge of U.S. society and the world and gives a better perspective on various cultures, providing new insights in human ecology. Careful analysis of historical housing styles reveals the contributions made by peoples from West Africa, Europe, and Asia, as well as by indigenous Indians. All of these cultures have made a significant contribution to the historical housing of the United States.

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See also: European Americans; Housing References and Further Reading

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Housing and Older Adults

At the beginning of the twenty-first century, almost 13 percent of the population in the United States is 65 years old or older. Projections for the year 2030 estimate a population of 70 million older adults. The majority of older adults prefer to age in place and will continue to live independently until the end of their lives. In general, older adults are attached to their homes and neighborhoods; they prefer to remain independent, retain control over their environment, and live close to support networks. Over the life span only a small number and proportion of older adults reside in group homes or nursing homes. The dilemma facing housing providers and policy makers over the next several decades is to design and build or modify environments to accommodate the changing physical capabilities of older adults and combine housing with a variety of support services to support independent living.

This entry begins with the theoretical underpinnings of the interrelationships between the environment and older adults. After a description of typical housing situations and behaviors, there is a summary of desirable policy responses.

Theoretical Framework of the Person-Environment System

Housing for older adults can be built to maximize individual competence and maintain independence and control. Powell Lawton (1989) offers several theoretical concepts to help design supportive environments for older adults. Both the physical and social environments of home, neighborhood, and community should be evaluated. Individuals in close proximity, the social environment, and physical environment influence the well-being of older adults. The concepts of maximum comfort and environmental press explain the relationships. Environmental press refers to the degree to which the

setting requires the resident to respond. Housing and services that do not encourage activity and negotiation on the part of residents result in apathy and lethargy; too many barriers make a resident feel incompetent. The zone of maximum comfort, the right level of environmental press, varies by individual; it is the physical and social environment that maximizes the older individual's sense of competence and ability to function independently.

Characteristics of Older Adults, Their Housing, and Adaptation Behaviors

Housing policy initiatives since World War II have expanded homeownership opportunities. The majority (79 percent) of adults 65 years and older own a home; 77 percent of older homeowners own their homes free and clear. In general, older Americans are very well housed. However, millions of older adults spend a high proportion of their income on housing, live in substandard units, or live in housing that does not accommodate their physical capabilities (U.S. Department of Housing and Urban Development 1999). Housing problems are most common among older householders who are female, low-income, and minority. Rural residents, especially in southern states, are more likely than others to be in a physically inadequate unit.

Older adults are diverse and employ differing strategies to meet their housing and personal needs. There are two broad categories of strategies: (1) Adapt the physical environment to compensate for physical change; or (2) engage in psychological adaptation by accepting inconveniences, denying problems, developing compensating mechanisms to negotiate surroundings, or redefining personal expectations of satisfactory living arrangements. In a recent survey (Bayer and Harper 2000), about a third of respondents expressed concerns about the need to make modifications and their ability to afford such modifications. Twenty-one percent were concerned about finding information about modifications. Current seniors are more likely to engage in psychological adaptation behaviors than to make modification in the physical structure. Common adaptation behaviors include avoiding stairs and the main entrance, taking fewer baths, and avoiding low toilets.

Senior Housing Alternatives: Continuum of Housing and Support Services

Alternative housing is especially designed or

adapted for individuals or families with special needs. Senior housing alternatives incorporate universal design principals and support services to accommodate older adults who are willing to move from single-family detached units or private apartments. Independent-living retirement communities combine rental or cooperative housing with a service package that may include meals, housekeeping, scheduled activities, transportation, and security for active older adults. Assisted living facilities provide personal care and assistance with medications. Nursing homes provide skilled nursing care. Continuing care retirement communities, also referred to as life care or continuum of care communities, provide all three levels of housing and services in one setting; residents move into the appropriate level of housing according to their need for care.

In recent years, both the public and private sectors have developed alternative housing for older adults. However, good housing, with services, that promotes independence, safety, comfort as well as a sense of control and belonging is not as accessible to low-income households as to higher-income households. Nor is good housing with appropriate services universally available in all neighborhoods or regions of the country.

Policy Implications

Many issues need to be considered in the design and provision of housing and neighborhood environments to maximize the older adult's ability to function independently. First of all, housing should be defined as the physical and social environments of the home, neighborhood, and community; alternative housing for older adults needs to be sited in safe, well-served, accessible neighborhoods. Due to the interrelatedness of housing and support services needed to maintain independent living, policy makers must integrate and coordinate these programs. To support older persons' preference for aging in place and maintaining independence, control, and security, services should be delivered to independent living arrangements.

The livability of residential units can be maintained by modifying the physical structure as the needs of the resident change. A number of strategies are needed to ensure that modifications and services are available to all older adults. Education is needed to explain the variety of structural mod-

ifications and the number of assistive devices developed to accommodate individual change. To ensure that appropriate housing and support services are available in all areas and to all individuals, they may need to be provided by the public sector in underserved areas. Furthermore, housing and support services, including modifications to independent living units, may need to be subsidized for low-resource older adults.

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See also: Aging and Technology; Living Arrangements for Elders; Nutrition in the Elderly; Old Age, Social Relationships in; Older Adults: Preparation for Future Care; Outdoor Mobility in Old Age; Teaching Older Adults to Use New Technologies

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Housing Policy

Government regulation of various aspects of housing is shaped by the government's housing policy. Broadly, the nature of that housing policy can be understood by looking at housing-related legislation, together with the philosophies behind it and the programs that result from it. Housing policy includes government expenditures, loans, and loan

guarantees for real estate investments; zoning regulations and building codes; and legislation concerning property rights and property taxation (Aaron 1985).

In the United States, housing policy has had three consistent objectives. First, it has encouraged and facilitated widespread home ownership. Second, it has been used to stimulate the economy. And third, it has been used to promote a variety of social goals, such as reducing poverty or revitalizing deteriorating neighborhoods. Federal housing policy has produced a wide variety of housing programs, which include (1) a federally regulated mortgage finance system, (2) mortgage insurance and mortgage guarantees, (3) interest rate subsidies to home owners, developers, and landlords, (4) tax deductions for mortgage interest, (5) special depreciation allowances for rental housing, (6) low-rent public housing, (7) rent supplements for low-income households, (8) subsidies for neighborhood and community redevelopment, (9) aid to residents of rural areas, and (10) anti-discrimination measures (Mitchell 1985).

The most significant outcome of U.S. housing policy is the encouragement and facilitation of home ownership. Income tax subsidies benefit homeowners generally, and especially favor upper-income homeowners. Tax incentives for homeowners constitute the farthest-reaching housing subsidy in the United States

Although several laws related to housing were passed prior to the 1900s, federal involvement in housing began as a direct response to the Great Depression during the 1930s. Concern for poor housing conditions, especially in industrial cities, together with widespread unemployment, drove the establishment of a federally regulated housing finance system and the first public housing program.

Housing policy during World War II was focused on housing problems related to the dislocation and redistribution of the population as a result of military service and industrial production. Construction of temporary housing around military bases and war production plants was authorized, although largely not built because of materials allocations. Following World War II, housing subsidies was awarded to veterans. Increased demand for housing by returning veterans and their growing families enhanced federally created programs and institutions designed to facilitate home ownership.

During the 1960s, federal housing policy was imbedded in the Great Society objectives of reducing poverty and discrimination. In 1965, the U.S. Department of Housing and Urban Development (HUD) was created, bringing under one roof many of the diverse housing programs of the federal government.

Currently, at least six departments of the federal government administer programs that are directly related to housing. A multitude of additional laws and programs affect housing indirectly, and are administered through many other federal departments.

The Department of Housing and Urban Development oversees the greatest number of housing programs, addressing issues ranging from homelessness to home ownership. Examples of other departments' programs follow.

The Department of Agriculture, Rural Housing Services, and the Cooperative Extension System address housing needs of farmers and other rural residents. The Department of Treasury, Internal Revenue, oversees tax incentives for home ownership and real estate investing. In the Department of Veterans Affairs (the Veterans Administration) provides mortgage guarantees for veterans. The Department of Energy oversees the Affordable Housing Partnerships program, the Weatherization Assistance Program, and other energy-related programs in housing. The Department of the Interior (through the National Park Service) administers Historic Preservation tax incentives and programs.

Today, U.S. housing policy is moving toward increased state and local control of housing programs. Many federal programs are placed in the hands of municipalities, local housing authorities, and nonprofit housing groups though federal grants. The housing agenda, though adjusted with each presidential administration and subject to change depending on the political majority in Congress, continues to tackle problems of "place and race" (Cisneros 1997). Tax advantages for home owners continue to be the largest housing subsidy. A partial list of important programs for affordable housing includes the following: Section 8 rental assistance, Community Development Block Grants (CDBG), the Family Self-Sufficiency Program (FSS), HOME Investment Partnerships (HOME), Home Ownership Plus Empowerment (HOPE), and the Low-Income Housing Tax Credit Program (LIHTC).

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Table 1.1. Chronology of Important Housing Legislation

Year	Legislation
1934	National Housing Act. Created the Federal Housing Administration.
1937	U.S. Housing Act. Created the U.S. Housing Authority for low-rent housing and slum clearance projects.
1945	Veterans Administration
1946	Farmers Home Administration
1949	Housing Act of 1949. Established the national housing objective of providing federal aid to assist slum clearance, community development, and redevelopment programs.
1954	Housing Act of 1954. Section 701 formed comprehensive planning assistance.
1959	Housing Act of 1959. Established direct loans for senior citizen housing.
1964	Housing Act of 1964. Section 312 created the Rehabilitation Loan Program.
1965	Department of Housing and Urban Development Act. Established HUD; the Federal Housing Administration was placed under HUD Older Americans Act.
1966	Model Cities Program.
1968	Civil Rights Act. Title VIII provided for fair housing.
1969	Truth in Lending Act.
1970	Housing and Urban Development Act. Provided for the establishment of a national growth policy.
1974	Housing and Community Development Act. Established Community Development Block Grant, added building codes for manufactured housing.
1975	Home Mortgage Disclosure Act (HMDA). Equal Credit Opportunity Act.
1977	Community Reinvestment Act (CRA).
1978	National Energy Conservation Policy Act. Authorized financing for energy conservation improvements and solar energy research, demonstration, and implementation.
1983	Housing and Urban-Rural Recovery Act. Created the housing voucher program as an alternative to Section 8 rent certificates. Created the Rental Rehabilitation Program.
1987	Homeless Assistance Act. Provided assistance to the homeless, with special emphasis on elderly persons, persons with disabilities, and families with children.
1990	Affordable Housing Act. Created the HOME Investment Partnerships program, national Homeownership Trust program, and HOPE program, and provided funds for homeless programs.
1992	Housing and Community Development Act. Created the Office of Federal Housing Enterprise Oversight to supervise Fannie Mae and Freddie Mac. Developed a strategy to eliminate lead-based paint hazards.
1993	Omnibus Budget Reconciliation Act. Gave HUD greater flexibility in disposing of apartment buildings in government possession, made technical changes to HOME and public housing programs.
1998	Quality Housing and Work Responsibility Act. Provided additional public housing units, raised the limit on Federal Housing Authority (FHA) loans, created a home ownership voucher program.

See also: Cooperative Extension System (CES); Homelessness; Homeownership as a Tool for Building Family Capital Assets; Housing; Policy Education for Families and Children

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Hypertension and Blood Pressure Control

Hypertension is the major modifiable risk factor for stroke and one of the major risk factors for coronary heart disease, congestive heart failure, and renal disease (Perry and Roccella, 1998). There are approximately 50–60 million Americans with hypertension, and the prevalence of hypertension in adults 65 years of age and older exceeds 50 percent (National High Blood Pressure Education Program Working Group 1994). Despite the prevalence of this disease, only approximately one-fourth of all hypertensive patients have their blood pressure under effective control (Joint National Committee on Detection and Treatment of High Blood Pressure 1997).

Although there have been many empirical studies examining factors related to hypertension, a comprehensive examination of ecological factors related to this disease and subsequent poor blood pressure control is lacking. A clear understanding of these factors has not been forthcoming, in part because most studies of the antecedents of hypertension and blood pressure control have considered only the patient or provider, not sociocultural factors. Without this ecological approach, interventions to prevent hypertension, improve blood pressure control, and decrease health risks and costs cannot be effectively designed because potentially important social environmental and patient interactions may be missed.

This comprehensive approach can be organized by grouping contributing factors according to three general categories: patient characteristics, provider characteristics, and ecological environment, including the individual's social, cultural, and medical environment. While there are well-known provider characteristics (e.g., complexity of medication regimen, ineffective communication style) and patient characteristics (i.e., age, salt intake, alcohol use, smoking) related to the development of hypertension and poor blood pressure control, they will not be reviewed here. Rather, this entry focuses on the importance of examining the role of ecological factors in the development of hypertension and blood pressure control, namely, the more general sociocultural factors, such as acculturation, migration, community factors, cultural factors, social support, and provider-patient interactions, and their relationship with hypertension and blood pressure control.

Evidence that ecological factors affect hyper-

tension and subsequent blood pressure control can be observed when examining prevalence rates of hypertension across cultures and geographical regions. The Southeast, for example, is considered a "stroke belt," and hypertension is a powerful predisposing factor (Hall et al. 1997). The continued high prevalence of hypertension and the hypertension-related complications of stroke, heart failure, and end-stage renal disease in the southeastern United States makes hypertension a large public health concern in this geographical area (Perry and Roccella 1998). Many social and cultural reasons have been identified to explain these high rates of hypertension, including lower socioeconomic levels, lower education attainment, and an older population.

Further evidence for the impact of ecological factors on hypertension can be observed by examining migration and acculturation patterns. Gary James and Paul Baker (1995), for example, reported that there are about thirty-nine populations, in Africa, South America, Asia, and the Pacific Region, where hypertension is rare. People in these isolated communities have particularly low salt intake. After these people move to more developed communities, however, where salt intake is higher, their hypertension rates have been found to increase. These findings provide evidence that ecological factors play a significant role in the development of hypertension (Beaglehole 1992; Cooper and Rotimi 1994; Hollenberg et al. 1997).

Differences in prevalence rates among similar racial groups living in different areas provide further evidence of ecological influence on the development of hypertension. The prevalence of hypertension in Black Americans, for example, is higher than among Caribbean Blacks, and the prevalence of hypertension among Caribbean Blacks is higher than among African Blacks. In the United States, the prevalence of hypertension is lower in more educated, urban Blacks of high socioeconomic status than it is among less educated, rural Blacks of lower socioeconomic status; the opposite is true of African Blacks (James, Hardnet, and Kalsbeek 1983).

A variety of neighborhood characteristics, including the availability of resources and services to promote or maintain healthy lifestyles as well as the physical and social environment, may also have an impact on hypertension risk. Ana Diez-Roux and her colleagues observed that individual

socioeconomic characteristics, particularly income, are related to the incidence of coronary heart disease, with poorer people having a greater incidence of the disease. They also reported that, independent of individuals' socioeconomic status, the worse the social conditions of the neighborhood were, the higher the incidence of coronary heart disease (Diez-Roux et al. 1999). Neighborhoods may affect hypertension and subsequent blood pressure control in many different ways. Tobacco advertising (Pucci, Joseph, and Siegel 1998), for instance, and the availability and cost of healthy foods (Troutt 1993) are related to health behaviors. Differences among neighborhoods in the physical environment, in the availability and quality of public spaces and recreational facilities, and in perceived safety may affect patterns of physical activity (Morbidity and Mortality Weekly Report 1999). Living in some neighborhoods may be associated with exposure to noise, violence, and poverty, resulting in chronic stress (Henry 1986).

Other physical and psychological stressors encountered on a daily basis are linked to increased development of hypertension and subsequent poor blood pressure control (Adams-Campbell, Brambillam, and McKinlay 1993). As a consequence of historical factors and the continued race consciousness of society, African Americans currently experience a greater array of stressors than do Whites. These chronic socioecological stressors include, among others, higher unemployment, higher poverty rates and lower income levels, lower status occupations and lower social status, residential crowding, and substandard housing (McLoyd 1990). The experience of being discriminated against because of one's race or culture has been found to be directly related to increased blood pressure (Krieger and Sidney 1996). Shift work, which is performed by disproportionate numbers of minority people and those from lower socioeconomic strata, frequently results in sleep deprivation. Lack of sleep is emerging as an important contributing factor to cardiovascular disease and diminished mental and physical health, and may also play an important role in the lack of adherence to prescribed health recommendations and subsequent poor blood pressure control.

Cultural barriers such as mistrust, on the part of some minority groups, of medical personnel and medical systems or lack of cultural sensitivity on the part of health care providers contribute to poor

blood pressure control and lack of hypertension treatment. Cultural practices as well as lack of accurate understanding about maintaining good health are all important determinants of the effectiveness of patient-physician interactions. Physicians may not fully recognize the educational, social, cultural, or economic barriers to routinely prescribed hypertension therapy. Similarly, a patient's expectations and understandings of the physician or health provider's role may present additional obstacles. Issues such as the legacy of racial segregation, the stigma associated with disease, and mistrust of health care facilities tend to alienate minority groups from medical systems and are likely to exacerbate the effects of hypertension.

Social support, from family members, friends, or health care providers, plays an important role in medication adherence (Stanton 1987) and consequently decreases the effects of hypertension. This support may provide necessary information, encouragement, or logistical means for ensuring medication adherence, as well as increasing the likelihood that individuals will seek preventive health care services such as hypertensive screening and treatment. Increased social support has been found to be associated with improved health behaviors, including greater adherence to diet (Garay-Sevilla, Nava, Malacara, Huerta, Diaz de Leon, Mena, and Fajardo 1995), and decreased likelihood of smoking and alcohol use. In addition, social support has been found to have both direct and indirect stress buffering effects on resting blood pressure (Strogatz et al. 1997) and on cardiovascular reactivity (McNeilly et al., 1995).

Among those with hypertension, a major social-environmental factor that influences blood pressure control is the interaction and communication between providers and patients. Physician-patient communication, especially in the management of chronic disease such as hypertension, is important; patients who feel that they have participated in decision making are more likely to follow through on those treatment decisions than those who do not (Cooper-Patrick et al. 1999). In addition, hypertension requires that the patient take responsibility for implementing treatment regimens settled on during the physician-patient visit. Effective physician-patient communication must include the transfer of sufficient information to hypertensive patients to permit them to implement the treatment regimen correctly, and equally

important, must persuade patients that the agreed upon regimen should be carried out (Kaplan, Greenfield, and Ware 1989).

Social-ecological factors may also directly influence providers and the way they treat patients' hypertension. Physicians' beliefs about drugs are significantly influenced by drug advertisements, and prescribing behavior varies geographically (Avorn, Chen, and Hartley 1982). Thus, the providers' role in hypertension treatment outcomes may be overt, as in their medication prescription patterns. The sixth report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC VI) recommends a diuretic or beta-blocker for uncomplicated hypertension (Joint National Committee on Detection and Treatment of High Blood Pressure 1997). In several physician self-report surveys, 70 percent adherence to the guidelines was reported, but actual practice analysis revealed only 50 percent adherence (Siegel and Lopez 1997)

Obviously, hypertension is a significant public health problem, with upwards of 50 million Americans being diagnosed with the disease. Blood pressure control still remains poor, with only 25 percent of all hypertensive patients ever achieving a blood pressure <140/90 mm Hg. This is problematic because those who lack blood pressure control are at greater risk for stroke, heart disease, and other related diseases. Given the burden hypertension places on society, there is a need to consider further the role of social and ecological factors in addition to traditional hypertension risk factors (e.g., weight, diet). Potential social and environmental factors that may influence poor blood pressure control discussed above include patients' medical care environment, such as problems of access to health care, as well as influences of geographical region, acculturation, and socioeconomic status.

Further research needs to be conducted to examine how ecological factors may be considered and incorporated into successful interventions to decrease the impact of hypertension. Technological advances provide health care providers with the tools to play a key role in identifying and working with such patients. In addition, incorporating patients' social and medical environment as well as the role of the physician into patients' treatment regimen will enable the United States to achieve

and perhaps surpass the national health objectives for the year 2010—to increase the proportion of patients with controlled blood pressure to at least 50 percent.

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See also: Nutrition in the Elderly; Racism and Its Impact on Health; Smoking and Tobacco Use; Treatment Adherence

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Identity

See Adolescent Identity Formation; Ethnic and Racial Identity in Adolescence; Identity Statuses; Identity Styles; Racial Identity Development among African American Adolescents; Sexual Identity Development

Identity Statuses

Identity statuses refer to individual differences in how adolescents form a sense of identity. In terms of human ecology, identity statuses play a role in how adolescents cope and adapt within different environmental contexts. The rapid biological, social, cognitive, and emotional changes that accompany puberty create a need for adolescents to reconsider and revise how they think about and define themselves. They need to formulate a sense of who they think they are, what they plan to accomplish, and who they hope to become in the future. According to Erik Erikson, a leading life span developmental theorist, the task of forming a coherent and stable sense of identity is one of the major challenges that adolescents must face and resolve if they are going to become reasonably effective adults who can responsibly govern their own lives (Erikson 1968).

The concept of identity status was introduced by James Marcia in 1966 as a way to measure and investigate differences in identity formation. On the basis of two criteria that Erikson highlighted in his writings on adolescent identity—self-exploration and commitment—Marcia defined four identity statuses or types: achievement, moratorium, foreclosure, and diffusion.

The period of self-exploration (originally described as an identity crisis, in the sense of a turning point), according to Marcia, is more than a time of personal confusion and emotional turmoil: It involves an intensive period of self-analysis when adolescents actively question, examine, and reflect on their abilities, interests, career options, values, and life goals. The search for identity may also include observing and talking to role models, discussing and arguing beliefs with others, reading novels, traveling, working part-time jobs, experimenting with different life experiences, and the like. When one looks at commitment, within Marcia's model, one deals with the extent to which adolescents possess firm convictions about what they believe and aspire to: Do they have a clear sense of purpose and direction, or are they confused or ambivalent about the direction their lives are and should be taking?

The four identity statuses are distinguished on the basis of considering the extent to which adolescents have actively considered identity issues and whether or not they possess a firm commitment to beliefs, values, and goals. Two of the types have engaged in extensive self-examination, but they differ in their level of commitment. Adolescents who have reached the status of *achievement*, have achieved an identity, have taken stock of themselves, seriously considered a variety of life and career options, and found a set of values, beliefs, and life goals that they are comfortable with. They have a coherent sense of who they are and where they think they are headed; in other words, self-exploration is completed, and commitment is



Child playing a musical instrument (Elizabeth Crews)

present. Adolescents still in the process of self-exploration are classified as being in an identity *moratorium*. They are looking for something to believe in and are willing to consider different alternatives and options, but as yet they have not made long-term commitments; in other words, self-exploration is in progress, and commitment is absent. The remaining two statuses are characterized by limited self-exploration. Adolescents in the status known as *identity foreclosure* have firm commitments, but not ones they have arrived at on their own. Foreclosed adolescents have rather passively identified with and adopted expectations and goals held for them by significant others, especially parents and other adults. They have not consciously experienced an identity crisis; in other words, self-exploration is absent, and commitment is present). The final status, identity diffusion, includes adolescents who lack firm convictions and a sense of direction and are not exploring possible options or attempting to find something to believe in. They are the opposite of achievers; both commitment and self-exploration are absent.

Considerable research evidence indicates there

are advantages to personally achieving a sense of identity, especially in cultural contexts characterized by change and diversity. Identity-achieved adolescents generally deal with problems and decisions in a rational, informed, and adaptive fashion. They are socially skilled and concerned about others. They are relatively autonomous and self-directed, but also conscientious and socially responsible. When dealing with moral dilemmas, for instance, they have been found to emphasize issues like justice and concern for the rights of others. Adolescents classified in the moratorium status also take an active, informed approach to problem solving: They are open and willing to consider alternative ideas and points of view. These youth should benefit from educational contexts that provide sufficient freedom for self-expression, experimentation, and discovery. They may become emotional and rebellious, however, when faced with structure and demands they perceive to be arbitrary. As might be expected from individuals dealing with an identity crisis, they tend to be anxious, conflicted, and ambivalent.

Evidence indicates that the absence of self-

exploration is associated with personal disadvantages. On a positive note, foreclosed adolescents are conscientious, and they possess a clear sense of purpose and direction. Their reliance on normative solutions and willingness to work hard can enable them to be quite effective, especially in well-structured situations. They are the most inflexible, rigid, and fragile of the status types. In more diverse, less well-structured contexts they experience difficulty. They prefer having clear rules and standards to follow. Although they are socially oriented, their social relations are characterized by a sense of dependence and neediness: Foreclosed youth typically endorse authoritarian values. Adolescents with a diffuse identity status try to avoid having to deal with personal problems and life decisions. They are impulsive and self-centered, and they lack a sense of life purpose or direction. Although they are primarily concerned with their own feelings and desires, they have a low sense of self-worth and may experience depressive reactions. Identity diffusion is associated with problem behaviors like drug use and academic problems.

Various educational and parental practices are associated with differences in identity status. For example, adolescents with warm and supportive parents who provide reasonable guidelines are most likely to engage in self-exploration. Such parents provide a democratic atmosphere that encourages individuality, respect for different points of view, and open and honest communication among family members. Likewise, educational contexts that encourage intellectual questioning, critical evaluation, and analytical thinking likely enhance the formation of a personal identity. Home environments characterized by rejection, emotional distance, enmeshment, arbitrary control, and limited parental involvement have been found to be negatively associated with progress in personal identity formation.

For many adolescents the challenge of constructing a sense of personal identity can be daunting, especially in the short run. Identity foreclosure is a way to avoid the stress and uncertainty of a personal identity crisis. It offers adolescents prefabricated goals and standards that are socially viable, and it provides them a sense of security, continuity, and life purpose. Although it is difficult to predict the future, it seems reasonable to assume that more and more adolescents becoming adults in the twenty-first century will encounter a world

of fairly rapid social, political, technological, and economic change. Under such conditions the value of foreclosure is diminished, and the importance of identity achievement is enhanced. Identity achievement provides a basis for adaptive, self-regulated coping and decision making within a world of changing contextual demands and expectations.

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See also: Adolescent Identity Formation; Erikson, Erik Homburger; Ethnic and Racial Identity in Adolescence; Identity Styles; Parenting Styles; Racial Identity Development among African American Adolescents; Sexual Identity Development

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Identity Styles

The term "identity style" pertains to relatively stable differences in how adolescents deal with the tasks of constructing, reconstructing, and maintaining their sense of identity. From a human ecology perspective, differences in identity style play a role in how adolescents attempt to solve problems, make personal decisions, and manage challenges encountered in the course of daily life. Adolescence is marked by a multitude of physical, social, biological, and cognitive changes. These changes create a need for adolescents to begin to question who they are, the beliefs they hold, and the direction their life should be taking. The concept of identity



Adolescent shunned by the group (Skjold Photographs)

style, introduced by the author of this entry, refers to the process by which adolescents revise or preserve the way they define and identify themselves (Berzonsky 1989). It comprises the social and cognitive strategies adolescents rely on or prefer to use as they attempt to cope with or avoid alternatives and information relevant to themselves. Three styles have been distinguished: informational, diffuse/avoidant, and normative.

Adolescents with an informational identity style spend considerable time thinking about themselves and their self-views. They implicitly assume they play a role in constructing the sort of person they currently are and the person they hope to become in the future. Research indicates they are introspective, self-reflective, and willing to entertain ideas, values, and beliefs discrepant from their own. When it comes to coping with identity conflicts, they actively explore options and alternatives and search out relevant information before attempting to solve personal problems and make decisions. Ample evidence indicates they are cognitively motivated and enjoy the challenge of evaluating complex information relevant to themselves. Many information-oriented adolescents are conscientious and goal oriented, especially those who have formed relatively stable personal standards and commitments. They emphasize personal attributes such as their own ideas, beliefs, goals, and values when constructing their identity.

Adolescents with a diffuse/avoidant identity style procrastinate and try to avoid problems, decisions, and identity issues as long as possible. Problems and conflicts, however, cannot always be avoided indefinitely. They therefore find themselves reacting to situational demands and consequences. For instance, how diffuse/avoidant adolescents act and respond depends more on where they are and who they are with than who they are. Research indicates that they have limited self-insight and look to others for direction. Their self-definition highlights social elements such as their reputation, their popularity, and the impression others have of them. Their coping strategies are focused on emotions; they are more concerned with alleviating the negative feelings they may be experiencing than trying to actually solve the problem at hand. They experience considerable anxiety when they cannot avoid decisions, and they are quick to rationalize and blame others for poor choices and failures. The strategic nature of this

style is illustrated by a tendency to avoid negative self-diagnostic information by creating handicaps (e.g., not studying for a test) that can later be used as excuses for poor performance. Use of a diffuse/avoidant identity style is associated with a fragmented, confused, and unstable internal sense of identity.

A normative identity style involves internalizing and following the standards and prescriptions of significant others, especially parents and other adults. This is a relatively automatic approach to problem solving and decision making that requires limited thought and mental effort. Normative adolescents possess stable, well-defined values, commitments, and standards, but ones formed prematurely, without a process of deliberate personal exploration and evaluation. Adolescents who use this preemptive style are conscientious and self-controlled, but they have a high need for structure and a low tolerance for ambiguity. They place a premium on preserving and maintaining their existing identity structure and close themselves off from ideas, values, and beliefs that may conflict with their own. Normative adolescents emphasize collective self-elements such as cultural or family standards, patriotism, and religious beliefs when defining who they are.

In most style comparisons, adolescents who use a diffuse/avoidant style typically fare worse than their informational and normative counterparts. The Diffuse/avoidant style has been found to be related to low self-esteem, poor peer relations, relatively high levels of nonclinical depression, neuroticism, alcohol problems, disordered eating, conduct disorders, and emotional problems. Several studies have examined how late adolescents with different identity styles negotiate the transition from living at home to attending a university. Compared to students with an informational or normative style, diffuse/avoiders display lower levels of academic purpose and motivation, less mature interpersonal relationships, and a lower sense of academic autonomy. Despite limited academic autonomy and self-direction, normative types have been found to deal with the transition to university in a relatively adaptive fashion. Their positive adjustment and successful achievement may be influenced by their firm sense of educational purpose and responsibility. In unstructured contexts characterized by change and diversity, however, a rational, informed approach may afford

advantages that the normative style does not. Identity styles do not appear to be inherently functional or maladaptive. Whether a particular style is effective may depend on how well it fits with the nature and demands of the situation adolescents find themselves in.

Identity styles have been studied in a number of cultural contexts, including Canada, Finland, India, Spain, the Czech Republic, Australia, the Netherlands, and the United States. The relative cross-cultural consistency of findings indicates that although cultural context may influence which identity style adolescents prefer to use, those who use a particular style (whether informational, normative, or diffuse/avoidant) deal with problems and self-relevant information in a similar fashion. Likewise, available evidence reveals that male and female adolescents with the same identity style approach decisions and identity issues in a similar way.

Factors that contribute to differences in identity styles are not well understood. Some research suggests a possible link between family practices and identity style. Use of an informational style, for instance, may be encouraged by authoritative practices such as establishing and maintaining firm but reasonable guidelines that parents not only explain and justify, but themselves model and follow. Such practices indicate to adolescents that at least some aspects of the world make sense and that information is important and useful. An informational orientation seems less likely to be encouraged by strict, unilateral parental supervision or excessive permissiveness. Reliable differences in IQ or verbal and mathematical SAT scores have not been found between late adolescents with different identity styles. These findings suggest that by age 18 or younger, most normal adolescents may be capable of using the social-cognitive strategies that underpin the three styles. The identity style adolescents prefer to use, therefore, may have more to do with motivational factors and temperament than with cognitive ability.

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See also: Adolescent Identity Formation; Ethnic and Racial Identity in Adolescence; Identity Statuses; Parenting Styles; Racial Identity Development among African American Adolescents; Self, Self-Concept, and Self-Esteem; Sexual Identity Development

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Individual Development as a System of Coactions

Viewing individual development as a system of coactions means seeing human behavior, personality, intelligence, and so forth as a consequence of multiple hidden influences in addition to the obvious ones in the external environment. The hidden influences come from the brain and nervous system, the hormones, the activity of genes, and other factors that operate beneath the skin. None of these influences, including the environmental ones, are primary or act independently; they are all necessary, and thus they "coact" in a systemic way to produce developmental outcomes (Gottlieb 2002). This way of looking at things is in contrast to the way we usually think about how organisms develop.

When we think of how living things grow and change, we typically tend to think in terms of one cause and one effect. For example, we believe that a certain gene causes brown or blue eyes, that punishing someone for a behavior lessens the likelihood that they will repeat the behavior, or that supportive, loving parents help to create a sense of

self-worth in their children. This one cause–one effect approach is straightforward to think about and to study scientifically. In fact, the traditional scientific method of experimentation is based on the idea of holding everything in a situation constant except for one factor, which is allowed to vary. In a traditionally well-designed experiment, changes in the outcome of interest are attributed to the changes in the one factor allowed to vary. However, these ideas and methods assume that many factors affecting individual development act independently of each other and that it is possible to isolate these independent factors and their effects.

This assumption is most evident in the classic nature-nurture controversy, in which some argue that nature (i.e., biological factors, especially genetic inheritance) is more important and others argue that nurture (i.e., experiences and learning) is more important in determining how an individual will develop in terms of personality, temperament, intelligence, psychological health, and so forth. Even views that recognize the importance of both biological and social factors often assume that their contributions to development can be isolated and that their total effect represents an additive process (that is, a summation of independent nature and nurture factors). In this view, a certain amount of variation in development is caused by biology, and an additional amount of variation is caused by social influences.

More and more scientists are explicitly recognizing that the idea of influences operating independently represents a false dichotomy, and that components of a developmental system do not act in isolation, nor do their effects proceed in only one direction. In a developmental systems view, the cause of development—what makes development happen—is the *relationship* between two or more components, not the components themselves. There are four levels of developmental analysis (genetic activity, neural activity, behavior, and the cultural, social, and physical aspects of an organism's environment). The process and outcomes of relationships, or coactions between components of a developmental system, can be at the same, at lower, or at higher levels of the system. However, studying development from a coactional perspective is not as straightforward as simply incorporating factors measured at several levels of the developmental system, or investigating potential cross-level pathways in one direc-

tion. Many coactional relationships are bidirectional, and so they are subtle and complex and not easily recognized.

A study conducted by Mark Cierpial and Richard McCarty (1987) using a strain of rats called spontaneously hypertensive (SHR) provides a clear example of coactional developmental processes. When SHR rat pups are suckled and reared by normal (i.e., non-hypertensive, or normotensive) mothers after birth, the rat pups do not develop hypertension. In addition, when normal rat pups are suckled and reared by hypertensive mothers after birth, the normal rat pups do not develop hypertension. However, when SHR rat pups are suckled and reared by hypertensive mothers, the SHR pups *do* develop hypertension. So the cause of hypertension in this strain of rats is not just nature (e.g., genetic predisposition) and not just nurture (e.g., how the mother behaves toward the pup); the cause of hypertension is in the nursing *relationship* between the SHR pups and their mothers.

There are many examples of how biological factors may contribute to behavior and experience, and how behavior and experience, in response to biological influences, differ in individuals of different personality makeup. For example, increasing levels of the male hormone testosterone contribute to increasing sexual interest during puberty. However, behavior toward potential romantic partners is different in shy versus outgoing individuals. So we have a difference in behavioral expression in different individuals, even though the testosterone surge is about the same. This difference in behavior illustrates the relational point of view—it is not just the testosterone change or just the personality trait, it is the combination of the two (plus other factors) that leads to behavior.

Moving in the other direction, social experiences can change biological factors that may at first glance seem stable and unlikely to change. Two studies, one done with rats and one done with humans, illustrate how experiences can change biology. In the rat study (Plotsky and Meaney 1993), groups of baby rats were exposed to different types of experiences. One group was separated from their mothers for brief periods (two to five minutes); a second group was separated from their mothers for much longer periods of time, a much more stressful experience for baby rats than brief separation; and a third group was left undis-

turbed. These different kinds of early experiences were later associated with very different biological and behavioral responses to stress. Rats that had been separated from their mothers for long periods reacted much more strongly to later stressful experiences, as indicated by the release of stress hormones and other biological changes, as compared to the undisturbed rats and the briefly separated rats that had gradually become accustomed to new experience. These different early life experiences actually changed the way the infants' biological systems operated in response to stress in adulthood.

A conceptually related study looked at how adult women reacted to stressful situations. Somewhat similar to the rat study, some women had, as children, been exposed to physical abuse, a stressful experience that is perhaps analogous to long-term maternal separation in the rat study. Like the rats that had experienced the very stressful condition of long-term maternal separation as young pups, those women who had been abused as children reacted more strongly to experimental stressors in adulthood than did women who had not been abused as children. Thus, as in the animal experiment, an early, extremely stressful experience was associated with a change in the way that their bodies reacted to stressful situations later in life. In both cases those extreme earlier experiences made the rats and the women more sensitive to stress and less able to cope behaviorally and biologically. In other words, the early very stressful experience (an environmental factor) acted in a "downward" direction to affect the biological level of function in the women and the rats. This change at the biological level later acted in an "upward" direction to affect the behavioral level; the adults in both cases became highly sensitive to subsequent environmental stressors.

So, to further exemplify coaction with reference to the levels shown in Figure 1, in these studies an early and stressful experience coming from the environment changed the nervous system and brain (neural level) to the extent that, when later exposed to a different stressor from the environment, both the human and the rat nervous systems were altered in their sensitivity to stress hormones. Further, in the rat studies it was also possible to demonstrate that gene activity was affected by the early experience. Brain receptor sites for stress hormones increased in density after the stress experience. It is likely that gene activity was

also affected in the human study, but the investigators did not measure it. Changing genetic activity participated in the establishment of a poorly regulated stress response system, which became apparent later in development.

Although it is clearly possible to use a multi-level coactional framework to study human development, it is admittedly difficult. For example, longitudinal studies—studies that follow the development of the same individuals over time—are better suited to this perspective. However, such studies require more time and money to conduct than do studies that examine different age groups at the same time (cross-sectional studies) in order to construct a picture of development. There is also the difficulty of examining factors and processes from different levels of the developmental system. Studying multiple levels requires expertise in multiple disciplines, such as molecular biology, psychology, and sociology. Because few scientists have the necessary expertise in all these areas, transdisciplinary teams of researchers who have different skills are needed to implement the coactional developmental systems model in humans as well as in animals.

Gilbert Gottlieb

Carolyn Tucker Halpern

See also: Ecodevelopmental Theory; Stress; Twins

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Indoor Air Pollution

Indoor air pollution has become an increasing problem since the 1970s. There are several reasons why this increase has happened. In the 1970s, the energy crisis prompted builders to construct tighter homes. In these homes, pollutants generated indoors were less likely to escape, especially because many were built with windows that could



Anti-smoking billboard (Michael Siluk)

not be opened. Furthermore, modern homes were constructed using synthetic building materials, which emitted gases into the air for many weeks after construction was completed.

There are five indoor air pollutants that can lead to severe illness and death in persons with extensive exposure. These five are environmental tobacco smoke, mercury vapor, carbon monoxide gas, toxigenic molds, and radon.

The single most important indoor air pollutant is environmental tobacco smoke. This is the smoke produced by the end of a burning cigarette. Both nonsmokers and smokers breathe environmental tobacco smoke and the over 3,000 different compounds that it contains. Heavy exposure to environmental tobacco smoke can lead to the development of lung cancer in nonsmokers. Among children, exposure to environmental tobacco smoke from a smoking parent leads to higher rates of asthma, middle ear effusions, and sudden infant death syndrome (SIDS). Because of these problems, in the 1990s many regulations were enacted to assure that public spaces would be smokefree.

Mercury vapor can come from a variety of sources. Most commonly, it is produced by heating elemental mercury (the shiny substance that is used in old-fashioned thermometers). Mercury vapor is particularly dangerous because it can cause a lung inflammation that is often fatal. Children may encounter mercury when its properties are demon-

strated during a science class. Many find it enchanting, and bring it home to play with it. Other sources of mercury vapor are from gold smelting and religious uses (for example, in Santeria, a religion practiced by some Hispanic Americans).

Carbon monoxide is a colorless, odorless, tasteless gas produced by incomplete combustion. Sources of carbon monoxide include improperly vented furnaces and space heaters and the like. Carbon monoxide combines with hemoglobin in the blood, replacing oxygen. Initially, carbon monoxide poisoning causes a headache and drowsiness, with symptoms that may be mistaken for the flu. With continued exposure, the victim loses consciousness and dies.

Toxigenic molds (sometimes called toxic molds) are molds that produce poisons, or toxins. These toxins are on the surface of the mold spores, and when a person touches the mold or breathes in mold spores, the toxins can damage skin or lung tissue. After skin exposure, a person may develop a red rash, which becomes crusted and inflamed. If the mold spores are inhaled, the toxins may cause harm to the tissues of the lungs. In young infants, exposure to toxigenic molds has been linked to lung bleeding and sudden death. Infants should not live in moldy homes.

Radon is an indoor air pollutant that comes from the radioactive decay of uranium. Radon enters homes through cracks in the basement foun-

dation, and can build up to dangerous levels, especially in basements. The amount of radon in a home will depend on a number of factors, including the geology underlying the home, the building materials used in the home, and the tightness of the home construction. Exposure to radon has been linked to the development of lung cancer. Those at highest risk for radon-related lung cancer are cigarette smokers.

Ruth A. Etzel

See also: Air Quality; Asthma; Healthy Indoor Air; Mold and Health; Radon; Smoking and Tobacco Use

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Information Technology Impacts on Children, Youth, and Families

Information technology, defined here as computing and telecommunications, including the Internet, is a new social phenomenon that has been in our lives fewer than eleven years. Despite its increasing integration into our daily lives, the effects or impacts of this communication and information technology tool have gone largely unexamined. From human ecology theory we know that interactions in one sphere of our environment affect interactions in others. Yet the impact of interactions of human beings with computers and the Internet in homes, workplaces, and play spaces is virtually unstudied and unknown.

How we communicate with one another and how we find information are profoundly different today from even five years ago. To live productively and gain greater life satisfaction we need to understand the world around us, including the increasing influence of the computer and the Internet. Otherwise, we run the risk of blindly accepting this powerful technology unexamined. Most would agree the Internet is here to stay, and its use is spreading rapidly. It is important for us to understand and prepare for its impact.

What Do We Know?

While what we know is slight and primarily demographic, we do know something about the extent of

technology penetration into our lives. We have a relatively clear picture of who has access to home computers and to the Internet. In 2001, 94 million U.S. adults had access to the Internet (Howard, Rainie, and Jones 2001). There are 55,000 new users each day (UCLA Center for Communication Policy 2000), with 65 percent of U.S. households with a computer and 55 percent of Americans with access to the Internet from home or elsewhere (Nie and Erbring 2000). We know that the patterns of diffusion and adoption show that the Internet is a resource acquired and used for the most part by more affluent and well-educated Americans. We also know that using the Internet takes time. Electronic mail and searching for information take high priority in Internet time (Nie and Erbring 2000; UCLA Center for Communication Policy 2000). The average time for U.S. users is 9.4 hours a week, including work (UCLA Center for Communication Policy 2000). Finally, we know that children and male teenagers continue to be the heaviest users of the Internet (Howard, Rainie, and Jones 2000).

What Don't We Know?

The redistribution of the limited personal resources of time and effort means other activities are displaced. What is being displaced, and what are the positive or negative consequences in our lives? What patterns of behavior are changing? Does the Internet have a positive or negative effect on individual well-being, social interactions with others, and community building? These are just a few of the questions with no clear answers.

Perhaps the clearest picture of what we don't know about the impact of information technology, computers, and the Internet is found in the National Science Foundation (NSF) study, *The Application and Implications of Information Technologies in the Home: Where Are the Data and What Do They Say?* (Papadakis and Collins 2000). Such questions as how families use information gained from the Internet and with what consequences, how the Internet has changed family dynamics and relationships, the effects of home computing on the environment inside and outside the home, and the role of the Internet in enhancing the quality of life or diminishing it are all unexamined questions.

Peggy S. Meszaros



Young children using a computer at home (Elizabeth Crews)

See also: Intergenerational Programs in Communities; Internet Use; Leisure Activities among Young People

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Intelligence

Many experts view intelligence as involving goal-directed, adaptive behavior. In both 1921 and 1986, experts gave similar answers when asked to define intelligence: It involves the ability to learn from experience and the ability to adapt to the surrounding environment ("Intelligence and Its Measurement: A Symposium," 1921; Sternberg and Detterman 1986). The modern experts also emphasized metacognition, defined as people's understanding and control of their own thinking processes. To understand modern thinking about the nature and measurement of intelligence, one must look back a century to two different traditions that shaped later thinking—the work of Sir Francis Galton and Alfred Binet.

Historical Background

In 1884, Galton had the idea that very simple sensory and perceptual skills were related to intelligence and real-world success, presumably because these skills were linked to basic biological processes (Eysenck 1967; Sternberg and Powell 1983). Galton (a cousin of Charles Darwin) suggested that intelligence involves two basic capacities: energy and sensitivity to physical stimuli. Galton's perspective is sometimes referred to as a psychophysical view of intelligence, because of its emphasis on low-level tasks that are as demanding of physical abilities as of psychological or mental ones. Galton in England and later James McKeen

Cattell in the United States constructed a number of tests based on the psychophysical view. For example, people's arms would be touched with two pins, varying the distance between the pins, to see how far apart the pins had to be for a person to know there were two (as opposed to one) points of contact. The shorter the distance that could be perceived as being between two pins, the more intelligent the person was deemed to be. This psychophysical tradition did not fare well, however, in part because scores on the tests weren't related to conventional measures of achievement, such as school grades (Wissler 1901), and in part because a competitor offered a more compelling theory.

Alfred Binet, a Frenchman, had the opposite point of view from Galton. Binet (Binet and Simon 1916) suggested that intelligence involves higher-level comprehension, judgment, and reasoning—and most importantly, the ability to adapt to the environment. Binet suggested three main elements of intelligence: (a) *direction*, which involves knowing what has to be done and how to do it; (b) *adaptation*, which involves figuring out how to perform a task, and then monitoring the strategy you come up with while you are actually doing the task; and (c) *criticism*, or the ability to critique your own thoughts and actions. Binet was among the first and is still among the most influential thinkers in the history of the field of intelligence. His work was instigated partly in response to a request in 1904 from the Minister of Public Instruction in Paris, France. The minister asked Binet to construct a test that would distinguish children who were genuinely mentally "defective" from those who were simply behavior problems. The idea was to protect students who were behavior problems from being classified as retarded, and to make sure that retarded students got the kind of special education that it was believed they needed.

Binet's test was very successful in making this distinction, and a version of the test is still in use today: the Stanford-Binet Intelligence Scales (Thorndike, Hagen, and Sattler 1986). These scales can be used for children as young as 2 years up through adulthood to measure intelligence according to Binet's conception. The test is given individually, and must be administered by a trained psychologist. In its current version, it offers an overall score, as well as subscores. There are fifteen subtests in all, six of which are given at all age levels: vocabulary, comprehension, pattern analysis,

quantitative ability, bead memory, and memory for sentences.

A similar set of tests prepared by David Wechsler is also used (Wechsler 1974). These scales, with different names at different levels, are the *Wechsler Adult Intelligence Scale—Revised (WAIS-R)*, the *Wechsler Intelligence Scale for Children (WISC-III)*, and the *Wechsler Preschool and Primary Scale of Intelligence (WPPSI)*. The Wechsler scales yield an overall score, as well as separate verbal and performance scores. There are many other tests of intelligence, as well, including tests that can be administered to groups of people in one or two hours and that do not require a professional to administer.

Intelligence Test Scores

Binet suggested that we might assess children's intelligence on the basis of their mental age—their level of intelligence compared to an “average” person of the same physical age (also called chronological age). But William Stern, a German psychologist, suggested that mental age was a problematical measure, because it made it difficult to compare scores of people of different ages. How do you compare the mental age of 10 when achieved by an 8-year-old and a 12-year-old? In order to deal with this difficulty, Stern suggested the intelligence quotient (IQ), which is the ratio of mental age (MA) to chronological age (CA), multiplied by 100 to get rid of decimal points.

An “average” person has a mental age equal to her chronological age, so that this person's IQ is equal to 1 times 100, or 100. Scores below 100 are “below average.” Thus, if Jim has a mental age of 8 and a chronological age of 10, his IQ is $(8/10)$ times 100, or 80. Scores above 100 are “above average.” So, if Jane has a mental age of 12 and a chronological age of 10, her IQ is $(12/10)$ times 100, or 120. Because of the use of a ratio of MA to CA in calculating the IQ, an IQ calculated in this way is sometimes referred to as a ratio IQ. Ratio IQs are rarely used anymore, because it was discovered that there is a weak link in their calculation, namely, the construct of mental age. Today, people generally use what are called deviation IQ scores, which are calculated on the basis of how high a person's score is relative to other people of her own age. The average score is still 100. The standard deviation is set at either 15 or 16. When 15 is used as a standard deviation, roughly two-thirds of all scores fall between

85 and 115, and roughly nineteen out of twenty scores fall between 70 and 130.

Theories of Human Intelligence

Although Binet had a fairly well-elaborated theory of intelligence, he is best remembered for his ideas about testing intelligence via the measurement of judgment. Other theorists, however, are better remembered for their theories of intelligence.

Psychometric Theories of Intelligence

Psychometric theories are built around the measurement of intelligence or other constructs. These theories view intelligence as a map of the mind (see Sternberg 1990). The idea of understanding intelligence as a map of the mind dates back to at least the 1800s, when phrenology (the pseudoscientific study of regions of the mind through the analysis of bumps on the head) was in vogue. But the psychometric theories are much more sophisticated than the phrenological ones.

One of the first of the psychometric theories was proposed by a British psychologist, Charles Spearman (1904, 1927). He suggested that intelligence could be understood in terms of two kinds of underlying mental dimensions, or factors. The first kind of factor is a single general factor, which he labeled *g*. *G* is a hypothetical construct thought to influence performance on all mental tests. The second kind are specific factors, each of which he labeled an *s*. These *s* factors are thought to be involved in performance on only a single type of mental-ability test (e.g., on a test of vocabulary, or arithmetic computation, or memory). Because there are as many specific factors as there are tests, Spearman did not see the specific factors as interesting. With one such factor per test, they don't really tell us anything that generalizes beyond performance on a single test. But the general factor is of interest, precisely because it is general. Spearman suggested that this factor is the key to intelligence, and that it comes from individual differences in mental energy.

Louis Thurstone (1938), an American, disagreed with Spearman. Thurstone suggested that the core of intelligence resides not in one factor, but rather in seven basic interrelated factors, or primary mental abilities. The seven primary mental abilities are verbal comprehension, verbal fluency, inductive reasoning, spatial visualization, number, memory, and perceptual speed.

Whereas Spearman emphasized just a single ability (g) in his theory, Joy P. Guilford (1967; Guilford and Hoepfner 1971) proposed as many as 120 factors, a number later increased even further to 150 (Guilford 1988). In the structure-of-intellect (SOI) model, intelligence is understood in terms of a cube that represents the intersection of three distinct dimensions: operations, contents, and products. According to Guilford, operations are mental processes that come in five types: memory, cognition (understanding what something, say, “president,” means), convergent production (reaching a single correct response to a problem, as in an arithmetical word problem), divergent production (generating multiple responses to a problem, as when you try to think of large numbers of words having “c” as their third letter), and evaluation (making judgments, as in determining whether a particular statement is a fact or an opinion).

In Guilford’s model, there are also five contents (the kinds of terms that appear in a given problem): semantic (words), symbolic (e.g., numbers or letters), behavioral (what people do), auditory (sounds), and visual (pictures). Finally, there are six kinds of *products*, or responses, in the theory. They are units (single words, numbers, or pictures), classes (hierarchies), relations (such as “better than”), and more complex entities, including systems, transformations, and implications. If we multiply the five operations by the five contents and the six products, we get the 150 factors in the 1982 version of the theory.

Guilford’s theory encountered a number of problems that have never been resolved in a fully satisfactory way. For one thing, 150 factors is a lot of factors (Eysenck 1967). John Horn and John Knapp (1973) suggested problems in the statistical methodology. Indeed, Horn and Knapp were able to use Guilford’s methods to obtain as strong support for randomly generated theories as they could for Guilford’s theory. The attempt to expand upon Thurstone’s seven factors, therefore, was less than totally successful.

Might there be some way of combining Thurstone’s and Spearman’s theories that would retain the best aspects of each? Such a proposal was made in the hierarchical theories proposed by Raymond Cattell (1971), Philip Vernon (1971), and others. The basic idea of these models is to combine the idea of a general factor with the idea of more narrowly defined factors that apply

across classes of tasks, which are referred to as group factors.

Cattell (1971), for example, suggested that we could view general ability, or g , as being at the top of the hierarchy. Below that would be two major subfactors, which he referred to as fluid intelligence and crystallized intelligence. Fluid intelligence requires understanding of abstract and often novel concepts. It requires someone to think flexibly, and to seek out new patterns. For example, solving a series completion such as 1, 4, 9, 16, 25, ?, would require fluid intelligence. Crystallized intelligence represents the accumulation of knowledge and is measured by tests of vocabulary and general information. Beneath these factors would be even narrower factors, and we would go down the hierarchy until we reach Spearman’s specific factors, one for each test that was used. Other hierarchical views are similar. For example, Vernon (1971) suggested a distinction right under the level of general intelligence between verbal-educational and practical-mechanical abilities.

The psychometric models described above have been criticized on various grounds. One important criticism is that the theories, except for Guilford’s, had relatively little to say about mental processes. Psychometric theories are essentially structural: They specify what the map looks like. But what is missing is a specification of the processes of intelligence, an issue dealt with especially well by information-processing theories.

Information-Processing Theories of Intelligence

Information-processing theorists of intelligence stress the importance of how people mentally manipulate what they learn and know about the world. These theorists differ in terms of the complexity of the information processes they believe are fundamental to intelligence. Our brief descriptions of the various theories go from the simplest to the most complex.

Arthur Jensen (1982, 1998) has stressed the importance to intelligence of choice reaction time, or how quickly you can decide which of two or more buttons to push, given a stimulus. Earl Hunt (1978; Hunt, Lunneborg, and Lewis 1975) suggested the importance of lexical-access speed—the speed with which we can retrieve information about words (such as letter names) from long-term memory—for intelligence and particularly for verbal intelligence.

Robert Sternberg (1977) has suggested that individual differences in intelligence might be due to differences in processing for somewhat more complex types of problems, such as analogies. Consider, for example, the analogy, LAWYER : CLIENT :: DOCTOR :: (A. PATIENT, B. MEDICINE). Some of the processes that might be involved in solving this analogy would be to *encode* each of the basic analogy terms (i.e., perceive the terms and retrieve the appropriate concepts from long-term memory), to *infer* the relation between LAWYER and CLIENT, to *apply* this relation to DOCTOR, and so on. People who are faster and more accurate in using these processes, and who devise more efficient strategies for accomplishing them, might be viewed by this theory as more intelligent.

Finally, Herbert Simon (Newell and Simon 1972; Simon 1976) has suggested that intelligence is best understood in terms of even more complex mental processes, such as those used to play chess or to solve logical proofs. Simon and others have suggested that these complex processes can be simulated via a computer, so that we can view intelligence not just as a human attribute, but potentially as an attribute of computers as well. Displays of intelligence by computational devices are often referred to as artificial intelligence.

Contemporary Systems Theories of Intelligence

Two contemporary theorists, Howard Gardner and Robert Sternberg, have proposed theories of intelligence that attempt to deal with both the internal and external worlds of an individual. These theorists view intelligence as a complex system. Howard Gardner (1983, 1993, 1999) has proposed a theory of multiple intelligences, in which there are eight distinct and relatively independent intelligences. Each is a separate system of functioning, although the various systems can interact to produce overall intelligent performance. The eight multiple intelligences include: *linguistic intelligence* (used in reading a novel, writing an essay or a poem, speaking coherently, et al.), *logical-mathematical intelligence* (used in solving mathematical word or computation problems, balancing a checkbook, et al.), *spatial intelligence* (used in walking or driving from one place to another, in reading a map, in packing suitcases in the trunk of a car so that they will all fit, et al.), *musical intelligence* (used in singing, playing musical instruments, understanding and appreciating the structure of a

symphony, et al.), *bodily-kinesthetic intelligence* (used in playing sports, dancing, et al.), *interpersonal intelligence* (used in understanding why other people behave as they do, deciding how to react to a person's comments in an appropriate way, making a good impression during a job interview, et al.), *intrapersonal intelligence* (used in understanding oneself—why one thinks, feels, and acts the ways one does, and what one's own strengths and limitations are), *naturalist intelligence* (used in understanding nature and the natural world around us). A ninth, existential, intelligence has also been proposed.

Gardner's theory is somewhat reminiscent of multiple-factor theories, such as Thurstone's, in that it specifies a list of abilities that are believed to be fundamental sources of individual differences. There are three critical differences, however. First, Gardner believes the multiple intelligences to be basically independent, whereas Thurstone believed the primary mental abilities to be correlated. This difference is not so great, since Gardner does allow the intelligences to work together, and thus to interact. Second, and more importantly, Gardner believes each intelligence to be truly a separate intelligence, not just another ability. In other words, each intelligence is an entire functioning system of symbol manipulation in and of itself. On this view, each intelligence is modular, meaning that it emanates from a distinctive portion of the brain. Third, Gardner used multiple criteria rather than just psychometric criteria for identifying his intelligences. These criteria included distinctive effects of localized brain damage on specific kinds of intelligences, distinctive patterns of development in each kind of intelligence across the life span, evidence from exceptional children (both gifted and low-achieving), and evolutionary history of the intelligences. Thus, Gardner went well beyond psychometric methods in attempting to define his intelligences.

Whereas Gardner's theory of multiple intelligences has emphasized a set of relatively independent structures, Robert Sternberg's triarchic theory of human intelligence (1985, 1987, 1999) has emphasized a set of relatively interdependent processes. According to the triarchic theory, there are three important aspects of intelligence, each captured in a different subtheory of the theory as a whole.

The first subtheory is referred to as a compo-

nential subtheory; it deals with the basic information-processing components underlying intelligent performance. According to Sternberg, there are three main kinds of processes: *metacomponents*, or higher order executive (metacognitive) processes used to plan what you are going to do, monitor it while you are doing it, and evaluate it after it is done; *performance components*, or processes used for implementing the commands of the metacomponents; and *knowledge-acquisition components*, or processes used for learning how to solve problems in the first place. The three kinds of information-processing components are interrelated. Metacomponents decide what to do, and in turn activate the performance components and knowledge-acquisition components. The latter kinds of components, in turn, provide feedback to the metacomponents, enabling the metacomponents to adjust representations of information and strategies for processing information.

The second, *experiential subtheory*, relates intelligence to experience. Clearly, information-processing components are applied at varying prior levels of experience with a task. According to this subtheory, a task best measures intelligence when the task is either relatively novel, or in the process of being automatized. A relatively novel task would be one that is unfamiliar, but not totally outside the scope of a person's experience. *Automatization* refers to a task's becoming increasingly familiar, less effortful in the information processing it requires, and less explicitly conscious in the way it is performed.

The third subtheory, the *contextual subtheory*, relates intelligence to the everyday contexts in which we live. According to this subtheory, there are three basic processes of making contact with everyday contexts. In *adaptation*, people modify themselves to fit their environment. Eventually, as people accustom themselves to the environment, they may start to engage in *shaping*, whereby they modify the environment to fit themselves. Sometimes, though, shaping does not work. You may find that you are neither able to adapt to an environment nor shape it in a way that satisfies you. The bottom line is that intelligence in everyday life requires a balance among adaptation to, shaping of, and selection of environments.

Bioecological Theories of Intelligence

According to bioecological theory, which has been developed by Stephen Ceci and Urie Bronfenbren-

ner (Bronfenbrenner and Ceci 1994; Ceci 1996), intellectual abilities are akin to potential muscles: Without exercise the genetic potential to form a large muscle will not become actualized. Someone with less genetic potential for muscular development may actually develop more muscle mass because of the availability of a conducive environment coupled with the motivation to take advantage of this environment. Geniuses are examples of supremely motivated individuals. They possess a genetic advantage for specific competencies, but what leads to their expertise is the exceptional motivation to take advantage of relevant environmental factors associated with skill development.

As seen in a bioecological framework, an organism begins life with a set of biologically-based "resource pools" or abilities that influence the efficiency of cognitive processing (attention, memory, perceptual speed, and the like). These resources are deployed in response to environmental events, and the result is learning and the development of intellectual competencies. The specific environmental events that engage these underlying ability resources are varied and age-based: For example, they may initially include caregiver vocal elicitation of the newborn's attention; for the preschool-aged child, they may be interactive games, objects and events in the environment (Bronfenbrenner and Ceci 1994). With time, important environmental events include such factors as classroom size, teacher credentials, peer values, and the like.

In their bioecological theory, Bronfenbrenner and Ceci term the central construct "proximal process," which refers to the successively differentiated and complex process that unfolds over time between the developing organism and persons, objects, and events in the environment. In their model, genotypic tendencies may get amplified by successively more differentiated interactions with, say, a caregiver. When this happens, a tendency develops into a high level of competence. Bioecological theory expects that (1) proximal processes serve as the engine for the development of competency, not social class or global aspects of the environment, and (2) it is under conditions of high proximal process that bioecological theory predicts the highest heritability for a competency. If a student has the genetic potential to learn, say, Greek, but the school she attends does not teach Greek, then her potential remains dormant, and she will

fail to become all she is capable of becoming. In such cases, both her competence and heritability will be low. It is only under conditions of high proximal process that tendencies will fully crystallize into full-blown competencies, and heritability will be high. An implication of bioecological theory is that genes do have a significant influence on the development of intellectual competence, though their impact is neither as direct nor as potent as has been assumed in behavioral geneticists' theories.

Conclusion

The systems theories of intelligence tend to be broader than the other ones we have looked at, incorporating some of the major aspects of the other approaches. At the same time, their breadth makes them harder to test fully, and thus to disconfirm—in other words, there's so much going on in these theories, and so much is included, that it would be hard to prove them wrong. These theories have also been criticized by some for being over-inclusive, that is, for trying to capture too much in the concept of intelligence. Nevertheless, the general trend in psychology seems to be toward broader rather than narrower conceptions of intelligence, in recognition of the fact that children and adults can be intelligent in many different ways. A final point is that attempts to define and measure intelligence should always bear in mind that intelligence, while partly inherited, is also modifiable—in other words, intelligence can be increased, and the amount and type of intelligence a person is born with is *not* set for life.

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See also: Bronfenbrenner, Urie; Ceci, Stephen J.; Cognitive Assessment; Early Childhood Assessment; Intelligence and Parenting

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Intelligence and Parenting

Like the latest fad diets and clothing styles, fashions in parenting wax and wane over time. When North America was being settled, women reproduced for virtually all of their adult lives, and more than half of children died in their first few years of life. Children who survived were put to work as soon as they were able; education was a rarity. Thus, the nature of childhood and of the parental bond were both different from what we view as typical today. Things changed by Victorian times, although children continued to be dressed and treated like miniature adults until late in the nineteenth century. Discipline and book learning were plentiful, and much of the time parents spent with children went toward reminding them to be seen and not heard.

During the last few decades, the shifts in parenting attitudes and styles have been radical. Since World War II we've seen different approaches to and styles of parenting, all aimed at raising better, smarter kids—from the emphasis on discipline

and conformity of the 1950s, to the looser, unconstrained, feelings first outlook of the 1970s, back to a more controlled approach in the 1990s. Of course, even within a time period different parents treat their children differently. What all this means is that children have historically managed—and will no doubt continue to manage—to grow up despite the fashions of their times and the opinions of their parents.

Moving beyond the fads and opinions, the key question is, what do we really know about the effects of different parenting practices and parental styles on children's development, particularly in the realm of cognitive abilities? It is this question that we will consider here.

Much of the research on parenting and intelligence has focused on the concept of "parental style," defined as "a constellation of attitudes toward the child that are communicated to the child and that, taken together, create an emotional climate in which the parent's behaviors are expressed" (Darling and Steinberg 1993, 488). The parent's behaviors "include both the specific, goal-directed behaviors through which parents perform their parental duties and non-goal-directed parental behaviors, such as gestures, changes in tone of voice, or the spontaneous expression of emotion." In practice, parental style is a package deal that is influenced by a parent's intelligence and personality, outlook on child rearing, childhood experiences, and myriad other factors, including prevailing cultural views and practices.

Before we can evaluate the relationship between styles of parenting and the development of children's intelligence, though, we must first ask whether there are styles of parenting that characterize broad groups of parents. Despite the individuality of parents themselves, the demands of the job appear to give rise to certain basic patterns of behavior, at least within the confines of a given culture. What has arguably been the most influential conceptualization of parenting for the past three decades was developed by Diana Baumrind through extensive research on how parents play their roles (for a review, see Baumrind 1991). Baumrind saw parental behavior as fitting within three general types or patterns: authoritarian, permissive, and authoritative.

Parents with an authoritarian style try to shape and control their children's behaviors, which they evaluate against a set of rigid standards. Authori-

tarian parents emphasize obedience, respect for authority, hard work, and traditional values, and discourage real communication in favor of the “listen and obey” mode. Baumrind (1971, 1973) saw authoritarian parents as being high in demandingness and low on responsiveness toward their children. The second parental style—the permissive style—refers to parents who give their children considerable freedom. Permissive parents have a tolerant and accepting attitude toward their children, rarely punish them, and make few demands and place few restrictions on them. The third style of parenting was described by Baumrind as authoritative. Authoritative parents set clear standards and expect their children to meet them, treat their children maturely, and use discipline where appropriate to ensure that rules are followed. These parents encourage their children to develop independence and individuality, and consequently practice open communication, in which children’s points of view and opinions are considered. In other words, children’s rights as independent human beings are honored within the authoritative family system. (For a review of the complexities underlying the parental style concept, see Darling and Steinberg 1993).

Baumrind’s program of research explored the interrelationship of parental style and children’s cognitive and social competence. She began by studying preschool children to learn what effects parental style had upon the children’s intelligence and personality. Later, Baumrind and other researchers expanded their investigations to include middle- and high-school-aged children, children of different races and ethnic groups, and children of different socioeconomic backgrounds. These studies have shared three sets of goals. First, they have sought to illuminate the effects of parental style on children’s development and performance. Second, they have attempted to understand the mechanisms and the processes through which specific parental behaviors and styles influence children. Third, they have investigated the roles of cultural background, personal values, racial and ethnic origin, and socioeconomic level in the parent-child relationship. We will review the findings of a few representative studies in order to gain a broad picture of what is known about the effects of parental style on children’s cognitive competence.

Helen Bee and her associates (1982) investigated the mother-child relationship as a predictor of later IQ and language development in the child. This research contrasted the predictive ability of perinatal or infant physical status, early childhood performance, and family ecology (e.g., level of stress, social support, and maternal education) with the predictive ability of measures of mother-infant interaction. The authors found that infant physical status was a poor predictor of what the child’s IQ and language development would be at 4 years old, that child performance was a poor predictor before 24 months of age and good thereafter, and that family ecology predicted child IQ and language only within a low-education subsample, but not among mothers with more than high school education. However, the quality of mother-infant interaction was one of the best predictors at every age tested, and was as good as actual child performance in predicting IQ and language development. In another study evaluating the affective quality of the mother-child relationship and its longitudinal consequences for children’s cognitive performance, Arsenio Estrada and his colleagues (1987) found that the affective quality of the mother-child relationship when the child was 4 years old was associated with mental ability at age 4, IQ at age 6, and school achievement at age 12. The associations remained significant even after the effects of mother’s IQ, socioeconomic status, and children’s mental ability at age 4 were taken into account. The authors suggest that affective relationships influence cognitive development through the parent’s willingness to help children solve problems, through the development of children’s social competence, and through the encouragement of children’s exploratory tendencies.

Sanford M. Dornbusch and his colleagues (1987) examined the relation of parenting style to adolescent school performance in a sample of 7,836 high school students. The authors found that both authoritarian and permissive styles were associated with lower grades, while authoritative parenting was associated with higher grades. The strongest effect on grades was for authoritarian parenting (in the negative direction). Children of families with a purely authoritative style had the highest average grades, while children of families with mixed or inconsistent styles had the lowest grades.

In a similar study investigating parenting practices and adolescent achievement, Laurence Steinberg and his colleagues (1992) focused on the impact of authoritative parenting, parental involvement in schooling, and parental encouragement to succeed on adolescent school achievement. The sample was ethnically and socioeconomically heterogeneous, containing 6,400 American high school students. The authors found that authoritative parenting led to better school performance and stronger school engagement. Interestingly, they also found that parental involvement with schooling was a positive force in adolescents' lives when the parents had an authoritative style, but less so when the parents had other styles. It is perhaps not surprising that school involvement by demanding, rigid, critical parents doesn't have the positive impact of school involvement by parents who accept their children's interests and goals and assist them in achieving these goals.

When is the mother's influence on children's school achievement strongest? R. D. Hess and colleagues (1984) found that maternal measures taken during preschool years predicted school readiness at age 5 and achievement test performance at grade 6. But the prediction was stronger for age 5 than age 12, meaning that the mother's influence on school achievement was stronger during preschool years.

An example of the processes through which parental behavior affects a child's development is provided by the work of Barbara Rogoff and W. Gardner (1984), who watched thirty-two middle-class mothers preparing their 6- to 9-year-old children for a memory test. The mothers guided the children in transferring relevant concepts from more familiar settings to the relatively novel laboratory task, thus assisting the children in mastering the task and in developing methods for completing similar future tasks. Formal attempts to measure the processes through which parental style influences child development in the context of more typical parent-child interactions have often focused on the home environment (e.g., Bradley and Caldwell 1984). Researchers evaluate various features of parenting behavior in the home, such as maternal responsiveness, acceptance of the child, involvement, language stimulation, and encouragement of social maturity, through the use of the HOME (Home Observation for Measurement of the Environment) Inventory.

In a study by R. Elardo, R. Bradley, and B. M. Caldwell (1977), various aspects of the early home environment were related to language development at age 3. These aspects were the emotional and verbal responsiveness of the mother, the provision of appropriate play materials, and maternal involvement with the child. Bradley and Caldwell (1984) found that HOME scores from age 2 predicted intelligence test scores at ages 3 and 4 1/2, as well as first-grade achievement test scores. Later, R. Bradley, B. M. Caldwell, and S. M. Rock (1988) examined children as infants and at age 10, finding significant correlations between home environments measured at both 2 and 10 years and children's achievement test scores and classroom behavior. The HOME Inventory has also been validated as a predictive tool for Black children (Bradley and Caldwell 1981).

Despite the fact that most research has centered on the mother as the primary caregiver, the father is also an integral component of the family system. Jay Belsky (1981) discussed the processes of influence of parents upon children, more broadly conceived in the context of the mother-father-child triad, and advocated this approach for future research. What about the level of agreement between the two parents regarding how to raise children—does parental agreement have an effect on children's cognitive development? In a study examining the effect of parental agreement during early childhood on adolescent intelligence and personality, B. E. Vaughn, J. H. Block, and J. Block (1988) found that parental agreement regarding child-rearing orientations (evaluated when the children were 3 years old) predicted male children's IQ, aspects of moral judgment, and personality during adolescence. For girls, early parental agreement was associated with adolescent self-esteem. For both genders, parental agreement was associated with personality descriptions provided by outsiders. These findings suggest that parental agreement is, in fact, important—but differentially important for boys and girls.

Given what we have learned about the significance of parental style, a natural question concerns the extent to which parents' styles can be improved. Can we teach parents to have more effective styles, particularly styles that help children excel? The answer to this question would require several pages; however, two studies suggest a note of caution. J. Madden, J. O'Hara, and P. Leven-

stein (1984) investigated the impact of a home-based intervention program that modeled verbal interaction between mother and child using selected toys and books. In their low-income population, only small IQ effects were found, and three years later there were no effects on IQ, achievement, or first-grade teachers' evaluations. Similarly, Sandra Scarr and Kathleen McCartney (1988), evaluating the same intervention program in Bermuda, found that it had virtually no cognitive, social, or emotional effects. The fact that one training and intervention program doesn't work does not mean that none could; it simply means that modifying parental style is not a simple matter, and that program design must address many needs and characteristics of the population.

When all of the studies have been evaluated, it is apparent that there is a considerable amount of evidence for a strong association between parental style and a child's cognitive competence. The key word here is association: Very little evidence exists that can demonstrate clear cause-and-effect relationships between parenting style and a child's intelligence. Scarr (1985) has argued forcefully that "the implications . . . for improving children's intellectual functioning by intervention in mothers' control and discipline techniques are dismal. Even if we could dramatically improve a mother's positive behaviors toward her child, her improved behavior would have little payoff in the child's IQ score" (Scarr 1985, 505). Scarr notes that mothers with higher IQs tend to have children with higher IQs, and that these mothers also tend to have more effective parental styles. Thus, the findings showing a link between parental style and children's cognitive competence are actually due to the effect of shared genetically transmitted intelligence between mother and child. Scarr notes that parents' behaviors are correlated with their children's because of shared genes, and that what we observe in the world of parenting and child development is explicable even if parents have no effects on their children, or vice versa.

A more recent frenzy on this same theme has been caused by Judith Rich Harris, who published a book titled *The Nurture Assumption* (1996) and wound up in every major periodical and on every major talk show in North America. The cover of *Newsweek* in September of 1998 even asked, "Do Parents Matter?" Harris's thesis, briefly summed up, is that parents' role as shapers of their chil-

dren's development has been greatly exaggerated. Harris challenges the "nurture assumption," which presumes that children are the products of their (mostly parental) environments. Her perspective is that it is the environment more broadly construed—peers, friends, schoolhouses—as well as the contribution of genes that shapes children's behavior, rather than parental influence per se.

As evidence Harris cites the fact that children of immigrants adopt the language and ways of the dominant culture external to their homes, and notes that children, like Cinderella in the classic fairy tale, often behave one way at home with their parents but entirely differently in the world at large. Harris points out, for example, that birth order effects are evident in the home, where the eldest child bosses the others around, but disappear when the children are out in the world in other environments. And dishonesty in the home is a poor predictor of dishonesty outside the home. Referring to people who delay childbearing because they believe it requires a huge commitment, Harris is quoted in the *New Yorker* as saying, "If they knew that it was O.K. to have a child and let it be reared by a nanny or put in a day-care center, or even to send it to a boarding school, maybe they'd believe that it would be O.K. to have a kid."

Harris's critics have dealt out examples of parents' measurable influences on child development like cards on a casino table. Harvard's Jerome Kagan and other eminent child developmentalists have cited numerous studies attesting to parents' pivotal roles (several of which have been described above). Critics have also noted that the measures of parental influence relied upon in the studies cited by Harris were not nearly sophisticated enough to depict the subtle, real parental influences that nevertheless exist. They point out that Harris has minimized the fact that even if peer groups are important, parents influence the choice of them.

As with any argument centered on the nature-nurture issue, there are two highly polarized sides. Undoubtedly, the truth resides somewhere in the middle, perhaps more to one side, perhaps to the other. We must all await future data and empirical research to decide these questions, but for the present, and given the breadth of correlational data indicating a positive link between parental style and children's cognitive competence, it is wise to

recall the words of Virgil: "As the twig is bent the tree inclines."

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See also: Cognitive Assessment; Intelligence; Maternal Education; Parenting Styles

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Intergenerational Programs in Communities

One of the critical challenges facing society is enhancing the contexts of development of distinctive age groups, including young children, youth, adults, and the elderly. This is particularly the case for groups such as youth and the elderly, which face challenges of making the transition from one life phase to another, specifically from childhood to adulthood, in the case of youth, and from middle adulthood to the later years, in the case of the elderly. All too often programs and efforts aimed at the individuals in one phase of life unwittingly endorse an assumption of age separation or age segregation that understates the intergenerational realities of individual experiences in families and work settings. In that regard, one of the more exciting opportunities for improving human development programs lies in those efforts that enlist the intergenerational resources of communities in providing opportunities that serve the needs of multiple generations.

An example of such a program is Cyber Seniors/Cyber Teens, a Maine-based program, which

provides training in computer and Internet skills by youth to senior citizens. The program provides benefits for both older adult participants and the elderly, including such outcomes as the ability of older adults to access information on social security programs and health promotion and the opportunity for youth to enhance their own computer knowledge, computer teaching skills, and citizenship.

Ecological Basis of Intergenerational Programs

The development of programs such as Cyber Seniors/Cyber Teens reflects principles of the ecology of human development. The understanding of the development of children, youth, and older adults has undergone a transformation with the recognition that development is a process of mutual interaction, over time, between individuals and their significant contexts or environments. Increasingly, the need for an ecological perspective on human development has emerged from the pervasive social challenges facing American communities, families, and their children and youth, including drug abuse, health issues, and violence. These issues are both complex and interrelated, requiring integrative research, innovative public policies, and interventions. In addition to these social changes, there has been an increasing societal pressure for universities to begin to address such problems of individuals and communities across the life span. This configuration of developmentally related social issues, ecological perspectives on human development, and increasing university and public awareness of responsibility for action research has created an opportunity for rethinking federal agency priorities in the direction of research that is community based, focusing on the development of children and youth in context (Jensen, Hoagwood, and Trickett 1999). In turn, such an ecological perspective has several key elements as guiding emphases, including the following (Bronfenbrenner 1989; Lerner 1991; McKinney, Schiamberg, and Shelton 1998; Schiamberg 1988).

Development in Context

This dimension serves to underscore the interaction of youth with their significant contexts including family, school, and neighborhood/community. In much the same way that it would be pointless to try to understand the life dynamics of

fish without recognizing that they swim in the sea, it would be equally inappropriate to study human beings out of context. Furthermore, the changes human beings experience over the course of a life span never happen in a vacuum. Instead, they are the result of the reciprocal interaction of human beings and the contexts of development that present, or fail to present, opportunities for enhancement of the self. Significant others in one's life (e.g., parents, siblings, grandparents, teachers, spouses, and coworkers) operate across the multiple settings or contexts. Furthermore, significant contexts of life such as family, school, and work continue to evolve in complexity throughout the life span, including the increased likelihood of intergenerational relationships as a vital dimension of those contexts.

After-school programs provide a significant context of youth development, which creates an opportunity to better understand both the normative development of all youth in a significant life context and the opportunity to frame and develop more sensitive and effective interactions based on that understanding (National Research Council 2000). That is, examining youth development in such contexts as after-school programs provides a unique opportunity to understand cognitive and social development in collaborative networks of adults and peers that more closely reflect or simulate the multiplicity of participants and diversity of the adolescent youth experience than the usual school environment does.

Individual Uniqueness, Plasticity, and Diversity

Individual differences are a hallmark of human development. Not all human beings are found in the same environments or settings, and likewise, not all individuals respond in similar ways to what seems (to an external observer) to be a similar setting. To ignore these unique features of diversity is to misinterpret human development for a substantial percentage of the population. Well-designed community-based intergenerational programs hold promise for providing an opportunity to better understand and describe how individual plasticity and diversity play out in the context of community-based intergenerational learning experiences. As well, intergenerational programs that focus on the collaborative potential of community interaction provide an opportunity for rethinking the notion of individual ability by maximizing the contribution

of individual uniqueness, plasticity, and diversity of individuals by allowing each individual to make his/her own distinctive contribution.

Development in Context and Public Policy

Because the ecological approach derives from the study of development in context, it offers an informed perspective for applying knowledge of the results of community-based intergenerational programs to the concerns and problems of adolescents, older adults, and families. Not only is there a significant absence of public policy grounded in evidence from the study of development in context, but there is clear absence of policies based on the unmistakable and pervasive intergenerational interaction in contexts of development across various developmental contexts.

CyberSeniors/CyberTeens: An Exemplary Program for Bridging the Digital and Generational Divides

CyberSeniors/CyberTeens is a unique partnership among the National Retired Teachers Association (part of AARP), 4-H Youth Development, and CyberSeniors.org, created to empower seniors through the purposeful use of technology. It is the first bilingual, community-based, primarily volunteer-driven, intergenerational program of its kind. Retired teachers are working beside 4-H youth, using CyberSeniors.org's award-winning curriculum to train Seniors aged 50 and over how to use the Internet's information and communication resources to achieve better health and foster lifelong learning. A special focus of CyberSeniors/CyberTeens is CyberHealth, a health education program designed to promote health literacy and healthy lifestyles among the two segments of our population with the least access to this information: elders and young people. A dynamic aspect of CyberHealth is the collaborative way in which these generations are learning from each other: young people sharing their technology skills and seniors sharing their life experience wisdom. Young participants observe the aging process firsthand, and begin to understand the long-term ramifications of their own health behaviors.

Dimensions of CyberHealth

In CyberHealth, young people working with adult mentors provide the training to get Seniors online; the tools to facilitate Seniors being able to drill

down into a site to source the information they need; evaluation criteria so elders can weigh the accuracy, reliability, and timeliness of content; specifics on how to use information culled from the Internet with their health care providers; and training in how to use the Internet's communication resources to reach out to others who are dealing with the same health and wellness issues. The majority of older adult health care consumers have been left out of the educational loop. Health information programs are usually targeted to providers at a professional level, and those that are targeted to consumers do not focus on preparing older adults for a partnership role in health decision making. And even though there is now a wealth of health information on the web, it is often inaccessible to elders because they lack computer skills, the on-ramps are designed by 20-year-old techies with their peers in mind, or the information is beyond a layperson's understanding.

Questions about the elderly of the future abound: How long will they live? What will be their quality of life? What will be the financial impact of their health care on the national budget? The cost of health care in the twenty-first century depends upon a number of factors, including medical advancements, elders' economic and education status, and health behaviors. The Internet, with its unlimited access to educational resources, can be a powerful force of societal change. CyberHealth is designed to promote health literacy (including awareness of quality healthcare) among traditionally underserved individuals so they can better understand how to take charge of their own health in a variety of ways, affecting their health-seeking behaviors.

Reducing Social Isolation in the Elderly

Of equal import are the emerging studies that document that computer literacy can provide elders a window to the world, thus reducing their isolation and increasing their social connection—a huge factor in elder health and well-being. The MacArthur Foundation study of successful aging notes: “Social isolation has been shown to contribute to a higher risk of alcoholism, arthritis, depression, heart disease, suicide and other physical and emotional problems. At any age, the risk of death is two to four times greater for the isolated than for socially connected people. People in their 60s, 70s, 80s and beyond were more likely to maintain their memories, intellectual abilities, and

health—and avoid depression—if they were fortunate enough to have friends and/or family in their lives.” CyberSeniors/CyberTeens intergenerational workshops foster real-life connections between teens and seniors involved, and also teach seniors how to use the Internet’s communication resources to connect with people of all ages online in a supportive virtual community.

Cyber Seniors and Computer Learning

CyberSeniors/CyberTeens is a natural extension of the award-winning, educational model established by CyberSeniors.org in their Computer Learning Workshops and at their advertising-free, interactive Web portal, <http://www.cyberseniors.org>. Launched in July 1998, their site receives more than 100,000 hits a month from points around the world. CyberSeniors.org is the only organization in Maine, and one of few in the nation, dedicated solely to training senior citizens—many living alone, on limited incomes, with visual impairments and physical disabilities—how to use computers to access the wealth of information and communication resources on the Internet.

In its first three years, CyberSeniors.org grew from one Maine workshop with 12 students to more than seventy-five workshops with more than 7,500 students in nine states. CyberSeniors.org workshops have been oversubscribed since the program began, with a burgeoning waiting list. Of the students who take the first Very, Very, Very Basic Computers workshop, 98 percent go on to complete the entire curriculum (now five modules) and clamor for more. Those who run this program have found that the problem is not in the technology but rather in the lack of educational opportunities available to elders to learn how to use this technology.

The Cyber Seniors Model of Community-Based Computer Training

Many seniors live on a fixed or limited income, so buying a computer of their own is not an option, and existing school and library resources, especially those in the nation’s most rural areas, are too burdened to serve this population because seniors have special training needs. CyberSeniors.org’s model of providing access and training through grass-roots community collaboration is a model that can be replicated in any community. The coalition, for example, wherever possible develops

partnerships with health care facilities and educational institutions for use of their labs and other space at little or no cost, with public HUD-subsidized housing and private housing facilities to establish computer training centers where Seniors live, with local internet service providers for free connectivity in its computer learning centers, with public and private foundations and for-profit businesses to garner funding and in-kind support, with universities, hospitals, and health care providers to develop and conduct research, and with a tremendous corps of volunteer teachers, high school student mentors, technology experts, and administrative staff from the greater community surrounding each computer access center. This coalition and community partnership building is governed by human energy and enthusiasm—not limited by any geographic boundaries.

Cyber Seniors Computer Learning Centers are people-powered, by residents of all ages in the local community. They are empowering in that they not only teach seniors valuable computer skills, but also they train graduates to become trainers themselves, providing a means for seniors to reinvest their learning in the human capital of their peers. Real time, human connections are made as seniors—through peer tutoring in the workshops—help each other access the valuable resources made available on the Internet through this technology. Teens involved in the program have become community leaders, as they follow the same peer-to-peer recruiting and training of other teens to participate in the program.

The senior student is a special student. The workshop must be a nonthreatening learning environment, in which students can advance at their own pace. Each workshop has a maximum of eight students, for which the coalition maintains a two- or three-to-one student teacher ratio. An important aspect of the program is the socialization that occurs during the learning process. Senior students learning from one another, as well as from their teen mentors, have fun in the process. The program’s learning objectives are for each student to develop a comfort level with the technology and to find meaningful content, so that using a computer becomes as natural as picking up a telephone.

Major Goals and Objectives

An important aspect of an intergenerational program such as Cyber Seniors/Cyber Teens involves

the need to measure and assess the goals and outcomes of such community-based efforts. For example, in the Cyber Seniors/CyberTeens program, a goal for seniors is to demonstrate how access to the Internet's information resources, along with increased communication between elders and their community, can help equip them to retain their independence, dignity, purpose, long-term mental and physical well-being, and community. For youth, a primary goal of the program is to demonstrate how the intergenerational collaborative learning and mutual interactions experienced in the CyberHealth real-life laboratories foster self-efficacy and promote social/citizenship skills, as well as healthy lifestyles. That said, an essential social objective of the program is to create a dynamic between seniors and teens in each workshop. The memories and insights shared through their interchange constitute the real production of knowledge and ultimately wisdom.

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See also: Aging and Technology; Community Youth Development; 4-H Youth Development; Intergenerational Relations; Old Age, Social Relationships in; Teaching Older Adults to Use New Technologies

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Intergenerational Relations

The phrase "parent and child" conjures up mental images of a twenty- or thirty-something parent with his young child. However, in our aging society the phrase could just as easily refer to people all over the age of 65! A 70-year old adult daughter may be caring for her 93-year-old mother, for example. Intergenerational relationships now commonly span fifty years or more, and thus an understanding of them is essential in understanding relationships and family support throughout life.

Intergenerational relations are connections between generations within families that directly influence individual development and behavior. Intergenerational relationship types and experiences vary by individual choice and family contexts. The function and meaning of relationships across generations in the United States have been transformed with sociohistorical changes. The aspects of intergenerational relations considered below involve (1) identifying the individuals that compose intergenerational relationships; (2) acknowledging past and current family structure as an influence on individual development and the nature of intergenerational relations; (3) exploring the family solidarity framework to understand interactions and exchanges of resources; and (4) recognizing the presence of intergenerational ambivalence in families.

Influences on Intergenerational Relations

Time

Intergenerational relationships develop over time, and thus these relationships have a history. The history embodied in past interactions shapes current situations, perceptions, and experiences. Intergenerational relationships evolve on three planes—individual time, family time, and historical time (Hagestad 1982). Life course transitions (marriage, childbirth, divorce, retirement, widowhood, and the like) create ongoing circumstances such that family members in intergenerational relationships must continually negotiate and renegotiate their relationships and support interactions (Connidis 2001). For example, adult children may relate to parents as equals as they move through adulthood, but over time may have to take on responsibilities for care of parents. The very term "adult child" is awkward because it confounds the usual conceptions of age and generational position.



Multigenerational family at a gathering (Elizabeth Crews)

Complexity of Roles

Individuals can simultaneously occupy roles as parents, adult children, grandparents, grandchildren, parents-in-law, and sons- or daughters-in-law. Stepfamily members increase the complexity of responsibilities. An individual acquires new positions on the vertical ladder of intergenerational relations within her family, called a *generational station*, as members die and are born (Hagestad 1982). Generational stations influence the degree of *developmental stake* that family members feel they have in a particular intergenerational relationship and may mediate motivation to maintain the tie (Hagestad 1982). Family structure will vary by the number and nature of intergenerational pairs.

Sociohistorical Changes

It is helpful to think of intergenerational relations in terms of family member pairs. Traditional dyadic pairs include parent-child and grandparent-grandchild relationships. However, societal and demographic changes make it increasingly necessary for researchers and policy makers to consider stepfamily ties and other non-biologi-

cally created kinship relations that fit into the intergenerational category (e.g., in-laws). Changing social habits and norms around family structures have introduced higher rates of divorce, remarriage, cohabitation, and gay and lesbian partnerships with children, all of which influence the nature of intergenerational ties across the life span (Connidis 2001).

Demographic Changes

The nature of intergenerational ties is partially dependent on the family context, and these contexts have changed over the years. The demographic trends of increased longevity along with decreasing fertility rates (i.e., fewer children due to delayed onset of marriage and childbearing), has created a “beanpole” structure of family relationships, a family structure with many generations still living, stretching over time, sometimes with only one person representing an entire generation (Bengtson 2001, 5). This macrosocial trend has also been described as the verticalization of society (Connidis 2001, 115), and the implications of this trend for family support in later life are great.

Contextual Influences

The function and meaning of intergenerational relations vary by the location of an individual on multiple levels, such as gender, generation, ethnicity, class, and lifestyle selections or opportunities available in the individual's environment. Gender is a key factor that influences participation, meaning, and obligation in intergenerational relations. For example, women provide more support overall to family members such as children, grandchildren, parents, and grandparents due to socially constructed forces of work and family situations (Connidis 2001). Generation, or membership in a particular cohort, also influences an individual's attitudes, beliefs, and actions within the relationship. Since the very definition of intergenerational relations depicts both members of the pair originating from different cohorts, understanding interactions and exchanges between generations necessitates awareness of cohort effects. Ethnicity and class position alter the experience of intergenerational relations in areas such as strength of family obligation, extensiveness of relational ties, and accessibility of resources to exchange or extract.

*Rates of Exchange Between**Adult Children and Their Parents*

According to one study (Bengtson and Harootyan 1994) 69 percent of adult children respondents reported contact with their mothers at least once a week, and 20 percent reported that they were in daily contact with their mothers. Weekly contact with fathers was reported by 56 percent of the sample, and 12 percent reported having daily contact.

Multigenerational Relationships

The study of intergenerational relationships becomes increasingly complex when we acknowledge that ideally we would study families that include three or more generations. The transmission of family values, norms, and historical influences can be seen more clearly over multiple generations and a longer span of time. The 2000 U.S. Census was the first in history to record the number of multigenerational (three or more generations) households. According to the 2000 Census there are 3.9 million multigenerational households in the United States, which is close to 4 percent of all households. Two-thirds of these households were comprised of householder and the householder's children and grandchildren. The other one-third

consisted of householder, the householder's children, and the householder's parents or parents-in-law. The areas most likely to have multigenerational households were recent immigration sites, high-cost housing areas, and areas where there are housing shortages.

Conceptual Frameworks for Understanding Intergenerational Relationships*Family Solidarity*

Availability of intergenerational relations, frequency of contact, exchanges of support, and the meanings associated with interactions are concepts embedded in the construct of family solidarity. Family solidarity (Bengtson 2001; Bengtson and Roberts 1991) encompasses six underlying dimensions. The first dimension, *opportunity structure*, gives recognition to the influence that geographic proximity can play in intergenerational relationships. The distance or nearness between dyad members can either enhance or constrain the relationship. Another dimension, *association*, is the frequency of contact between the generations, including telephone calls, written or electric correspondences, and visits. Modern technology associated with transportation and communication has improved the availability, quality, and frequency of contacts, and thus the potential for intergenerational ties to stay connected. A third dimension of solidarity, *affectual*, considers the emotional closeness, intimacy, and intangible supports that are exchanged between generations over time. Affectual solidarity appears as expressed concern or desire to stay close through sharing special moments, visits, and meaningful conversations. *Consensual* solidarity, another dimension, takes into account the actual or perceived agreement between generations in opinions, values, and lifestyle selections. *Functional* solidarity acknowledges the reciprocal exchanges of instrumental, financial, and other material assistance and gifts. The final dimension, *normative* solidarity, indicates the strength of obligation individuals feel about maintaining intergenerational relations with family. These norms stem from family traditions, cultural beliefs, and societal folkways or mores.

Researchers have created five types of intergenerational relationship styles between parents and children using dimensions of solidarity (Silverstein and Bengtson 1997). A nationally representa-

tive sample of adults in the United States between the ages of 18 and 90, reported on current relationship qualities between the adult children and aging parents in the sample. The five types of intergenerational relations were labeled *tight-knit*, *sociable*, *obligatory*, *intimate but distant*, and *detached*. The *tight-knit* group and the *sociable* group were described as having a high level of affectual solidarity and engaging in frequent contact. However, the *tight-knit* group reported high levels of functional support exchanges, whereas the *sociable* group did not. The *obligatory* intergenerational type reported low levels of affectual solidarity, but high levels of contact and exchanges. The *intimate but distant* group reported feeling affection and closeness in their relationships, but did not frequently communicate, visit, or provide functional support to each other. Members of the *detached* intergenerational relation type did not report feeling affectual solidarity, nor did they have high levels of opportunity structure or functional solidarity.

The six dimensions of the family solidarity framework can also be utilized to explain grandparent relationships. For example, the frequency of contact between grandparent and grandchild pairs depends on the proximity to each other (opportunity structure) and the age of the grandchild. Children under the age of 18 are more likely to visit frequently with grandparents, and adult grandchildren are more likely to provide affectual support rather than functional support. Normative solidarity, or the strength of obligation felt to provide support, is lower in grandparent relations than it is for parent-child pairs (Connidis 2001). All types of intergenerational relations may have some degree of ambiguity related to role expectations and commitments.

New Directions: Intergenerational Ambivalence

Kurt Luescher and Karl Pillemer (1998) suggest that various types of intergenerational ambivalence arise out of different family structures. The ambivalence framework interprets intergenerational relations with a focus on simultaneous and contradictory thoughts and actions family members experience. Intergenerational ambivalence has two components or levels. On a sociological level, ambivalence comes from the contradictions in social structure that result from roles, norms, and statuses. On a psychological level, ambivalence comes from the contradictions in subjective experience

that are operating in emotions, cognitions, and motivations. The authors speculate that the family solidarity framework may oversimplify the complexities of intergenerational ties and represent an “overly positive” view of family life (Luescher and Pillemer 1998, 413). Research on family relationships is moving toward understanding how ambivalences within intergenerational relations influence human development on multiple levels, over the life span, as members change generational stations (e.g., Connidis and McMullin in press). This shift in research attention moves understanding beyond examinations of family structure and dimensions of solidarity, to provide further knowledge about the purpose and meaning of intergenerational relations and how these enduring lifetime ties are transformed.

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See also: Family Diversity; Family Life Cycle

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Internalizing Disorders

Internalizing disorders are disorders in which symptoms of distress are focused inward. The most common internalizing disorders are depression and anxiety. These disorders contrast with externalizing disorders, which are disorders where symptoms of distress are focused outward (e.g., conduct disorder, substance abuse). Both genes and the environment influence internalizing disorders. Most of these disorders do have a significant genetic component, but the environment likewise plays a substantial role in the development of internalizing disorders. For example, twin studies suggest that the heritability estimates for depression and anxiety range between 30 percent and 40 percent (Sullivan, Neale, and Kendler 2000; Hettema, Neale, and Kendler 2001). This means that over one half of the variance in liability to these disorders is due to environmental factors (e.g., stressful life events, daily hassles, and the like). Clearly, genes and the environment interactively influence an individual's susceptibility to developing internalizing disorders.

Types of Internalizing Disorders

One relatively common internalizing disorder is depression. People with depression frequently experience depressive episodes. A depressive episode is characterized by marked sadness, along with many physical, cognitive, emotional, and behavioral symptoms. Some symptoms may include changes in weight, sleeping problems, difficulty concentrating and making decisions, decreased interest in pleasurable activities, decreased energy, and feelings of worthlessness. For a diagnosis of depression, symptoms must persist for a period of at least two weeks.

Individuals who have recurrent depressive episodes may be classified as having a depressive disorder. The most common depressive disorder is major depressive disorder (MDD). This disorder is not common during childhood, but the prevalence of MDD increases dramatically during early adolescence, and by middle adolescence the prevalence rates of MDD are similar to adult rates. Overall, it is estimated that about 24 percent of women and 12 percent of men experience MDD at some point during their lifetime.

A less common depressive disorder is dysthymic disorder (dysthymia). Dysthymia is a more chronic, less intense kind of depression. Individu-

als who have dysthymia exhibit depressed moods almost every day, along with a variety of symptoms, which may include eating problems, sleeping problems, decreased energy, difficulty thinking and concentrating, low self-esteem, and feelings of hopelessness. To be diagnosed as dysthymia, these symptoms must last for a period of at least two years (one year for children and adolescents). The key characteristic of this disorder is its chronicity. Overall, it is estimated that approximately 6 percent of the general population experiences dysthymic disorder during their lifetime.

Bipolar disorder (manic depression) is the least common depressive disorder. This disorder is characterized by depressive episodes that alternate with manic episodes. The episodes of depression are similar to those occurring in MDD. However, when the depressive episode subsides, the individual experiences a manic episode. During manic episodes, the individual may appear to be hyperactive and extremely excited. He will typically be restless, talkative, have trouble sleeping, and behave recklessly. When the manic episode is over, the individual may either return to a "normal" state or experience another depressive episode. Bipolar disorder is a serious disorder because many individuals with this disorder become suicidal due to the intensity of the moods and the dramatic shift in moods that characterize this disorder. Fortunately, it is estimated that only 1 percent of the general population develops this disorder during their lifetime.

Anxiety disorders are also classified as internalizing disorders. These disorders are characterized by anxiety and fear. Although anxiety disorders may occur during childhood, they become much more common during adolescence. Similar to depression, they have physical, emotional, cognitive, and behavioral components. Phobias (fears) are the most common type of anxiety disorder. Phobias involve an irrational fear of a specific situation or object (e.g., insects). It is estimated that about 9 percent of the general population has a diagnosable phobia.

Generalized anxiety disorder (GAD) is a more serious anxiety disorder. It is characterized by chronic anxiety (lasting for at least six months). Some of the symptoms of GAD include chronic worrying, restlessness, muscle tension, difficulty concentrating, and sleeping problems. Individuals with GAD find it nearly impossible to control their

worrying. The lifetime prevalence of this disorder is approximately 5 percent.

Another relatively common anxiety disorder is social anxiety disorder (SAD). Individuals with this disorder experience intense anxiety in relation to social situations. This disorder typically first occurs during midadolescence, and it is chronic. It is estimated that 3–13 percent of the population experiences social anxiety disorder at some point during their lifetime.

Panic disorder is a more intense anxiety disorder, which typically emerges during adolescence or adulthood. It is characterized by panic (anxiety) attacks where the individual may experience physical symptoms such as shortness of breath, palpitations (irregular heart beat), chest pains, lightheadedness, trembling, and excessive perspiration. When an individual has a panic attack, she typically fears that she is going to go crazy or die. Panic attacks only last for minutes; however, they tend to reoccur. Therefore, a person with panic disorder usually becomes extremely concerned about when the next attack will occur. This causes further anxiety. The lifetime prevalence estimate of this anxiety disorder is 3.5 percent.

Risk Factors for Internalizing Disorders

A major risk factor for developing internalizing disorders is gender. During childhood, when internalizing disorders are less common, girls and boys are equally likely to experience these disorders. However, during early adolescence, as prevalence rates for internalizing disorders rise dramatically, a significant gender difference emerges, and by middle adolescence, rates of depression and anxiety are two to three times higher for girls than for boys (Cohen et al. 1993). These gender differences persist throughout adulthood. Currently, it is not clear why these gender differences occur. However, research suggests that during adolescence, girls become more likely than boys to develop these disorders because girls have less effective coping techniques, lower levels of self-esteem, and more negative body images than do boys.

Internalizing disorders also tend to run in families. Many studies have shown that internalizing disorders are influenced by genes. It is believed that genes influence levels of neurotransmitters in the brain and that an imbalance of certain neurotransmitters (e.g., serotonin, norepinephrine) places an individual at an increased risk for devel-

oping internalizing disorders (Garber and Flynn 2001). However, the environment is equally important. Contextual factors such as poor family and peer relationships, stressful life events, and poverty all have been found to be associated with internalizing disorders (Garber and Flynn 2001). Moreover, research indicates that internalizing disorders occur as a result of the interaction between such environmental factors and a person's genetic makeup.

Treatment

A variety of treatment options exist for internalizing disorders. Individuals may receive psychotherapy (in the form of individual or family therapy, or both), cognitive-behavioral therapy, or medication. Psychotherapy may target problems in different contextual areas, such as the family, peers, school, or work. Alternatively, cognitive-behavioral therapy is particularly effective at helping people to reduce the negative cognitions and behaviors that contribute to their disorder. Medications used to treat depression and anxiety also are extremely effective and safe. These medications are typically administered in combination with therapy that helps the individual learn how to cope with his problems in a more effective manner so that further episodes of depression and anxiety may be prevented.

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See also: Externalizing Disorders

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International Society for the Study of Behavioral Development

The International Society for the Study of Behavioral Development (ISSBD) was founded in 1969 on the occasion of international scientific meetings in Germany, England, and the United States attended by a group of researchers particularly devoted to longitudinal research on human development in a life span perspective. The interdisciplinary orientation was expressed by the emphasis on behavioral development. Due to the enormous expansion of scientific interest in psychological studies and particularly in research on human development in the 1970s, the newly-formed society grew rapidly.

The mission of ISSBD entails the promotion, discovery, dissemination, and application of knowledge on human development across the entire life span. At the time of its foundation the stress on commonalities and differences of developmental processes from infancy to old age was new, and it is still true that conceptualizing development in such a way represents particular challenges in the analyses of processes that result in continuities and discontinuities.

ISSBD was given its charter in the Netherlands, but its membership has always been truly international by design and in reality. At present the membership amounts to about 1,000 members in vari-

ous categories (including student memberships) from more than fifty countries around the globe (with large representation from Europe and North America). A major emphasis was always to include researchers from less well-off countries where currency restrictions were in force. Toward this aim, an elaborate system of reduced membership dues and regional offices was established. Most members received their training and are active in various fields of psychology, but a considerable portion work in allied disciplines such as psychiatry, pediatrics, sociology, and the like.

ISSBD is governed by its officers, namely the president (who also serves a term as past president), the secretary general, the treasurer and membership secretary, the president-elect, the executive committee, and special advisers. Concerning nominations and elections for the officers and members of the Executive Committee, attention is given to representation of regions, disciplines, topics, and gender. The current president (1998–2002) is Kenneth Rubin (University of Maryland, United States), the future president (2002–2006) is Rainer K. Silbereisen (University of Jena, Germany).

The Society's premier scientific gathering is the series of biennial meetings that started in 1971. The most recent meetings have been in Beijing (China, 2000) and Ottawa (Canada, 2002), and the next meeting is scheduled for Ghent (Belgium, 2004). To date (2002), sixteen meetings have been held in more than a dozen different countries, including North and South America, Europe, and Asia. The usual attendance during the last decade is in the order of 1,000 or more, typically from more than fifty countries. In line with a change in scientific publication strategies, proceedings have not been published since the 1980s.

In order to fulfill its mission, ISSBD has always been active in organizing workshops and conferences. Between 1975 (Jakarta, Indonesia) and 1997 (Groningen, the Netherlands), nine Asian Workshops on Child and Adolescent Development were organized in the region, with a strong emphasis on scientific training. Likewise, a series of European Conferences of Developmental Psychology was organized under the auspices of ISSBD between 1984 (Groningen, the Netherlands) and 1994 (Krakow, Poland). Encouraged by the success of these events, an independent offshoot of ISSBD was formed, the European Society for Developmental

Psychology, which organized these conferences from 1997 on (the incoming president of the new society is Willem Koops of the Netherlands, a former Secretary General of ISSBD).

Another important instrument of ISSBD's support role is represented by the Summer Training Seminar in Life Span Development that began in 1977 (Torun, Poland), and has taken place every four years. In most cases they have been held outside North America or Western Europe, as was a recent workshop in Lima (Peru) on contexts of development.

A final element in ISSBD's scientific events comprises sponsored or cosponsored conferences that address topics relevant for particular regions, often planned to help establish or broaden infrastructure for research on behavioral development. Such conferences have taken place in Asia (China, Indonesia, India), South America (Brazil), and Africa (Kenya, Cameroon, Ivory Coast, Zambia, Namibia, and Uganda).

ISSBD publishes a newsletter for its members that addresses all aspects of its mission, for instance by publishing views on issues of human development from different regions or disciplines with a lead article and various comments. The current editors are Joan Miller (United States) and Xinglin Chen (Canada). ISSBD also publishes a major outlet for empirical research, the *International Journal of Behavioral Development* (IJBD). Since 1976, twenty-six volumes have appeared, including special editions such as the one devoted to the millennium. (Major articles will also appear in a book edited by Rainer K. Silbereisen and W. Hartup under the title *Expert Views on Human Development*.) The journal has readers in more than fifty countries and brings together authors from many areas, particularly North America, Europe, and Asia. The current editor-in-chief is William Bukowski (Canada).

Most of the activities (except for IJBD) could not be funded from the modest membership fees alone. Rather, as a matter of principle, ISSBD looks to team up with scientists and institutions in the region that bring their own resources (thereby often multiplying the basic funds ISSBD could provide). In addition, the society has been successful in securing grants from leading private foundations, such as the Jacobs Foundation (Zurich), the W. T. Grant Foundation, the MacArthur Foundation, and the Soros Foundation (New York). The

main aim supported has been the exchange between young scientists from all parts of the world, and in particular their getting into contact with major research centers and activities in Western Europe and North America. In many case such exchanges have resulted in collaborative research efforts, often with a cross-cultural emphasis on issues of human development.

At the beginning of the new century, new tasks for this unique learned society are imminent. In the past a major focus was on providing a bridge between disparate and often politically separated parts of the world (in many countries membership in ISSBD was the only way to build up and maintain contacts with researchers in the Western world). The new challenges now are twofold: One is to be more efficacious in helping societies (through members' scientific activities and other efforts) to apply insights on processes of human development in a culturally appropriate way in order to alter or improve developmental trajectories across the life span. Prominent examples include interventions related to cognitive aging, prevention of adolescent psychosocial maladjustment, and improving career development under conditions of rapid social change.

The other new challenge concerns the fact that the study of human development, always an interdisciplinary endeavor, needs to bring together emerging and very successful disciplines and research areas, such as behavioral and molecular genetics, neuroendocrinology, research on structural and functional properties of the brain, and others. Note that the applications of developmental research mentioned, and many more, have been profiting tremendously by recent theoretical concepts and technical breakthroughs (such as brain mapping methods). For ISSBD all this implies the need to enlarge and diversify its membership to bring together the best minds for a new dialogue.

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See also: Developmental Transitions across the Life Span

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International Youth Foundation (IYF)

The ecology of human development consists of changing relations between people and societal institutions. Currently operating in more than sixty countries, IYF is one of the world's largest public foundations working to improve the conditions and prospects for young people where they live, learn, work, and play. Established in 1990 to bring worldwide resources to young people in need, IYF works with hundreds of companies, foundations, and civil society organizations to strengthen and scale up existing programs that are making a positive and lasting difference in young lives.

IYF works with national and regional partner organizations around the globe to make sure that programs that are successful in supporting youth are able to increase their effectiveness, sustainability, and scale (i.e., ability to impact the greatest number of youth). Over the past decade, IYF and its in-country partners have helped more than 23 million young people gain access to the life skills, education, job training, and opportunities critical to their success (International Youth Foundation Annual Report 2000).

The guiding vision of IYF includes efforts to "create a world where every young person has at least one responsible and loving adult who is irrationally committed to his or her well-being; a safe place for sleeping, playing, learning, working, and being; a healthy start and a healthy lifestyle; the chance to contribute to others; [and] the opportunity to learn values and marketable skills for adulthood" (International Youth Foundation, Annual Report 2000, 1). To better make this vision a reality, the work of IYF is focused on "building a global network of private and public partners committed to children and youth; expanding the quality and quantity of private investment in young people, ages 5–25; increasing the impact of effective programs by supporting efforts that improve effectiveness, scale, and sustainability; [and] making the case for children and youth development and program investment" (Annual Report 2000, 1).

Although IYF's partners pursue common strategies, their work is tailored to meet the specific needs of local youth within their countries/regions. While some partners, such as the New Perspectives Foundation in Russia, focus on making education more developmentally and culturally relevant to young people, other partners, such as the German Children and Youth Foundation, focus

on generating sustainable intergenerational relationships in which adults mentor youth and join with them in collaborative community-building activities. By providing youth with better access to information technology, partners such as the Foundation for Young Australians focus on improving the educational and work skills of local youth. Other partners, such as Fundación Para la Infancia y la Juventud-Oportunidades in Venezuela, are focused on increasing the employability of youth, providing vocational and basic life skills training to the youth within their reach (Annual Report 2000).

Toward the end of the twentieth century, corporations, both small and large, began to take more seriously their responsibility of contributing to and investing in the future of the world. By working in partnership with IYF, corporations such as Cisco Systems, Lucent Technologies, Merrill Lynch and Co., Nike, Nokia, and Microsoft are able to outsource their corporate responsibility while supporting youth programs across the world in ways that coincide with their business values. As an example, in 1999, Lucent Technologies and IYF formed a global partnership based on expanding educational opportunities for youth. Within a year, the partnership had begun expanding from working in ten countries to a proposed fourteen additional countries by 2004. In China, Lucent support is being directed by IYF's partner, the China Youth Development Foundation, at improving the life skills and creativity of local youth by introducing new and inspired teaching methods and ideas for curriculum development (Annual Report 2000).

In addition to a network of thirty-nine Partners in forty-seven countries, IYF is connected to four "quasi-independent partnerships and initiatives." In collaboration with these four entities, the IYF network reportedly invests over \$110 million U.S. dollars a year. Quest International, one of these entities, operated in over thirty countries upon its merger in 2000 with IYF. Quest focuses most specifically on supplying the significant adults in the lives of youth with the resources needed to "help them cultivate personal responsibility, healthy decision-making, effective communications, multicultural understanding, and self-confidence in young people" (Annual Report 2000, 13). One of Quest's most central contributions of resources has been to develop a set of programs

complete with lesson plans that, mediated through caring adults, are aimed at motivating youth to live up to and optimize their potentialities.

The Forum for Youth Investment, an IYF initiative officially launched in 2001, is dedicated to increasing the quality and quantity of youth investment and involvement in the United States by promoting a big-picture approach to planning and policy development. The forum is aimed at fostering “strategic alliances among the range of organizations that invest in youth, and to strengthen connections between these organizations and those that invest in young children, families, and communities” (Annual Report 2000, 34). An example of one of the significant contributions the forum has made to the lives of youth is approaching influential venues and voices with a reframed perspective on the topic of America’s youth. These venues include the White House Conference on Teenagers and the U.S. Department of Education’s Reinventing High Schools seminar.

The third of these partnerships is between IYF and the Global Partnership for Youth Development (GPYD), itself an initiative of the World Bank’s Business Partners for Development program. The GPYD works to “study, promote, and invest in good examples of tri-sector partnerships in youth development around the world” (Annual Report 2000, 21) in an attempt to identify the key ingredients that make partnerships between the public, private, and nonprofit sectors work. IYF is the Secretariat of the GPYD and thereby has the role of identifying best practice programs in youth development to ensure that the greatest number of youth benefit. As an example, in the Philippines, the GPYD works in collaboration with the Children and Youth Foundation of the Philippines, the Ayala Corporation, the Department of Social Welfare and Development, and the World Bank on the Out-of-School Children and Youth Initiative, aimed at meeting the needs of Filipinos who are out of school (Annual Report 2000).

The Global Alliance for Workers and Communities (GA), launched in 1999, is the fourth of these partnered initiatives. The alliance is dedicated to “improving the work experiences and life prospects for workers involved in global production, and committed to promoting collaboration among private, civil society, and public sectors” (Annual Report 2000, 24). Members of the alliance include corporations such as Nike and Gap Inc.,

institutions such as the World Bank, and universities such as Penn State and St. John’s University. The alliance works to identify the needs and aspirations of workers and then designs and delivers training programs and other resources to help workers achieve their goals. In Vietnam, for example, seven Nike factories took part in the GA assessment of workers’ needs and hopes for their futures. GA and the Vietnam General Confederation of Labor are currently working together on the next phase of the project—a response to interviews and focus groups—developing programs within the factories that meet the health care needs of workers and answer their questions about health care.

Finally, the IYF family of initiatives includes the International Training and Consulting Institute (ITCI). Launched in 2000, the ITCI is focused on strengthening the ability of individuals and organizations to meet the challenges of today’s world by equipping them with the knowledge and skills they need to reach their goals. ITCI holds workshops around the world, during which ITCI staff work with clients such as GA and Quest on their individual needs for building capacity. ITCI has developed a self-assessment instrument for partners of IYF to begin to reflect on their performance and to learn about how to apply evaluation work to their own youth programs. ITCI training workshops also help IYF partners begin to think strategically about how their organization will need to adjust when changes to their program do occur.

As an example, ITCI worked with GA in Asia to improve communication between factory workers and managers. ITCI ran workshops in supervisory and managerial skills training to 370 supervisors and 90 managers from eight different factories in Indonesia. Not only were the workshops geared toward promoting better communication within the factory staff, but the trainings were also intended to help participants communicate more effectively with other people, in other parts of their lives. In this way, ITCI workshops are aimed at impacting the larger ecology of those who participate (Annual Report 2000).

Additional IYF supports to its partners include assistance in evaluation work and publications and electronic discussion groups centered on exchanging ideas and experiences related to evaluation and efforts to increase the effectiveness, sus-

tainability, and scale of their individual programs. IYF has developed a formal guideline called the “Framework for Effective Programming,” which provides examples of best practice within the IYF family network. These guidelines offer concrete characteristics of effective programming such as “offering age and developmentally-appropriate activities” and “involving the community in planning and implementation” (Annual Report 2000, 29).

In terms of promoting improved and continual learning, IYF focuses on “developing knowledge and skills that are practical and sustainable” (Annual Report 2000, 29). As such, IYF and its partners work most directly on the three themes of youth employment, youth participation, and youth and technology. In regard to youth employment, IYF supports programs that both work on improving the employment and job skills of youth and focus on the more general life skills that impact success in employment and within one’s life. These skills include learning to get along with others, better communication, teamwork, and time management. In regard to youth participation, IYF supports its Partners in promoting the leadership skills of youth as well as increasing the number of youth involved in the development and implementation of youth-run projects. By instilling in youth the skills and mindset to become involved in their communities in effective ways, IYF and its partners seek to create a mutually beneficial relationship in which youth benefit by becoming engaged members in society and society benefits from the energy and fresh ideas that youth introduce and make happen (Annual Report 2000).

In regard to technology, IYF is interested in how new technologies impact youth employment. IYF’s publication “What Works in Youth Employment: The Impact of New Information Technologies” (2001) offers examples of non-governmental organization (NGO) and corporate partnerships that have successfully increased employment opportunities for youth by training and placement in fields related to technology. IYF partners and other youth practitioners and policy analysts can use this publication to gain information about best practices in using technology with youth, as well as the challenges and emerging trends in using technology to promote youth employment.

IYF and its network of partners will continue to work together to ensure that in this new century youth are able to confront and overcome the many

challenges they face with greater strength in resources, preparedness, and wisdom.

Elizabeth Dowling

See also: Community Youth Development; Youth Development

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Internet Romance

Versions of interactive computer software such as e-mail and chat rooms were first created in the early 1970s. For many years, however, this technology was mostly used in university and military settings and by techies; it was not until the mid-1990s that the Internet became mainstream in popular culture. Among other activities, the Internet is commonly used to search for information, shop, and pay bills. Meeting other people through the Internet is also a common online activity, and finding romance online, depicted in the 1998 movie *You’ve Got Mail*, is a popular online activity among many users of the Internet.

Researchers still have a lot to learn about this new form of dating and courtship, and opinions are mixed, but early indications are that Internet relationships can be important and meaningful for the individuals involved in them. There are some differences between face-to-face relationships and online relationships however. For example, individuals in online relationships tend to share personal, sensitive, and intimate information about themselves earlier in the relationship and at a faster rate than they do in face-to-face relationships. It is not yet known if this is a good or a bad thing, and little is known about how these differences affect long-term relationship stability and satisfaction. One thing that does seem certain is that online romantic relationships are unlikely to remain online forever; most online romances that endure eventually result in a face-to-face meeting.

There are many advantages to Internet relationships. For example, many people, especially if they are shy, have low self-esteem, or are inexperienced, have an easier time starting a conversation with a stranger online than in person. This can at least partially be explained by the fact that the estab-

ishment of an online relationship is not hindered by physical characteristics (e.g., attractiveness, size, age, race), geographic location, or social class. Overcoming these obstacles through online interaction with people one generally would not initiate contact with in person provides exposure to ideas, perspectives, and experiences that one would otherwise not be exposed to. Another advantage of online interaction is that the anonymity allows flirting behavior to be practiced with little risk of embarrassment. Finally, the physical distance of online relationships also provides the advantage of being able to end communication with a person fairly easily and with presumably less guilt than in face-to-face relationships.

Many of the advantages of online relationships described above also introduce potential dangers. It is very easy to be deceived online—a person can literally assume a new identity. Males can say they are females, 40-year-olds can say they are 15-year-olds, and next-door neighbors can say they live in a distant state or country. There is probably little harm in this when done solely for entertainment, but a deceitful online “friend” with ill intentions can also create a false sense of security and potentially inflict physical, financial, or emotional harm.

Safety tips recommended for those who meet people online include not giving out any personal information that would help a person find you (e.g., name, address, telephone number, school, employer), sharing all that you know about your online friend with friends and family members, and not agreeing to meet a person face-to-face. However, if a face-to-face meeting is arranged, always take a friend or family member along for the meeting, let others know where you are going, and only agree to meet the person in a public location.

Jason D. Hans
Marilyn Coleman

See also: Internet Use

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Internet Use

The Internet has become a new ecological realm, not of physical dimensions, but created by human interaction. The information age has brought human beings together, using technologies that connect them more closely and more efficiently than ever before. As with any ecology, conditions exist within the Internet that promote positive as well as negative outcomes. Nevertheless, the freedom of the Internet holds great potential, provided its expansion does not leave people behind.

The early development of what is now known as the Internet began over thirty years ago. The U.S. government established the Advanced Research Projects Agency (ARPA) to fund and oversee the technological research initiatives of scientists within universities and industry. The United States was determined to take the lead in military science over its global rival, the then Soviet Union, and poured a great deal of resources into the development of technological infrastructure that would assist in winning the military race. Scientists associated with ARPA realized the potential that could be tapped into if computer and communication technologies could be combined to allow individual computers to share information and workloads with other computers around the country. What developed over the course of roughly ten years was a network of computers that transferred, received, and shared data across vast distances with very little delay. As the early network of computers expanded and developed, it began to be used for civilian purposes, and the Internet as we know it today was born.

The accessibility of personal computers has been a key element in the growth and popularity of the Internet. Computers are no longer the hulking, expensive, and laborious machines that they were in the late 1960s and 1970s. Ironically, as computers got better, they got cheaper, and so more people could afford to own one. Although computers had been part of the workplace for twenty years prior to the personal computer boom of the mid-1990s, they were generally designed to carry out a narrow array of duties, including data management and word processing. At that time, most workers thought of their computers as advanced typewriters and turned to the phone for communication and the newspaper for reading up on current events. The mid-1990s saw the personal computer's coming of age, as technology allowed indi-



People accessing the Internet at home (Elizabeth Crews)

viduals to easily establish Internet service connections using phone modems and to explore the rapidly widening expanses of the Internet. Over the course of roughly five years the services and technological infrastructure supporting the Internet allowed for lightning fast Internet connections and infinite possibilities for Internet use.

The attraction of the Internet is its diversity and depth of potential. There are currently more than 500 million human beings online, all with their own personalities, cultures, beliefs, perspectives, and motivations. Unlike typical communities, the Internet is boundless and governed only by the limitations of its supporting technology. Further, because the Internet has no central government, party, religion, or social laws, any individual with a computer and phone line has the ability to express an opinion, share an idea, advocate a cause, or sell a product to hundreds of millions of other individuals, who all can do the same. Newsgroups, Web sites, e-mail, chat rooms, instant messaging, and posting boards all provide ways for individuals, associations, and businesses to interact. The human interactions that occur within

the Internet community are guided by a common culture of sharing that incorporates countless subcultures, each with its own rules of the road. The ideas, information, and perspectives exchanged on the Internet range from cooking recipes to rocket engine designs.

American Internet users may represent the leading edge of how the Internet is becoming a superhighway of communication. On a typical day in America, approximately 55 million Americans log onto the Internet and send more than 285 million e-mails. Certainly hundreds of millions of messages being exchanged between people represents a great deal of communication. However, the increasing use of e-mail may actually be changing the way people communicate at the most basic levels. The good news is that Internet users have been shown to be more interested and actively involved within their social networks than nonusers. For example, results from an ongoing survey being conducted by the Pew Internet and American Life Project (PIALP), show that 59 percent of Internet users who e-mail family members say that they communicate more often with family members via

e-mail than they did without e-mail. In addition, 60 percent of Internet users who e-mail friends report they communicate more often with friends via e-mail than they did without e-mail. On the other hand, at the same time that e-mail has opened lines of communication, to some extent it has become a substitute for actual conversation. For example, the PIALP survey revealed that even though the majority of Internet users say that e-mail use has improved their connections to family and friends, most of those who e-mail family and friends say they like e-mail because they can stay in touch without investing too much time actually talking. Interestingly, the PIALP survey also showed that more than 30 percent of Internet users who e-mail family and friends say that it is easier to speak frankly or to communicate unpleasant things via e-mail than in actual conversation.

Although the Internet ecology is fed by electricity and structured by wires and hard drives, information is the lifeblood and product. Just as the printing press and telephone revolutionized human communication, the Internet is a new genre of global information exchange, with depth and diversity as its strength. The Internet has allowed the exchange of information to shift from centralized and restricted forums, such as schools, television news, or magazines, to dispersed and open forums where all persons can create, share, and learn. Being informed no longer depends on physical access to a library across town or a conference halfway around the world. The Internet not only provides information, it provides a wide range of sources that cross regional, cultural, and social borders. Someone seeking information about current treatments for breast cancer need not rely exclusively on the opinion of one or two local doctors in a city but can now gather information from potentially hundreds of doctors, patients, and survivors around the globe, each with experiences and perspectives that may be useful. Indeed, the Pew Internet and American Life Project reported in 2001 that more than 50 million Americans look for health information on the Internet. The report showed that up to 47 percent of those who looked for information on the Internet relating to their own conditions said the information they found influenced their decisions about their own health care. The respondents said that Internet information helped them to decide between various treatment approaches, informed

them of important issues and questions to raise with clinicians, and assisted them in determining whether a visit to a doctor was warranted.

The phrase "information is power" may sum up what the Internet holds for those who have access to it. Nowhere is the power of the Internet more apparent than within regional and global commerce. For consumers, access to information allows for deliberate decisions regarding the cost, quality, and variability of products and services. It also allows consumers to comparison shop, which compels businesses to compete with one another and drives down prices. The growing attraction of Internet shopping seems to be a lucrative trend. For example, Forester Research, Inc., has reported that worldwide consumer spending on the Internet in 1998 accounted for an estimated \$8 billion, compared to a projected \$76 billion by the end of 2002 and \$108 billion by the end of 2003. For businesses, the Internet allows greater access to customers and opportunities for niche marketing around the world. The Internet also facilitates the business-to-business exchange of resources and services, allowing businesses across the whole global commerce spectrum to cut costs and maximize profits. Numerous projections suggests that worldwide business-to-business commerce using the Internet will grow to more than \$820 billion by the end of 2002 and is expected to exceed \$2 trillion by 2004. Thus, the Internet empowers both consumers and businesses by making information a global commodity that is available to all.

The traditional experts of our societies, those with advanced training or degrees, are no longer the sole distributors of knowledge. The Internet allows anyone with an opinion or experience to share her expertise with the world, regardless of status or position. Of course, the freedom and ease with which information can be shared presents a complicated challenge to those who seek information. Internet users have to continually make judgments as to the motives of people who share knowledge and whether or not their information is accurate or useful. As an open and free virtual community, the Internet is populated with all types of people, each with an agenda to promote, some with positive motives, some with negative. In essence, the openness of the Internet is both its value and its danger, because it acts as an interactive portal for everyone regardless of intent.

While at no time in human history has the in-

dividual had as much leverage, freedom, voice as within the Internet community, less than 10 percent of the world's population has access to the Internet. The rapid technological growth of industrialized countries exists in contrast to a majority of underdeveloped and poor countries that struggle to provide the most basic of human needs. Ironically, there are about 94 million Americans (18 years and older) without access to the Internet. The inequities of access to the Internet extend, like other social challenges, to gender, racial, educational, financial, and age dividing lines. For instance, reports suggest that although women represent the majority of the American population, less than half have access to the Internet compared to more than half of American males. Only 36 percent of African Americans and 44 percent of Hispanics have access to the Internet, compared to 50 percent of Caucasian Americans. Just 34 percent of Americans who graduated from high school but did not go to college and 17 percent of those without high school education have access to the Internet. Of all Americans with incomes less than \$30,000, 31 percent have access to the Internet compared to over 78 percent for Americans earning over \$75,000. Finally, only 13 percent of those over 65 have Internet access, compared to 65 percent of those under age 30.

Despite the amazing changes that have occurred within the Internet's virtual community, hundreds of billions of people in groups, communities, and regions around the globe remain virtually locked out of the Internet. They may not have the social freedoms or resources available to others or may have priorities directed toward maintaining their basic lives in the face of poverty, hunger, or violence. In essence, the Internet has yet to prove its capacity to make real change in the lives of people disconnected from it. Perhaps the next stage in the Internet's development will be to positively influence the lives of those both inside and outside of its virtual reality. If not, the Internet may simply remain a useful luxury to some and a useless rumor to most.

George T. Ladd

See also: Aging and Technology; Information Technology Impacts on Children, Youth, and Families; Intergenerational Programs in Communities; Internet Romance; Leisure Activities among Young People; Teaching Older Adults to Use New Technologies

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Investigative Interviews with Children

Investigative interviews with children are conversations to obtain information that will support decision making in law enforcement or child protection. Guidelines for conducting investigative interviews evolved after numerous studies documented that the content of children's reports are not pure reflections of their experiences. Rather, children's autobiographical narratives develop during interactions with adults, interactions that are influenced by family dynamics as well as broader cultural and historical circumstances. Studies designed to document how information is transmitted from adults to children have shown that some questioning strategies lead children to answer inaccurately, change their answers, and report information that conforms to adults' suspicions about what happened. To protect the reliability of eyewitness testimony, interviewing guidelines therefore state that interviewers should conduct conversations that are developmentally sensitive and legally defensible. No single protocol for conducting investigative interviews is universally accepted. Nonetheless, there is widespread consensus that interviews should have two primary characteristics: The interviewer should take a hypothesis-testing approach, and information resulting from the interview should be provided by the child rather than the adult (Poole and Lamb 1998).

Background Issues

The movement to specify procedures for conducting investigative interviews with children began in the 1980s, when an increase in sexual abuse alle-

gations challenged social workers, police officers, and other professionals who interviewed children about possible abuse. A series of highly publicized day-care cases raised concern that some strategies used to encourage abuse disclosures might have led children to report events that never occurred. In the *McMartin Preschool* case, for example, seven teachers were accused of ritually abusing several hundred children over a ten-year period in a Los Angeles suburb. Beginning with an investigation in 1983, this case ended without a conviction in the early 1990s after one of the longest and most expensive trials in California history (Garven et al. 1997).

As other day-care cases emerged during the 1980s and 1990s, researchers conducted hundreds of studies to test whether children who had not experienced particular events could be led to say that they had. These studies documented that some children are led to make false reports by a variety of interviewing strategies, including repeating questions, asking leading questions, providing information that creates negative stereotypes of particular individuals, and reinforcing children for particular types of answers. Three basic findings emerged from this research on children's suggestibility. First, even very young children can report events accurately when they are questioned in a nonsuggestive manner. Second, young children are generally more suggestible than are older children or adults. Finally, although children who have not been exposed to suggestive influences are often highly accurate in the face of a few suggestive questions, the proportion of children who report events that never occurred increases as the number and density of suggestive techniques increases (Ceci and Bruck 1995).

Summarizing observations from day-care cases and controlled research, Maggie Bruck and Stephen Ceci (2002) argued that interviewer bias is a defining feature of suggestive interviews. Biased interviewers hold prior beliefs about what occurred and behave in ways that maximize disclosures that are consistent with those beliefs. They ask questions that might confirm their beliefs but avoid questions that might prove their beliefs to be wrong. Biased interviewers mold the content of interviews by failing to challenge children's reports when those reports are consistent with their hypotheses, even when children describe bizarre details. In contrast, these interviewers repeat ques-

tions and challenge children when they are not satisfied with initial answers. Interviews with these characteristics are called confirmatory interviews, and such interviews do not accomplish the fact-finding function of investigative interviews.

The accuracy of children's testimony can be compromised even when interviewers are not blatantly suggestive. This distortion occurs when children's developmental needs conflict with the techniques interviewers use to elicit information. Regarding language development, for example, words and sentence structures that seem easy to adults often confuse young children, and analyses of conversations have found frequent mismatches between the children's knowledge and the content of the adult's questions (Walker 1999). Even adolescents are sometimes confused when adults overestimate their ability to understand lengthy questions and technical vocabulary.

Children's developmental needs cannot be addressed merely by using simple language, however. For example, cluttered environments often distract young children, which can reduce the amount of information they provide in response to nonsuggestive questions. Preschoolers may fail to use props to reproduce experiences accurately, which can lead to errors when interviewers ask them to draw or act out events with dolls. Thus research on children's suggestibility provided the impetus for developing investigative interviewing guidelines, but guidelines seek to improve the accuracy of children's responses by incorporating findings from research on multiple fronts, including developmental trends in language, attention, and conceptual development. Moreover, interviewing protocols encourage interviewers to be sensitive to cultural issues and the special needs of children with disabilities (Poole and Lamb 1998).

The Structure of Investigative Interviews

Most interviewing protocols break the interview down into a series of stages. Authors use various adjectives to describe this approach, including stepwise, structured, funnel, and phased. Many agencies and task forces have developed their guidelines by adopting common features from the following influential protocols. The Cognitive Interview was originally formulated in the United States as a technique for interviewing adult eyewitnesses, but modifications were later incorporated for interviewing children (Fisher and Geiselman

1992). The Structured Interview, developed by a group of psychologists in Germany and the United Kingdom, was designed to test which components of the Cognitive Interview contributed to its superiority over standard police interviews (Memon et al. 1997). The Step-Wise Interview from Canada was designed specifically for child sexual abuse investigations (Yuille et al. 1993). The Memorandum of Good Practice was assembled by a team of professionals in England and Wales in response to legislation that allowed videotapes of initial investigative interviews to be admitted as evidence in criminal proceedings (Home Office 1992). The U.S. National Institute of Child Health and Human Development interview protocol evolved into a highly structured protocol after field tests revealed that investigative interviewers often fail to follow general guidelines (Sternberg et al. 2002).

The description that follows attempts to pull together the most widely agreed on characteristics of an effective investigative interview, one that will produce reliable information. It is important to remember, however, the goal of an investigative interview is not merely to encourage children to describe events. Rather, the goal is to ask questions that will test alternative hypotheses about the source of event allegations or the details of witnessed events. This goal is best accomplished when interviewers have time to prepare for the conversation, and therefore interview preparation is sometimes considered an initial interviewing phase. During this phase, interviewers use existing information about the target events and the children's life circumstances, including details about family structure and relevant community issues, to plan questions that might reveal misunderstandings. They also plan the wording of individual questions to insure that conversations will be appropriate for children's developmental levels, and they try to arrange quiet and uncluttered settings for interviews. Careful interview preparation helps interviewers avoid suggestive techniques, thereby increasing the chance that children will volunteer the majority of the information rather than merely confirm information first mentioned by the interviewer.

Interviewers progress through several phases during the interview, with the number and order of phases determined by local requirements, the features of individual cases, and interviewers' preferences (Poole and Lamb 1998). Interviewers typ-

ically begin by introducing themselves and explaining their jobs in a nonthreatening way. They then build rapport by discussing neutral topics, which puts children at ease and provides an opportunity for interviewers to become familiar with children's speaking habits. By reinforcing children for providing information during rapport building, interviewers convey the idea that the children are expected to do most of the talking. Either before or after rapport building, interviewers deliver age-appropriate ground rules instructions. These ground rules could include instructions that children should not guess or make anything up, and that they can correct the interviewer and ask questions during the interview. In addition, some interviews include a truth-lie phase. During this phase, interviewers ask concrete questions to determine whether children know what "the truth" means (e.g., "If I said that my shoes were red, would that be the truth or a lie?"), followed by prompts to encourage children to affirm that they intend to tell the truth. These phases are the presubstantive part of interviews; they occur before interviewers discuss target allegations or events.

Children of different ages and cultural backgrounds have different assumptions about what is appropriate behavior during conversations with unfamiliar adults. For example, school-aged children may believe they should answer every question asked, because question-answer rituals are an important part of classroom conversations. Children from some ethnic backgrounds believe it is rude to speak freely to authority figures. Therefore, the presubstantive portion of the interview provides an opportunity for interviewers to convey their expectations for the conversation that will follow.

Interviewers begin the substantive part of interviews by signaling a topic change (e.g., "Now that I know a little more about you, we are going to talk about something else"). They then try to introduce the topic in the least suggestive way possible. For example, interviewers might start by asking children if they know the reason the interviewer is talking to them before moving to more focused prompts. Throughout the topic introduction phase, interviewers try not to single out a specific suspect or mention specific allegations. Once children acknowledge the topic, interviewers initiate the free narrative phase by asking them to describe the events (e.g., "Tell me about that"). Because responses to open-ended questions or invi-

tations to talk (e.g., “Tell me more”) are generally more accurate than responses to more focused prompts (e.g., “What color was his car?” “Did this happen in the bedroom or in the family room?”), interviewers try to prolong the free narrative phase with nonsuggestive prompts such as, “What happened next?”

The questioning and clarification phase follows the free narrative. During this phase, interviewers ask questions that might clarify ambiguous details, elicit information that is required for legal purposes, and test alternative hypotheses about the sources of information (e.g., “You said that Jess hit Sally. Did you see Jess hit Sally or did someone say that he hit Sally?”). Although interviewers often need to use forced-choice questions during this phase (e.g., “Did Jess hit Sally one time or more than one time?”), they try to revert to open-ended questions whenever possible (e.g., “Tell me about the first time you saw Jess hit Sally”). Finally, interviewers initiate the closure phase by asking children if they have anything else to say or if they have any questions. Interviewers often talk about neutral topics at the end of the interview to put children at ease.

Unresolved Issues

Despite widespread consensus about the goals and overall structure of investigative interviews, there are many debated issues and unresolved questions. Researchers differ in their assessments of whether repeated interviewing is a major threat to the reliability of children’s reports, whether anatomical dolls and drawings are useful or should be avoided, and how much effort should be made to encourage disclosures from children who fail to report suspected abuse. There is lack of agreement among policy makers about the benefits of mandatory protocols and whether interviews should be electronically recorded. Finally, because it has proved difficult to train investigative interviewers to adhere to interviewing guidelines, a major challenge for the future is to develop and test new training and supervision procedures.

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See also: Ceci, Stephen J.; Child Abuse; Juvenile Justice System; Memory; Real World Memory

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Juvenile Diabetes

Juvenile diabetes, or insulin dependent diabetes mellitus (IDDM), is the most common metabolic disease of adolescence. The National Health Interview Survey on a representative sample of the American population revealed a prevalence of 150 cases in 100,000 children and adolescents between the ages of 10 and 17 in 1995.

Diabetes is characterized by a gradual beginning and a progressive, possibly life-shortening course, which however poses no severe impairments for the affected adolescent. After a more labile initial phase, most patients of diabetes show a relatively stable course. The manifestation of juvenile diabetes ensues more rapidly, unlike the adult form of diabetes, and may occur within several weeks. The typical course displays a series of distinct phases. With appropriate therapy, an initial remission is achieved, and the need for insulin decreases. A second phase of relative metabolic stability follows, which turns into a phase of full diabetes after the exhaustion of the body's own production of insulin. The need for insulin increases again during puberty (the labile pubertal phase), and adjustment becomes difficult. As puberty draws to a close, a condition of relative metabolic stability gradually emerges, with a constant but high need for insulin (postpubertal stabilization phase).

Complications of diabetes are the diabetic coma, a direct consequence of an insulin deficit; delays in growth due to the chronic lack of insulin; and finally long-term damage, which chiefly affects the eyes and kidneys (such as retinopathy

and nephropathy). The development of this long-term damage is more closely associated with the level of metabolic control than with illness duration. The frequency and severity of vascular changes are disproportionately smaller in well-adjusted patients than in patients with poor or fluctuating metabolic control. Medical adaptation can be clearly ascertained through metabolic control, and the quality of metabolic control is directly related to short- and long-term complications.

The therapeutic demands on patients and their parents are complex, involving the injection of insulin, monitoring glucose levels in the blood and urine, and attending to dietary regulations on a daily basis. Treatment focuses on the necessary insulin substitutions, associated diet, and physical exercise. These three factors must be sensibly combined and supported by metabolic control. Obviously, diabetes therapy can only be successful if both the adolescent and his parents understand the treatment. Accordingly, at the same time that adolescents must be intensively and adequately treated medically, the quality of the doctor-patient relationship will decisively influence their motivation to follow the doctors' advice. The relationship between doctor and patient is thus recognized as essential for patient compliance with the prescribed regime and general willingness to deal with the illness.

Sensible medical treatment should not focus exclusively on sugar levels; it must take the patient's entire psychosocial situation into consideration. In general, theoretical knowledge and skills in practical self-control increase with the level of



Young diabetic (Laura Dwight)

cognitive development. From the age of about 9 onwards, most children with diabetes are able to inject the necessary insulin by themselves; they are able to take reliable urine tests at about 12 years. Adequate cognitive insight represents a necessary but not sufficient condition for successful coping and especially, compliance. Very little attention has been paid to developmental factors that can impair the understanding of the diagnosis or occurrence of the illness. This is generally seen among adolescents whose willingness to accept medical advice is often low, particularly those with diabetes, but also in those with other chronic illnesses.

Good metabolic control continually demands much of the adolescent; problematic metabolism that persists despite precise obedience to doctor's orders may make all the initiatives look pointless. Compliance is further diminished by the low perceived severity of the illness, the low perceived benefit of preventative or curative behaviors, and the considerable barriers that stand in the way of health-related activities such as insulin injections and maintaining an appropriate diet. These barriers

are particularly large when medical procedures hamper age-typical behaviors with the peer group, especially in adolescence, when the peer group's eating and drinking patterns, mobility, and risk-taking behavior present significant temptations for the ill adolescent. Diabetic adolescents frequently withdraw socially from healthy peers and perceive themselves as less attractive in the eyes of healthy romantic partners. They have to resolve the dilemma created by the conflict between adaptation to the illness and overall developmental progression, sometimes at the costs of deterioration of metabolic control. Some studies have revealed that diabetic adolescents share the same developmental goals and that their progression in diverse tasks across adolescence is impressive, particularly with respect to developing professional competence. There are, however, also indications of a delay in tasks relating to close relationships, suggesting that diabetic adolescents show lower levels of intimacy and reciprocity in relationships with close friends and romantic partners, and take up romantic relationships later.

Diagnosis and management of the illness also present major long-term stressors for the parents. While some families have the capacity to adjust to the illness by exploring new behaviors, other families are incapable of devising new strategies. They continue along familiar paths and apply earlier methods to try to meet the adolescent's needs in the new situation. One parent might devote herself to the ill adolescent totally, thereby withdrawing from the other members of the family, a behavior seen most commonly in mothers of diabetic adolescents. In this respect, it is important to clarify the father's role in the family's coping, and whether the relationship between the ill adolescent and her siblings is affected. Open and concealed conflicts could arise in the family, and these may undermine treatment and impair the adolescent's adjustment. A fundamental question is how the chronicity of the stressors contributes to dysfunctional behaviors in the family. It might be possible to cope well with the stress of an illness in itself, but its chronicity can lead to rigidity or a breakdown of coping, even in a family that initially functions well. This kind of response is evidenced in the highly structured family climate in most families of adolescents with diabetes, which is independent of illness duration, gender, age, and level of metabolic control. This tendency to a rigid

family structure suggests a developmentally inhibitive effect on all afflicted adolescents.

Inge Seiffge-Krenke

See also: Treatment Adherence

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Juvenile Justice System

Beginning in the late 1800s, state legislatures in the United States embarked on creating a new and separate system of courts, laws, agencies, and programs designed specifically for children and youth. The growing understanding that children should not be held to the same legal standard as adults because of their developmental immaturity, along with the growing public sentiment that punishing children in the same way as adults was immoral, led to the creation of this new juvenile justice system (Champion 1992). The primary goals of the juvenile justice system were, and to some extent still are, treatment and rehabilitation and the prevention of further involvement in the adult criminal system. Not only does this system often have a powerful role in shaping the developmental contexts of the children and youth within its care, the system is continually shaped by the political, social, and historical contexts within which it exists.

Overview of the Juvenile Justice System

Currently, in most states, juvenile courts have jurisdiction over three types of cases: status offenses (e.g., running away and truancy), dependency cases (e.g., child abuse and neglect), and delinquency cases. We will focus on the delinquency component of the juvenile justice system. The juvenile justice system is large and multifaceted, and its processes and components differ from state to state. Generally, however, there are four phases within the system: prevention, arrest, adjudication, and juvenile corrections. The first phase involves prevention services and programs that are broad-based and serve the largest group of youth. Pre-

vention programs include family-strengthening strategies and support of community institutions.

The next phase of the system addresses youth who commit delinquent offenses and are arrested. At this point, some youth will be released or diverted if the crime is not a serious one and law enforcement officers believe a youth will not be a risk to himself or to the public. However, other youth will proceed further in the system and be scheduled for formal processing in juvenile or family court, and perhaps held in detention. A few who have committed the most serious offenses may be waived to adult criminal court.

Youth who are formally processed in the juvenile justice system will then be adjudicated. Some of these cases will be dismissed, and the youth involved will be released from further involvement with the court. In other cases, the youth involved will be adjudicated as delinquent and will proceed to juvenile corrections programs or other dispositions. Very few youth reach this phase. The system narrows the number of youth at every successive phase, resulting in fewer youth reaching the most restrictive corrections programs at the end of the system.

Juvenile corrections programs work with a small number of youth, and they usually have the most intensive involvement with these youth. Corrections programs include probation, nonresidential programs and services, and residential programs such as group homes, ranches or camps, and institutions. New forms of corrections programs such as boot camps and day treatment programs have recently been developed. Often additional aftercare programs or parole may be used to supervise and assist youth with reintegration into the community following a residential placement.

Current Trends in the Juvenile Justice System

During the past four decades three major developments have altered the focus of the juvenile justice system: (1) U.S. Supreme court rulings protecting the rights of juveniles during court proceedings; (2) the passage of the Juvenile Justice and Delinquency Prevention Act; and (3) the recent shift in public and social policy from treatment and rehabilitation toward deterrence and punishment (Schwartz 1992). These changes have contributed to altering the original vision of the court and creating a system with two competing goals and orientations. The original goals of social service, ad-

vocacy, and treatment are being subsumed by a new focus on consequences and punishment (Krisberg and Austin 1993).

Four landmark Supreme Court decisions reformed the legal framework that determines the quality of justice for delinquent youth. *Kent v. United States* (1966) established a juvenile's right to a hearing before transfer to a criminal court and right to counsel during a police interrogation. *In re Gault* (1967) gave juveniles the right to an attorney, the right to confront and cross-examine witnesses, the right against self-incrimination, and the right to notice of charges. *In re Winship* established a juvenile's right to the criminal court standard that guilt must be proved beyond a reasonable doubt. Juveniles have also been given protection against double jeopardy (*Breed v. Jones*, 1975), establishing that double jeopardy exists if a juvenile is adjudged delinquent in juvenile court and then tried for the same offense in adult criminal court. Taken together, these rights given by the U.S. Supreme Court guarantee juveniles a minimum of due process during adjudicatory proceedings (Krisberg and Austin 1993).

Although juveniles today have more legal rights that they did thirty years ago as a result of the Supreme Court rulings described above, they are still not vested with the same rights as adults in criminal court (Schwartz 1992). For example, the right to a trial by jury is not constitutionally required, although in some states it is granted by statute (*McKeiver v. Pennsylvania*, 1971). Additionally, though the right to counsel is constitutionally granted (*In re Gault*, 1967), it may be waived. Instead of assigning counsel, many states permit youth to choose whether to have the services of counsel. There is considerable debate whether youth have the cognitive or emotional capacity to fully understand the consequences of their decision when they waive their right to counsel.

The Juvenile Justice and Delinquency Prevention Act of 1974, together with its 1980 and 1996 amendments, profoundly altered juvenile laws and practices (Snyder and Sickmund 1999). This act requires that states receiving federal funding follow four mandates. The first mandate calls for the "deinstitutionalization of status offenders," stating that status offenders should not be institutionalized as though they had committed crimes. The second mandate requires "sight and sound separa-

tion" of juveniles and adult prisoners and requires that juvenile offenders not come into contact with adult prisoners. The third mandate, "jail and lock up removal," requires that all juvenile offenders be removed from adult criminal facilities. Finally, the fourth mandate, concerning "disproportionate confinement of minority youth," requires that states make efforts to reduce the disproportionate representation of minority youth in juvenile facilities. Although these reforms have been considered major advances in the fight for juvenile rights, girls and children of color in general have not experienced the intended benefits.

Issues of race, gender, and social class profoundly affect the quality of juvenile justice. Although legal factors such as severity of offense and prior record heavily influence the court's decision-making process, it is equally clear that race and gender also play significant and pervasive roles in these deliberations. For example, statistics demonstrate that minority youth are confined to public correctional facilities disproportionately to their representation in the general population. Additionally, with respect to gender, girls continue to be arrested and incarcerated for offenses (generally status offenses and prostitution crimes) that would not trigger a similar response for males (Schwartz 1992).

Although many reforms have attempted to increase the rights of juveniles, public concern over lenient consequences for dangerous juveniles has resulted in more vigorous prosecution of violent youthful offenders. For example, beginning in 1976, over half the states made it easier to transfer youth to adult courts (Champion 1992). This new emphasis, reflecting societal concerns, is in conflict with the original rehabilitative mission of the courts. The juvenile courts are currently struggling to balance the two competing demands, thus creating courts that are essentially in an identity crisis, pulled in different directions between rehabilitation and punishment.

Jennifer A. Murphy
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Kittrell, Flemmie P.

Flemmie Kittrell, a citizen of the world, was a leader in higher education in home economics. She was the first African American woman to receive a Ph.D. in nutrition in the United States. Born December 25, 1904, in Henderson, North Carolina, she was the seventh of nine children and the daughter of sharecroppers. Kittrell entered Hampton Institute (now Hampton University) in 1924, earning a bachelor of science degree in home economics in 1928. Immediately afterwards, she assumed a position as both a teacher of home economics and dean of students at Bennett College in Greensboro, North Carolina. At the time, Bennett was a private African American women's college.

With the encouragement of her professors at the Hampton Institute, Kittrell pursued graduate study in home economics. In 1930, with a leave from Bennett, she attended Cornell University in Ithaca, New York, where, with a fellowship, she completed a M.S. degree in rural education with a minor in foods and nutrition.

Accepted in 1933 as a Cornell Ph.D. student, Kittrell was granted another leave from Bennett College. She completed her dissertation, entitled *A Study of Negro Feeding Practices in a Selected Community of North Carolina*, in 1936 and was awarded a Ph.D. in nutrition, with minors in child development and rural education.

In 1940, she became dean of women at the Hampton Institute. Four years later, she joined the faculty of Howard University, where she remained for almost thirty years as head of the Department of Home Economics. During her successful tenure



Flemmie Kittrell (Cornell University)

at Howard, Kittrell laid the groundwork for the first doctoral program in nutrition at an African American university. Her academic writings express a deep affection for families and their children. She believed that social welfare initiatives, such as Head Start and nutritional programs, were invaluable.

able to fighting poverty. She maintained that equally essential to a child's well-being is a loving and secure family, with the scientific study of family and child development a necessity.

Her scholarly endeavors reached well beyond the borders of the United States. In addition to developing international student recruitment efforts at Howard's Department of Home Economics and hosting international seminars on nutrition and child development, she traveled extensively as a lecturer, consultant, and researcher. In 1947, Kittrell was invited by the U.S. Department of State to head a survey of nutritional practices in Liberia. The survey shed light on "hidden hunger," a condition where adequate food quantity, but low nutritive quality, can lead to malnutrition. Importantly, her work in Liberia explored ways to adequately feed people with indigenous foods.

In 1950–1951, and again from 1953 to 1955, Kittrell traveled on a Fulbright award to India, where she founded a research program in food and nutrition at the College of Home Science at Baroda University.

Kittrell visited Ghana in 1958, giving a series of lectures to social welfare officials around the country about home economics in the African American population and in the general American population. During her stay she met with Ghana's prime minister and minister of education. Her reasoned and hopeful characterization of race relations in the United States impressed her audiences in Accra, Koforidua, and Cape Coast.

During her career, Flemma Kittrell consulted for the Congo Polytechnic Institute, the Methodist Church in Northern and Southern Rhodesia and Mozambique, Project Head Start, the American Dietetic Association, the American Academy of Arts and Sciences, the World Population Society, and the Home Economics Advisory Council at Cornell University.

The University of North Carolina at Greensboro awarded her an honorary Doctor of Human Letters, citing her contributions to the improvement of family life and individual well-being through college teaching, student guidance, research in human nutrition, and international assignments. The American Association of Family and Consumer Sciences has an international fellowship named for Kittrell, and Cornell University's College of Human Ecology has a Flemma Kittrell Fellow-

ship for graduate students, with preference given to minority students.

Francille M. Firebaugh
Dina Bishara

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Kohlberg, Lawrence

Almost half a century ago, Lawrence Kohlberg played a major role in revolutionizing psychology because he sought justice—he sought to understand justice as a universal value, as central to human problem solving from childhood to adulthood, as critical to human thought historically and socially, and as a necessary ideal for social change. The major results are his now well-known six-stage theory of moral reasoning development and a democratic community approach to education, called the just community. The creation and practice of several just community programs, the first in a women's prison and the second in a high school, led to the development of the idea that institutions possess a moral atmosphere or moral culture, which can be developed by the decisions of its members, and consequently institutions can become vehicles for social as well as individual change. The strength and generativity of Kohlberg's work came from his articulation of the interrelationships among theory, research, and practice as a new paradigm, the cognitive-developmental paradigm. Recognizing these interrelationships, Kohlberg necessarily was also an advocate—for children, for schools that nurture children's development, and for social and public policies that address injustices. Kohlberg's body of work and his life exemplify the human ecological

approach to psychology; he can rightly be considered a pioneer in this field. This entry highlights Kohlberg's achievements and concludes with a brief description of his stage theory of moral reasoning development.

Kohlberg was recognized as a major theoretician and research scientist soon after he completed his dissertation on the moral reasoning of children at the University of Chicago in 1958. His dissertation challenged existing views in child psychology and proposed a model of child development incorporating the work of Jean Piaget, the Swiss psychologist, then newly introduced to American scientists, the American psychologist-philosophers George Herbert Mead and James Mark Baldwin, the American pragmatist, John Dewey, and the French sociologist Emile Durkheim. In his original study, Kohlberg posed moral dilemmas to boys ages 10 to 16. Some of the dilemmas were taken from books of casuistry and others from novels, especially from Victor Hugo's *Les Misérables* (now known in its Broadway rendition as *Les Mis*). It is the source of the famous Heinz Dilemma (whether Heinz should steal a drug developed by the local druggist to save his wife from dying of a rare form of cancer). Although Kohlberg analyzed the modes of thinking of only ninety-eight boys living in the Chicago area, the effects have been vast.

Kohlberg and his colleagues conducted longitudinal research over twenty-five years with his original male Chicago sample and for more than ten years with both males and females in Turkey and Israel. These studies formed the basis of the moral judgment scoring manual (Colby et al. 1987) and gave empirical support to the first five stages of his theory. Stage six remains a controversial theoretical endpoint, one that Kohlberg argued aligned moral judgment with moral action.

Since the 1960s, researchers have conducted hundreds of studies in sixty countries that confirm the usefulness of the theory, the structured moral judgment interview, and the coding manual for describing and analyzing people's solutions to all kinds of moral and social dilemmas. The large majority of these studies support the developmental and universal nature of moral reasoning, as well as exploring its relationship to family, educational, occupational, interpersonal, social, cultural, and personality differences. Two areas of criticism are important to note. During the 1980s, criticisms

arose from Carol Gilligan and others that Kohlberg's theory could not account for the moral reasoning of women. Subsequent research and a meta-analysis by Lawrence Walker demonstrated that the coding manual and the theory are not biased against females. However, this line of criticism was useful in encouraging careful consideration of sex differences and a focus on female development, per se. Criticisms and debates about the universal nature of moral values and moral reasoning development have arisen. These debates center around the higher stages (5 and 6) and raise a fundamental question: that is, whether the underlying reasoning of moral worldviews of non-Western cultures can be understood and assessed from a Kohlbergian perspective. Richard Schweder's work exemplifies these criticisms (see Kurtines and Gewirtz 1991).

As a theorist, Kohlberg argued that a cognitive-developmental perspective better integrated empirical evidence than socialization and identification explanations rooted in psychoanalytic and behavioral paradigms. For instance, by the late 1960s he had transformed the discipline's thinking about the meaning of sex role knowledge for children's understanding of themselves and others. In the last year of his life, 1987, he published his fullest presentation of this paradigm as *Child Psychology and Childhood Education*.

As an educator, Kohlberg helped create a Montessori School in the poor neighborhoods surrounding the University of Chicago. He crystallized the cognitive-developmental view of education in "Development as the Aim of Education" in 1972 (reprinted in Kohlberg 1981). It remains a classic statement of why this perspective should inform schooling and education rather than either a cultural transmission of knowledge view grounded in learning theory or a romantic view of maturation grounded in a Freudian view of preset development.

The developmental paradigm came to fruition in the just community approach. By 1975, the two just communities, one with female guards and inmates at the Niantic Prison in Connecticut and the other with teachers and high school students at the Cambridge Rindge and Latin High School in Cambridge, Massachusetts, were thriving. These democratically governed communities had similar goals: (1) to foster cognitive, moral perspective taking and empathic development; (2) to create

moral cultures, that is, shared norms of mutual respect and support; and (3) to be models for institutional change. About two dozen prison and school just communities have been successfully launched since. Neither their small number nor limited life span of about five to ten years (with the outstanding exception of the Scarsdale Alternative School, now thriving in its twenty-sixth year) discouraged Kohlberg. He believed that one worthy form of advocacy was the development, documentation, and analysis of experimental programs in social justice, since perhaps others in the future would build on them, as he consciously built on Dewey and Durkheim's educational ideas.

As a moral psychologist, educator, and advocate, Kohlberg knew he had to become somewhat of a philosopher and address the questions, what is virtue? and what is justice? Fostering moral development in schools and in society must, in the end, he believed, be judged by philosophers to be just. To define justice, Kohlberg looked to Plato, Kant, and his contemporaries, John Rawls and Jürgen Habermas.

Lawrence Kohlberg was born October 25, 1927, in Westchester County, New York. He died January 14, 1987, at the age of 59. He authored seventy-five major articles and four books, and coauthored three books and forty major articles, as well as contributing countless invited articles and addresses. He mentored current leaders in moral psychology as graduate students and postdoctoral fellows for twenty-eight years.

As an adolescent, Kohlberg attended the residential private high school, Philips Academy, in Andover, Massachusetts. In a brief autobiography, Kohlberg wrote that he first became aware of his interest in justice as a discontented high school student. A teacher gave him Dostoyevsky's *Brothers Karamazov*. In Dostoyevsky's novel, Ivan is ready to give up on the God who allows injustices and cruelties to children and innocents. Larry Kohlberg shared this skepticism, but it raised for him the central question of moral autonomy, why be just in an unjust world? Although the older, scientific Kohlberg was convinced he had to empirically validate and substantiate his theory of moral reasoning before moving to the study of moral action, understanding moral action was his ultimate, though never fully achieved, goal.

After high school, Kohlberg joined the Merchant Marines as World War II drew to a close. At

the war's end, he joined the illegal effort to take Jewish refugees through the British blockade to settlements in Palestine. (If you don't know the story, read *The Exodus* by Leon Uris, or see the movie of the same name.) The aim of the Jewish Hagenah, the volunteer army, was a political one, to establish the state of Israel. Ships rammed ships. British tear gas and steam stopped the Hagenah ships. Two infants died on Kohlberg's ship. The crews of these ships, including Kohlberg, were detained several weeks on Cyprus before being released and sent to their home countries; their refugee passengers remained much longer. This experience raised issues of social justice for Kohlberg, above all, "Was using death and violence right or just for a political end?" (Kohlberg, cited in Kuhmerker, Gielen, and Hayes 1991, 13).

Kohlberg entered the University of Chicago seeking ideas to address his questions; he received the B.A. in one year and the Ph.D. in 1958 in Clinical Psychology. Kohlberg felt challenged by the intellectually exciting atmosphere of the University of Chicago, studying with Anselm Strauss, sociologist; Jack Gewirtz, behavioral psychologist; Carl Rogers and Bruno Bettelheim, clinical psychologists; Bernice Neugarten and Robert Havighurst, adult developmentalists; and Charles Morris and Alan Gewirth, philosophers. He credited the extraordinary mentoring of his dissertation adviser, Helen Koch, as the source of any gifts he later displayed as a mentor. Indeed, as Kohlberg progressed through his career, he became an extraordinary mentor in the largest sense of this term.

Kohlberg had a brief stay at Yale and as a Fellow at the Stanford University Center for the Advancement of Thought in the Behavioral Sciences before he was appointed professor of psychology and education at Harvard University's Graduate School of Education, Department of Human Development, in 1968. From 1969 to 1974, he held a career scientist award and afterward received grants from the National Institute of Mental Health. From 1974 to 1987, he also received support for programmatic moral education interventions and research in schools and prisons from private foundations, namely the Danforth Foundation, Spencer Foundation, Joseph P. Kennedy, Jr., Foundation, and the W. T. Grant Foundation. Kohlberg was recognized for his lifetime contributions to developmental psychology and to education by the Society for Research in Child Development (SRCD) and with honorary degrees from

Loyola University in Chicago and Marquette University in Milwaukee, WI.

At Harvard, the extraordinary mentorship of Larry Kohlberg came to the fore. He not only mentored graduate students and postdoctoral fellows, but also high school students and prisoners, teachers and prison guards, principals and prison wardens, colleagues (myself included), visitors, critics, and even strangers met at conferences and in large halls after delivering guest lectures throughout the United States, Europe, South America, Japan, and China. The energy and commitment of his mentoring became the social and emotional foundation of the new field of moral developmental psychology that he was forging with his ideas and research, and encouraging others, such as Elliot Turiel, Robert Selman, James Rest, James Fowler, Augusto Blasi, and Carol Gilligan, and others to forge with theirs.

The effectiveness of his ideas, research, and teaching was magnified by his preference for working with others. Early in his tenure at Harvard, Kohlberg put together a strong group of postdoctoral and graduate student colleagues and critics, the core of the Center for Moral Development and Education, sponsored by a grant from the Joseph P. Kennedy Foundation in 1972 and closed two years after Kohlberg's death in 1989. The center disseminated research reports and articles written by Kohlberg and other researchers in the field regardless of their academic home. From 1972 to 1985, it sponsored workshops on scoring moral judgment interviews that previewed earlier versions of the now published scoring manual (Colby et al. 1987). It sponsored moral education workshops from 1976 until 1986. It became an intellectual crossroads where international and local scholars gathered every Friday afternoon for sherry and wine to engage a guest speaker, to hear reports of new findings, or at regular intervals to have open community discussions of the center's grant and work commitments, interpersonal issues, and future plans. Secretaries, students, and staff were all equal members. Kohlberg extended the center's hospitality to include his homes in Cambridge and on Cape Cod, creating what his lifetime friend, Jack Gewirtz, characterized as the American version of the nineteenth century Paris salon.

In 1974 Kohlberg joined with Lisa Kuhmerker and others to create the Association for Moral Education, a society of psychologists, sociologists,

educators, researchers, and philosophers. It is now in its twenty-eighth year with a strong international membership and an affiliated journal, *The Journal of Moral Education*.

Kohlberg, the advocate, created a moral educational movement. He, Anne Colby, and Betsy Speicher validated the usefulness of moral dilemma discussions as a teaching strategy that fosters students' moral cognitive development. Simultaneously, Kohlberg and Robert Selman developed a filmstrip series, *First Things Values*, for training teachers. These efforts grew into the moral education business of the 1970s and 1980s, when Kohlberg teamed with Ralph Mosher, professor of education at Boston University and with Edwin (Ted) Fenton, professor of education at Carnegie Mellon University. The three summered in Cape Cod. Fishing and cooking mixed easily with discussions, spawning education institutes and research projects.

From 1976 to 1986, Kohlberg, Clark Power, myself, and various teachers, especially Elsa Wasserman, Judy Coddling, and Tony Arenella, taught summer institutes in the just community approach to moral education and school change. The just community teachers were the backbone of these heavily theoretical and always applied institutes. As a result of a review of the Scarsdale program, in 1985 the New York State Education Department sponsored four more just community programs in two Bronx high schools, Theodore Roosevelt and Bronx High School of Science. These programs are strong examples of the usefulness of traveling the two-way street between theory and practice. The Harvard educational institutes created a new ecological niche, a new human ecology—the psychology and practice of moral and citizenship education—and differentiated it from the many programs that were imported into education, such as values clarification programs.

Just community interventions and research were done with Clark Power, Joseph Reimer, Marvin Berkowitz, and myself (Power, Higgins, and Kohlberg 1989). Evaluations showed that the interventions promoted the development of students' and teachers' moral reasoning and enhanced school climate, that is, fostered the development of civic communities with norms of justice, responsibility, caring, and prosocial behavior.

This entry only highlights Kohlberg's major contributions to the development of the emerging

field of human ecology. It should also be noted that he wrote about issues of religion, spirituality, and moral development in adulthood and aging, moral perspectives in tragedy and the novel, the impact of historical and social forces on the moral thinking of Mahatma Gandhi, Martin Luther King Jr., and Janusz Korczak, as well as directly about important social issues of our day, specifically liberalism and political ideologies, Watergate, and capital punishment.

The entry concludes with a brief description of Kohlberg's theory of moral reasoning development. The theoretical assumptions underlying the theory are (1) reasoning develops through stages; (2) each stage is a coherent pattern of thinking; (3) development through the stages is orderly, moving from less to more complex reasoning with no falling back to earlier stages of thinking; and (4) the pattern of reasoning at each stage is integrated into the next higher stage. Kohlberg used an interview method of presenting a dilemma, followed by probe questions to encourage a person's best thinking; thus, the theory describes stages of competence and not stages of the usual reasons people may give to justify their behaviors.

There are three levels: preconventional, conventional, and post-conventional. In each level, there are two stages. At Stage 1, right or moral is defined as literal obedience to rules and authority and avoiding punishment; the reasoning involved is typical for young children. At Stage 2, right is defined by making fair exchanges in concrete, immediate terms. School-age children define justice as each person getting the same amount or being treated the same as every other. The move into the conventional level denotes a shift to being able to take the perspective of others, of groups, and society. At Stage 3, adolescents and adults define right from an interpersonal perspective. They are aware of shared feelings, agreements, and expectations, and they put themselves in the other person's shoes as a means of coming to a moral decision. At Stage 4, adults take a normative perspective. Right or morality is defined by the relationships of individuals to society and its institutions, such as the law, marriage, and so on. There is a focus on obligations, roles, and rules. At Stage 5, a person takes a prior-to-society perspective; that is, he recognizes that rights, such as the rights to life and liberty, exist regardless of whether they are recognized by society. More generalizable ideas, such as

tolerance, equity, due process, and impartiality are used to make moral decisions. Stage 5 reasoning makes clear distinctions between the legal and the moral point of view, but finds it hard to integrate them. At Stage 6, a person takes the perspective of a moral point of view, a point of view that ideally all human beings should take toward one another as equal autonomous persons. This means she makes moral decisions by considering the points of view of all affected, even future generations, using a procedure of prescriptive role-taking. The unique aspect of Stage 6 is the *deliberate* use of universal principles of justice, equity, equality of human rights, and respect for the dignity of human beings as individuals. "These characteristics of Stage 6 reasoning require that Stage 6 raise dialogue to a principle, a principle of procedure or 'moral musical chairs.'" (Kohlberg 1984, 638).

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See also: Moral Development

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Latino Leadership

Understanding and enhancing the development of leadership in the Latino community is crucial, given the emergent changes in the American population sometimes described as the browning of America. The United States is becoming more ethnically and culturally diverse, and specifically it is becoming more Latino. The growing presence of Latinos in the United States has profound implications for the future of leadership in our nation. By the year 2025, there will be over 60 million Latinos living in the United States. By 2050, 100 million Latinos will be living in the United States, which translates into one out of every four Americans. Over the next half century, 68 percent of the nation's population increase will be fueled by Latino population growth (U.S. Census Bureau 1990, 2000). The Latino community will be one of the principal crucibles out of which leadership emerges and to which it is held accountable. As workers, managers, voters, leaders, and followers, Latinos deeply influence both the quality and quantity of effective and meaningful leadership across every sector of American life. As Latinos play an increasingly significant role in determining the quality of leadership in the United States, there is a corresponding imperative to understand how leadership is experienced, understood, and developed.

The Latino cultural perspective on leadership both creates and gives emphasis to new paradigms for understanding the emergence and practice of leadership. The communal, collectivist, people-centered orientation of Latino leadership values, coupled with empathetic and compassionate lead-

ership styles, points to a new way of thinking about leadership, in many ways similar to paradigms that are currently being discussed in leadership circles. Stephen R. Covey (1996) writes that the leader of the future is one who creates a culture or value system based on the principles of service, integrity, fairness, and equity. Similarly, Daniel Coleman (1998) argues that the most effective leaders are those who possess emotional intelligence, of which empathy and cross-cultural sensitivity are key components. In terms of credible and caring management styles with an emphasis on caring for one's followers, qualities of this new paradigm of leadership profile coincide with qualities that Latinos expect from their leaders.

For Latinos, regardless of specific country of origin, leadership must be embedded within the family and the community to be culturally relevant. It must also contend with the dynamics that other contexts and expectations bring to bear (Bronfenbrenner 1977). Nonetheless, regardless of cultural context, there are universal characteristics of leadership, which in turn may impede or enhance the manifestation of leadership. Leadership research has seen an evolution of its theoretical base from rational, mechanistic, and simplistic views that placed emphasis on leaders' traits and characteristics to more interactive and complex theories, theories that have generated studies on settings and situations and how such variables could be attributed to successful leadership (Johnson 1993; Northouse 1997). Moreover, definitions of leadership vary widely. The concept of leadership has been variously defined from a personality

perspective, as an act or behavior, as the focus of group processes, or as an instrument of goal achievement (Northouse 1997, 2–3). Northouse has identified several common and essential factors in the concept of leadership that seem to be universal regardless of context:

- It is a process or continuous and interactive dynamic that acts to effect change
- It emerges out of a reciprocal relationship of influence between leader and follower
- It exists in a community or group context and involves goal attainment around shared visions, purposes, and values
- It is intentional about making real or concrete change

As a process, effective and transformative leadership is a continuous and interactive dynamic that serves to bring about change in the people or environment within its influence. Over time, there emerges a reciprocal and trusting relationship of influence between leaders and followers. While the context of influence tends to create a community around a particular set of values and thought, the sphere of influence is not limited by geographic boundaries. Goals are established around a common vision and determination for change (Faiver, Villarruel, and Ramirez 2001a).

Ecological Framework of Latino Families

These findings on leadership effectively describe the dynamics that exist within the Latino family. The family environment creates the most immediate ecological system, in which learning to deal with influences and obstacles, supports and implications at each interface serves as the foundation for navigating the larger mainstream community context. The family is the primary and most powerful source of influence within Latino culture, where there is an ongoing interactive and reciprocal process of defined and respected roles and relationships. The community, as an extension of family, is the second most powerful source of influence for the Latino. For most Latinos, however, “family” extends far beyond those persons living within the immediate household or those within their immediate family of origin.

Family, within the Latino culture, includes *tíos* and *tías* (uncles and aunts) and *primos* and *primas* (male and female cousins), as well as *compadres*

and *comadres* (godfathers and godmothers, literally co-fathers and co-mothers) at a level of intimacy comparable to the immediate family in other cultures. This closeness holds true whether or not these family members are living within the same household, are within this country, or are living in the countries of ethnic origin. The psychological ties are strong and not to be discounted simply because of geographical distance. These roles and relationships carry particular significance for the Latino family. More than blood ties, these are deeply regarded responsibilities. Personal resources, for example, are often sent back to families within the country of origin. At the same time, however, acquisition of these financial resources within this country often faces barriers and obstacles. These realities of economic scarcity, subtly created by the interaction of internal cultural mandates with external sociopolitical limitations, not only affect the immediate lifestyle of the Latino family, but also create difficulties for educational advancement and subsequent leadership development (Faiver, Villarruel, and Ramirez 2001c).

Challenges of Latino Diversity

According to the 2000 Census, almost 45 percent of new immigrants coming into this country within this past decade came from fifteen different countries in Latin America, with Mexico and the Dominican Republic supplying the largest numbers (U.S. Census Bureau 2000). The practice and process of leadership development among Latinos is embedded within a multicontextual and multicultural ecological framework that is often assumed to be homogeneous (Ibarra 2001). As observed by earlier researchers, given the visibility of the similarities of language and religion among Latinos, their historical and cultural diversity is frequently overlooked (Skidmore and Smith 1984). While Mexican Americans account for at least 58 percent of the Latino population in this country, the remaining third of Latinos have come from fourteen other countries, each with their own unique cultural characteristics. The second largest of the Latino groups represented in the United States are Puerto Ricans (who have been citizens of the United States, not immigrants, since 1917), followed by Cubans. The 2000 Census counts Dominicans as the next largest group of U.S. Latinos, followed by Salvadorans,

Guatemalans, and then Hondurans and Nicaraguans. Of the approximately one million South American Latinos, Colombians, Ecuadorians, and Peruvians were the largest groups counted in the 2000 Census (Roy 1998; U.S. Census Bureau 2000).

Each of these Latin countries, while sharing commonalities of language and religion with the others, is unique. The differences involved create confusion and frustration, both among Latinos, who wish for a singular form of leadership from within the culture, and among those within the mainstream who do not perceive the uniqueness of each group and thereby hold unrealistic expectations.

To further add to the complexities in understanding cultural variations among Latinos whose countries of origin differ, there likewise exist significant differences within cultural groups whose ancestral origins are the same, but whose actual context of origin may vary. Mainland Puerto Ricans, for example, who are born and raised in New York, experience their cultural heritage differently from those born on the island of Puerto Rico itself. While all are U.S. citizens, and all are Puerto Rican, their sense of identity and cultural perspectives may differ significantly, even though they still hold to the basic underlying Latino values. This overarching reality of Latino leadership reflects the relationships between culture and leadership, which in turn contributes to the development of intracultural leadership models useful for developing leadership-training programs.

The most basic principle is that many issues and challenges facing Latinos in all sectors of their lives, as well as the strengths that bolster their efforts, are not influenced only by access to financial resources; really understanding them requires a deep understanding of cultural influences that impede or enhance progress from within (Gowan and Trevino 1998). It is expedient to build upon the emerging Latino identity and to recognize the political and social consciousness that informs the desire and capacity for leadership. Among all Latinos, no matter how diverse the contexts and cultures from which they come, there exists an underlying cultural imperative that necessitates a sense of community citizenship. This sense of community citizenship creates an ecological framework and perspective within which all activities are pursued (Flores and Benmayor 1997).

Scope of the Human Ecosystem

For Latino leaders, the focal point of *el pueblo* (meaning both people and community) resonates throughout the Latino community and points to a distinct cultural framework that shapes leadership development. It is estimated that 13 million Latinos, almost one-third of the expected number of Latinos in the total population in 2004, will have come to the United States within the last ten years and will, therefore, most likely bring with them current, active relationships with those who have remained behind in their native countries. Any Latino leader with influence among these recent immigrants will have a far wider field of influence than might exist for those within mainstream cultural affiliations whose migration into this country goes back three or four generations or more. The current and active contact with family and friends still living in the countries of origin discussed above allows greater potential for influence for the Latino leader.

Parental Context for Leadership Development

Given that family and community are the primary contexts for leadership development, it is not surprising that parents are a stabilizing force for most Latinos. The general feeling is that parents who are able to safeguard the immediate well-being of the family are providing a crucial form of leadership. Even though many Latino parents have not had access to or have not pursued formal education, their willingness and ability to continue to learn from life is deeply regarded, often serving as motivation to other family members and the younger generation to pursue more formal channels for education. Although higher education at the university level often seems financially inaccessible, most Latinos desire some form of continuing formal education in an area of study that contributes to the well-being of the community. Education, like leadership development however, is felt to occur first within oneself and then within the family context, and finally to be nurtured within the community. Only then does it emanate outward into the larger, or mainstream, community.

Manifestation of Latino Leadership

Latino leadership embraces an ecological context that far exceeds the typical boundaries and definitions of leadership within this country. More than just politically expedient, it is a personally and cul-

turally essential context. For the Latino, the determination of successful leadership is one that is manifested within the context of its ultimate benefit to the family and community, regardless of how geographically far that family and community extends. It is also one that is carried out through role models and mentors who lead by example within the family and community. Latino leadership is intergenerational and collaborative and is identified and recognized at many levels of contribution to the community. Latino leaders come from among artists, entrepreneurs, civic activists, religious clergy, immigrants, parents, and young people. While it is also felt to be significant to have leaders in positions of political power, their leadership role is valued in direct proportion to the benefit and impact on the Latino community from which the particular individual has come. An understanding of Latino leadership must reflect the breadth and depth of community and family.

Guided both by a commitment to community and to the cultural values of the Latino heritage, Latinos remain quietly grounded in their sense of belonging to something larger and deeper than themselves, even when they are not always able to clearly articulate what that is. For many, being involved is simply a way of life. The issues have always been a part of who they are, not something that has to be sought out. The needs are present in everyday life. It is often the personal realities and experiences of participants that define the areas in which they choose to assert leadership, and often that leadership takes the form of carrying out everyday roles with diligence and dedication and without being afraid to risk being visible. It is important to Latinos to locate themselves in relation to others and to the broader issues and to know how to bring whatever they gain back into the community. Latino leaders must have the ability to embrace the complexities of the whole and still be able take specific actions for change.

Intracultural Understanding

Effective leadership for Latinos who have more recently immigrated to this country requires a knowledge and understanding of the political and historical circumstances that have surrounded individuals and families at the time of entry into this country, and of the long-term implications for the influence of these circumstances. Shaped and constricted by the time in history and reasons behind

their immigration to this country, the Latino experience is not truly universal or generic, although many of the underlying values are similar in nature.

The relationship of Latinos to this country and to the potential for leadership evolves as much from their own personal situation as it does from the larger relationship of the United States to their countries of national origin. For many, the experience of immigration or the immigration process, from the psychological point of departure from their country of origin to the psychological, political, and economic point of integration into this country, has contributed significantly to the ways in which leadership by Latinos is expressed or perceived possible. Regardless of the length of time in this country, the circumstance under which each group has entered and remained here greatly contributes to their attitudes toward their capacity for leadership and political participation and to the ways in which they are perceived by others, Latino and otherwise. This circumstance of entry further defines, shapes, and redefines ethnic and racial identity within a new and often unfamiliar or hostile context.

The juxtaposition of these very different histories at times creates tension, but at the same time maintains an environment of continued renewal of cultural values and the roles they define. This serves to keep these values both as strengths as well as challenges to the newly emerging paradigms for leadership. The culturally defined roles of women, for example, struggle to evolve in a context that begs them to remain intact, even as each new wave of immigration contributes to the strengthening of the values that preserve those roles intact.

Gender expectations for women go hand in hand with gender expectations for men. How men and women perceive their roles in relationship to each other has a direct bearing on how they subsequently perceive their own power and potential for leadership within the larger social and political context. The effects of being considered a political minority, along with issues of respect and status as perceived within familial and cultural contexts for Latina women and Latino men, brings to bear considerable constrictions for Latina women leaders in particular. Improving the external conditions of the community by way of developing strong leadership mandates that change take place in the in-

ternal perceptions of what is possible for those within the community by way of thoughtfully guided critical reflection on the interactive dynamics of culturally held values and relationships.

Often the socialization process for women in general and Latina women in particular serves to mask organizational skills and overt leadership strengths of women. Academic counseling at the high school level for young Latina women is inadequate. Women are typically steered into career choices with little potential for adequate income or leadership roles. Latina women carry the added restrictive barrier of within-culture nonacceptance of more assertive roles, thereby making mentor relationships difficult to establish and positive academic or professional female leadership role models hard to find. Economic uncertainty as a result of having been relegated to careers that do not provide an adequate income often instills a fear of the risk-taking involved in pushing the boundaries of cultural and political limitations. This situation requires a considered reexamination of cultural values and the dynamics that occur within the total ecological framework at the point of interface and interaction with other Latino cultures and with broader mainstream cultures. (Faiver, Villarruel, and Ramirez 2001b)

Implications and Influences

The implications of the close family ties among Latinos are familial and social as well as geographical and political. Unlike other European ethnic groups that have immigrated to the United States, the proximity of the homeland for Latinos, regardless of the specific cultural underpinnings of each cultural group, creates an interactive immediacy of international context and influences and forms a vibrant part of the ecological framework in which they carry out their daily lives. While there does exist a correlation between the level of current affiliation with and embeddedness in the country of origin and the level of adherence to the cultural values, there is an overall value of family cohesiveness that affects the dynamics of family interaction and leadership for Latinos. Although it happens that the greater the psychological distance from the cultural context of the country of origin, the more closed the family system becomes, the essence of the values still commands reverence, though the manifestation of these values may undergo surface change. This change may

in part be due to the need to interface with the value systems of other non-Latino minority as well as mainstream cultural groups that may not recognize the responsibilities implied in these relationships for Latinos (Faiver, Villarruel, and Ramirez 2001c).

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See also: Acculturation; Colonias, Las; Hispanic Immigrant Experience; Parent Education Programs for Immigrant Families

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Lead Poisoning

Lead poisoning is a serious disease caused by exposure to and absorption of lead, a toxic (poisonous) metal that is found in both natural and artificial environments. Lead affects virtually every system in the body and is harmful to people of all ages, but it is particularly dangerous to the developing nervous systems of children under the age of 6 years. Children are generally at greater risk of lead poisoning than adults because they are more sensitive to lead's damaging effects and their bodies absorb more lead than do adult bodies. Moreover, young children normally put objects in their mouths: If these objects contain lead or have lead dust on them, exposure is obviously greater.

A fetus may be exposed to lead, because lead from a mother's blood can pass to her unborn child. In some cases, fetal lead exposure may produce stillbirth or miscarriage. In other cases, the child may be born prematurely, have low birth weight, suffer damage to its brain and nervous system, and experience learning and behavioral difficulties later in life. Lead exposure in infants and young children can also damage the brain, nervous system, kidneys, and liver; cause learning and behavior difficulties; reduce muscle and bone growth; and damage hearing. In adults, lead exposure can cause reproductive problems for both men and women, high blood pressure, digestive and nervous system problems, and difficulty with memory and concentration.

While no amount of lead in the body is safe, the higher the level of lead in the blood, the greater the effects. In children, very high levels can cause deafness, blindness, coma, convulsions, and even

death. Moderate levels, too, can harm the brain and nervous system, kidneys, and liver. Even very low levels, which do not cause any obvious symptoms, are associated with decreased intelligence, behavioral problems, decreased growth, impaired hearing, and decreased ability to maintain a steady posture.

Moreover, these problems remain long after childhood, as the effects of lead on the brain may be irreversible. In comparison with children who have not been exposed to lead, children who have been exposed are much more likely to have problems with reading, vocabulary, attention, and fine-motor coordination, as well as greater school absenteeism and lower class ranking. They are more likely to drop out of high school.

Symptoms of Lead Poisoning

Children with lead poisoning may not look or act sick. Even if children do show some signs of lead poisoning, these symptoms can often be mistaken for other illnesses, such as the flu, or other health conditions or learning and behavior problems.

In general, early symptoms may include tiredness or restlessness, headache, stomachache, constipation, irritability, and poor appetite. As more lead accumulates, children may become clumsy and weak, and they may lose skills that they have already learned. More severe symptoms may include vomiting, loss of sight or hearing, and lapses in consciousness (that is, going in and out of consciousness).

Infants and toddlers who have been lead poisoned may cry or fuss excessively, have feeding or sleeping problems, and seem very sensitive to touch, tastes, noises, smells, or sounds. They may seem irritable and hard to comfort or soothe. They may be late in babbling and saying their first words. These symptoms are not unique to lead poisoning, however.

Preschoolers who have been lead poisoned may seem excessively active, uncooperative, fidgety, impulsive, and distractible. They may talk excessively and not appear to listen to what is being said to them. Many of these behaviors, of course, are normal for some preschoolers at least some of the time, so these behaviors alone do not clearly point to lead poisoning.

School-age children with lead poisoning may show various problematic behaviors in school, such as failing to finish class assignments, disrupt-



Child in hallway with peeling paint (Laura Dwight)

ing their classes, performing poorly, showing inability to tolerate frustration, having learning problems, being easily distracted, needing a lot of supervision, and having difficulty concentrating. Adults with lead poisoning may experience fatigue, irritability, anxiety, depression, headache, sleeplessness, and tremors. They may have digestive problems, such as constipation or diarrhea, stomachache, cramps, and vomiting or nausea, or have a metallic taste in their mouths. Their skin, especially facial skin, may become paler than usual. They may lose weight, have a diminished sex drive, and experience muscle or joint pain or weakness in their arms, legs, or wrists. People who are not lead poisoned may show some of these symptoms from time to time. However, if lead poisoning is suspected, the person should be tested by a medical professional.

Testing

The only way to know for certain if someone has lead poisoning is through a blood test, which may be either a simple fingerstick or a venipuncture (drawing blood from a vein). The U.S. Centers for Disease Control and Prevention (CDC) recommend universal screening for children ages 1 to 2 years if the children live in high-risk areas, and targeted (limited) screening for children in low-risk areas, depending on whether children have individual risk factors, such as living in older housing.

Blood lead levels are measured in micrograms per deciliter of whole blood (written as $\mu\text{g}/\text{dL}$, the standard expression for measures of blood lead levels). The CDC defines elevated blood lead levels, or “levels of concern,” as those greater than or equal to $10 \mu\text{g}/\text{dL}$. The U.S. Department of Housing and Urban Development (HUD) defines lead poisoning as a blood lead level of $20 \mu\text{g}/\text{dL}$ on a single test or $15\text{--}19 \mu\text{g}/\text{dL}$ on two consecutive tests. State and local health agencies may use somewhat different definitions of lead poisoning. However, some researchers now believe that even the threshold of $10 \mu\text{g}/\text{dL}$ is too high, as harmful health effects are found at much lower blood lead levels.

Since the 1970s, childhood lead poisoning has decreased in the United States because of limitations imposed on lead in gasoline, paint, and food cans. However, it remains a significant environmental health problem, and CDC in 1997 estimated that 890,000 U.S. children ages 1 through 5 years had blood lead levels of concern. Because

lead poisoning is often associated with deteriorated housing, the problem disproportionately affects low-income, urban, and minority children.

Treatment

When children have elevated blood lead levels, the first concern is to remove the source of lead exposure. Physicians may also recommend dietary changes, to ensure that the children eat frequently (a full stomach slows the absorption of lead), and have balanced meals that are low in fat and contain sufficient iron, calcium, and zinc, which may help to combat lead’s harmful effects. CDC recommends that children with blood lead levels of $20 \mu\text{g}/\text{dL}$ or above have a complete medical evaluation, and that children with blood lead levels of $45 \mu\text{g}/\text{dL}$ or above be given medical treatment called chelation therapy. Chelation therapy can reduce the level of lead in the body but cannot reverse the damage that lead has done.

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See also: Child and Family Poverty; Lead-Safe Environment

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Lead-Safe Environment

A lead-safe environment is one that is free of lead hazards that expose people to the risk of lead poisoning, treated in its own entry. Lead, a toxic (poisonous) metal that has been mined for thousands of years, has been used in common household

items such as paint, gasoline, water pipes, food cans, ceramics, cosmetics, and folk remedies. Although U.S. laws and regulations since the 1970s have greatly reduced the amount of lead emitted into the environment, people today are still commonly exposed to this dangerous element. Maintaining a lead-safe environment is the best way to prevent lead poisoning.

In the United States, lead-based paint and lead dust from that paint are now the major sources of lead poisoning in children. Until 1950, lead was a major ingredient in some interior and most exterior house paints. Some paints contained as much as 50 percent lead by dry weight. The older the house, the more likely it is to contain lead-based paint. Because it is durable and moisture resistant, lead-based paint was often used on windows, doors, and porches, and on walls in kitchens and bathrooms. In 1978, the Consumer Product Safety Commission banned lead-based paint for residential use, although it is still permitted for some other uses, such as marine and bridge painting. The U.S. Department of Housing and Urban Development (HUD) estimates that more than 38 million homes built before 1978 have paint that contains lead; in 23 million of those homes, the lead-based paint may represent a health hazard.

Intact lead-based paint—paint that is not flaking, peeling, or chipping—may not represent a hazard if it is not disturbed. But if the paint weathers or deteriorates, or if it is disturbed during home maintenance, repairs, or renovations, it can produce dust that may be inhaled or swallowed, which is especially dangerous for young children. If the paint is heated, it can produce dangerous fumes that may be inhaled. Intact paint may also become a hazard, if, for example, it is on accessible surfaces (like windowsills) that young children might chew. Children sometimes eat lead paint chips because they taste sweet. In housing where lead-based paint is present, adults should keep areas where children play as dust-free and clean as possible. Floors should be wet mopped and other surfaces wiped with damp cloths frequently. Children's hands should always be washed before they eat.

Lead hazards are controlled by two types of methods: interim methods (temporary controls) and abatement (permanent controls). Interim methods including removing dust and stabilizing paint so that it does not deteriorate further. Abatement, which must be performed by properly trained

and equipped professionals, includes removing or permanently enclosing hazardous components.

Lead-safe work practices can safeguard against creating lead hazards during home maintenance, repairs, and renovation. These practices are based on the principles of minimizing the creation of lead dust, working wet to prevent dust from spreading, and cleaning up carefully (U.S. Department of Housing and Urban Development 1999). Adults who work in lead-related industries (such as radiator repair, battery manufacturing, smelting, welding, or bridge work) or crafts (such as making bullets or fishing sinkers) may be exposed to lead on the job, especially if there is inadequate ventilation or other safety precautions. Adults may accidentally bring home lead dust on their clothing, shoes, or hair, jeopardizing other family members. Whenever possible, workers in such industries should change their clothing and wash before coming home. Work clothing should be laundered separately from family laundry.

Lead can enter drinking water by leaching from old lead pipes, solder, and fixtures. In the 1980s, the Safe Drinking Water Act restricted the use of lead in pipes, solder, and other elements of public water systems and plumbing, but many old pipes are still in place. This water is especially dangerous if it is used to make infant formula. Water that has not been run for several hours may contain higher lead levels, so allowing water to run until it is cold reduces the risk. Water can be tested for lead.

From the 1920s until the 1970s, lead was added to gasoline to prevent engine “knocking” or ping-pong in automobiles. Lead from auto exhaust became a major source of lead contamination in the air and soil. In 1978, the U.S. Environmental Protection Agency (EPA) reduced the amount of lead allowed in gasoline, but only after an estimated 5 million tons of lead particles had been deposited in the soil near roads, especially around densely populated urban areas. Since lead does not break down or decay, old lead deposits in soil may still represent a danger if food is grown in the contaminated soil, or if children playing in the soil inhale or swallow lead dust. Soil can also be contaminated by airborne lead from lead-related industries, such as smelting, battery manufacturing, and radiator repair, and the burning of lead-painted items. Children should not be allowed to play in bare soil, and they should wash their hands after playing outside. Family members should remove

shoes at the door to avoid tracking lead dust into the house.

Folk remedies from various cultures that contain lead include *alkohl* or *kohl* (used for skin infections and as an eye cosmetic), *bala goli* and *kandu* (for stomachache), *ghasard* (used as digestive aid), *pay-loo-ah* (for rash or fever), and *greta*, *alarcon*, *azarcon*, *coral*, *liga*, and *rueda* (for intestinal illness).

Lead can also be found in old or imported lead-glazed dinnerware and lead crystal. These items should be reserved for decorative usage, not food service or storage. Lead solder used to seal canned food may get into the food. Although lead solder was banned in the United States in 1995, imported cans may still contain it. Food should never be stored in cans. Lead may be present in some hair dyes, miniblinds, candles, and printing inks. Lead paint is sometimes found on old or imported toys or furniture. Such items should not be used for children. Eating a low-fat diet that includes iron and calcium may help the body to absorb less lead.

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See also: Lead Poisoning

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Leisure Activities among Young People

Adolescents' leisure activities include playing sports and games, socializing with friends, watching television, listening to music, and working on hobbies—activities that are conducted in different

ecological contexts. By definition these activities are chosen by the young, in contrast to obligatory activities, and are typically not meant to serve any practical purpose. They are therefore usually associated with a better mood than activities at school and work. Overall, leisure time in North America and Europe amounts to about 40 percent of waking hours, more than school and work combined. More concretely, adolescents spend from 6.5 to 8 hours per day on leisure activities in North America, 5.5 to 7.5 hours in Europe, and 4 to 5 hours in East Asia (Larson and Verma 1999). Although some activities may be wasted time from a developmental standpoint, the majority of spare time is passed in contexts that are influential for psychological development.

Structure and Content of Leisure Activities

Leisure activities range from having virtually no structure to being highly complex, from solitary activities to collaborative engagement in groups, and from receiving societal condemnation to receiving public and financial support by the community or other social agents. Highly structured leisure activities, such as extracurricular activities, are characterized by regular participation schedules, rule-guided engagement, direction by adult activity leaders, and emphasis on skill development. By contrast, many adolescent leisure activities, such as hanging around with friends, are relatively spontaneous, take place without formal rules or direction from adult leaders, and feature few goals related to skill development (Mahoney and Stattin 2000).

In terms of more structured leisure, large differences exist between North America, Europe, and East Asia. Sports occupy at least one hour a day in the United States, compared to about half an hour per day or less in the other countries, with a declining trend across adolescence. The data for playing music and other structured activities show that these activities take up more time across adolescence.

As for media use, the most common activity is watching TV (about two hours daily) followed by reading (fifteen minutes in the US, forty minutes in Europe) and listening to music (about half an hour; Larson and Verma 1999). In recent years, computer games and new interactive media are challenging TV watching.

According to Leslie Raymore, Bonnie Barber,



Adolescents playing basketball (Skjold Photographs)

and Jacquelynne Eccles (2001), leisure activities can be clustered into five groups, which for the most part show only slight differences between genders. The “positive-active” group is especially engaged in socially valued activities, like volunteering for community projects. Adolescents in the “risky” group are higher than average in doing things for kicks (including substance use) and hanging out with friends. The “diffused” group spends little time in any activity, and thus exhibits no clear preferences. The “home-based” group is made up predominantly of females and engages mostly in activities at home with family (including TV watching), whereas the “jock” group has a higher proportion of males and engages mostly in sports-related activities. Across the transition to early adulthood, most of these clusters showed remarkable stability (about 40 percent of the individuals remained in the same cluster). Leisure activities can, however, also change dramatically. For example, entering a romantic relationship and becoming a parent predicted changes in leisure patterns in female, but not male adolescents (Raymore, Barber, and Eccles 2001).

Contexts of Leisure Activities

The main categories of companionship are family and peers. However, about 25 percent of an adolescent’s waking hours is spent alone in her bedroom, which is typically a private space decorated with trophies signifying her emerging sense of self. Here, favorite leisure activities are listening to music, reading magazines, watching videos, and daydreaming (Larson and Verma 1999). The time spent with family declines from childhood through adolescence, as the time spent in school and school-related activities increases. Being together with peers is often associated with adolescent leisure. During adolescence, time spent conversing with friends (particularly via the telephone) increases rapidly. Indeed, the figures for the United States and Europe show that adolescents spend up to 30 percent of nonschool waking hours going to parties, discotheques, and the movies, as well as other away-from-home activities (compared to less than half this time for East Asia; Larson and Verma 1999). On average, the time in company of other-sex peers in the United States and Europe represents about twice the time adolescents spend with family. As peers select one another on the basis of shared focal attributes

(school achievement, substance use, and the like) and also have a mutual socialization influence, this large amount of time is particularly interesting for developmental consequences.

Consequences for Psychosocial Development

Leisure activities are central to several developmental tasks during adolescence, such as identity formation, the building of peer relations, the initial exploration of intimate relationships, and socializing into adult roles.

The most developmentally relevant aspect of active leisure is the fact that such activities require initiative, planning, and organization of place, time, and content. The individuals have to exercise control over their actions and regulate their emotions. Indeed, adolescents entertain clear, age-graded conceptions of what they want to achieve, so that they look for leisure locales suitable to pursue such goals, and monitor how successful they are in this regard. Rutger Engels and Ronald Knibbe (2000) showed that adolescents who perceive a discrepancy between their current and hoped-for future state of romantic affairs seem to select leisure settings, such as pubs or discotheques, because they offer opportunities for contacts with the opposite sex. Moreover, once the mismatch between current state and future aspirations is resolved, their preferences change again, this time for more private encounters.

The development of individual and collective agency seems particularly to profit from engaging in structured leisure activities because of building existing skills and interests, providing links to competent adults and peers, and creating opportunities for feeling competent and accepted (Maloney and Stattin 2000). Shirley Heath (1999) reported changes in adolescents’ conversations about their activities once they had entered youth organizations. Remarkably, they referred more often to issues such as goal achievement or adjusting their behavior. Experiences in leisure also have a carry-over effect to other arenas, such as occupational preparation and socialization. Research on entrepreneurs has shown that they took responsibility for others in out-of-school contexts from early on (Schmitt-Rodermund and Silbereisen 1999). In addition, positive effects on self-esteem and school achievement were also reported as an outcome of participation in civic activities (Youniss, Yates, and Su 1997). However, some un-

structured leisure activities may have negative long-term implications, among others, because opportunities to engage in antisocial behavior are greater during unstructured leisure activities compared to highly structured activities. Joseph Maloney and Håkan Stattin (2000) showed that a combination of involvement in less structured leisure activities and the absence of any highly structured activities was associated with high levels of antisocial behavior (e.g., becoming drunk, vandalism), especially in adolescent boys.

Media are a main forum for information and participation in popular culture that serves important roles in identity formation. Listening to music helps to forge important elements of one's identity: Demonstrating shared preferences with others through behavioral style and outfit accessories helps location within an emerging social network. Adults are often concerned about TV programs and videos because of their portrayal of violence and its possible role in the development of aggression. Although the causal nexus is difficult to assess, studies do exist that indicate that exposure to media violence is prospectively related to aggression (Wartella 1995).

Future research needs to address further the particular psychological qualities of the activities in context. Without such information, research on the selection of leisure activities and the investigation of consequences for psychosocial development cannot take into account the role of the mediating links involved. New leisure activities such as interactive media, together with the role of societal change in general, are another focus of needed research.

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See also: Community Youth Development; Extracurricular Activity Participation; Information Technology Impacts on Children, Youth, and Families; Political Participation by Young People; Youth Development

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Lifelong Learning

As a field, human ecology holds as one of its main goals the enhancement of the well-being of all life. In pursuit of this goal, its activities in research and community service have a strong educational component. Education is viewed as key in promoting well-being, with an emphasis on adult learning as a primary means of shaping political, social, and economic forces globally and locally. An intersection of higher adult learning with the philosophical activities of human ecology began with Marjorie Brown's work (1993) on the historical analysis of home economics and the need for professional direction that promotes lifelong learning in adults.

The ability of an adult to recognize a need for learning is foundational to continued development of emotional, social, and intellectual maturity. Lifelong learning implies that as an adult, an individual actively pursues educational opportunities beyond the requirement of prescribed or vocational education. Not always formal, lifelong education includes not only organized educational opportunities in professional education, skills



Older adults attending an adult education course (Elizabeth Crews)

training, human resource development, and continuing higher education, but enrichment activities and the pursuit of hobbies or specialized interests. Lifelong learning as adult education is often referred to as andragogy.

The use of the term *andragogy*, (education of adults) first coined by Eduard Lindeman (1926) and later made popular by Malcolm Knowles (1980), distinguishes the unique needs of adults as learners from those of children in traditional classrooms. Pedagogy, the education of children, differs from adult education in that adult learners are viewed as being self-directed, experienced, problem oriented, and mature.

Adults typically enter into a learning situation with an identified need or problem. The information that is provided is judged on the basis of its usefulness or practical application to a specific situation. Though some lifelong learning is pursued for personal enrichment, most adults seek out educational information only on a need-to-know basis.

As mature learners, adults have accumulated stores of knowledge. When approaching a learning situation, adults tap into this knowledge for its

usefulness. What is known is measured against what needs to be learned, helping the adult student to avoid duplicating knowledge or losing valuable time.

Lifelong learning encourages critical reflection on experiences and accumulated knowledge. It encourages adults to question assimilated beliefs and values that shape behavior. The process of critically reflecting on one's beliefs and values involves the lifelong learner in a higher order of thinking skills, and the process can reshape one's overall perception of life. It is through critical reflection that the individual comes to recognize distorted beliefs and social injustices and to be free to act in an authentic manner. The experience of learning in small groups is considered necessary, so that the adult student can test out thinking in dialogue with others. Ultimately, the experience of learning is viewed as the highest resource in life, with lifelong learning enhancing both one's experience and one's sense of the meaning of life.

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See also: Intergenerational Programs in Communities
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Living Arrangements for Elders

Our physical environment is with us from the time of conception to the time of death. It surrounds us twenty-four hours a day, every day of our lives. We know that when our physical surroundings meet our personal needs and preferences we are likely to live healthy, happy lives. This situation is referred to as environment-behavior fit. When that fit is studied in relation to late life, the area of study is called environmental gerontology.

The purpose of this entry is to understand what constitutes environment-behavior fit among elders and the implications of it for developing living arrangements suitable to the later years. To achieve this goal, it becomes necessary to recognize the progressive nature of the aging process, become familiar with various types of settings available to elders who range in function from independent to dependent states, and become familiar with current trends and design innovations used to meet the developing needs of elders.

Progressive Nature of the Aging Process

Although the aging process is universal, the rate at which it occurs varies from person to person. Some people steadily decline in function along a downward slope. Others plateau at intervals along this continuum. Functional competence (biological health, sensorimotor functioning, cognitive skill, and ego strength) and ability to care for oneself determine the level of tolerance for living in a certain type of setting. It is safe to assume that an independent elder who successfully lives alone in a single-family home is highly functional. Being able to tolerate the physical stress required to master this environment means that the individual feels comfortable functioning in it.

As functional competence declines and tolerance for stress diminishes, it becomes necessary to modify the environment so that the individual re-

mains capable of mastering it with comfort. For example, in a two-story home where bathing and sleeping accommodations are on the second floor, individuals are required to be sufficiently mobile to use steps. When mobility becomes limited and tolerance for using steps declines, it becomes necessary to alter the environment by making available toileting and bathing facilities and accommodations for sleeping on the first floor. As a result of this change, total living space diminishes, and mastery of the physical environment is regained.

When functional competence declines to a point where the individual becomes unsafe in the living arrangement and is no longer able to tolerate the environmental stress that it requires for survival, relocation becomes necessary. This situation may evolve, to take one example, from a series of chronic illnesses compounded by a hip fracture. At this juncture, diminished functional states are matched with a more accommodating environment to achieve person-environment fit and optimize well-being.

Changes in late life that disrupt person-environment fit are associated with one's ability to carry out the activities of daily living (ADLs). These activities focus on self-care and include bathing, dressing, using the toilet, getting into or out of a bed or chair, getting outside the house or apartment, and being able to feed oneself. Research shows that ADLs are ordered along a progressive level in the way they indicate functional decline. For example, inability to bathe oneself represents the least restrictive functional limitation, while inability to feed oneself is the most restrictive and severe. The latter is highly associated with the presence of other problems (Kart 1997).

Each of the ADLs interfaces personal ability with physical environmental qualities. Changes in one require readjustments to others in order to maximize fit. When bathing becomes unsafe to elders, it may become necessary to use a shower that is designed in a way that is sensitive to functional shortcomings. Limited flexibility may require a sloped floor rather than a curb in the shower floor to guard against tripping. A fold-up shower seat, accessible to those who need to sit, responds to lessened strength and endurance for standing. A sensor might be used to automatically start the shower upon entering and to regulate the temperature to prevent burns. Furthermore, an adjustable handheld shower fixture may ease limited range of motion.



Home care suite, exterior view (Journal of Housing for the Elderly 3, page 118)

Good environmental design requires that the physical setting should adapt to variation in levels of function. If an older person's limited abilities are restored to a higher level of functioning, it becomes necessary for the physical environment to provide options that heighten the challenge in achieving a sense of mastery. These types of reciprocal interchange are instrumental in achieving levels of maximum performance potential and reestablishing balance in the environment-behavior relationship.

A Continuum of Care Framework

Settings that accommodate elders who range in function from independent to dependent states are represented in a continuum of care (COC) framework (Morton 1981). This framework combines services with environmental design features to meet the needs of individuals who range in function from independent to dependent. As frailties develop and progress, the need for assistance with ADLs in the form of services and environmental interventions develops and gradually increases.

An *independent living arrangement*, such as living in one's own home, is a suitable choice for elders who master all ADLs independently. The first

step in the COC framework is apartment living, with age and income prerequisites and possible governmental subsidies. Elders who do well in this type of residence are those who do not require services to assist with ADLs.

Residents in *congregate care facilities* require a very low level of assistance. Services pertain to one or two ADLs, the most common being meal preparation. In congregate care facilities, meals are available or accessible. Emergency systems or coordinating staff, or both, are present, and the physical design of apartment residences focus on architectural accessibility.

Although most elders will not require each type of housing within the continuum of care framework, it is expected that most will need the services and environmental features provided by *assisted living*. The functional status of elders who need assisted living arrangements, as measured by the ability to achieve ADLs, is characterized as being semi-independent; residents commonly need assistance with at least three ADLs. This type of housing provides a cadre of services that range in quantity from moderately low to moderate. Services commonly include meals, housekeeping, personal care, and some degree of medical assistance.

The physical designs of assisted living facilities emphasize a residential as opposed to an institutional (i.e., hospital-like) appearance. Spaces in private units or apartments are organized as they would be in a conventional home for the purpose of sleeping, eating, leisure, and hygiene. The design of the entire facility aims to reinforce human scale and create homelike qualities. Assisted living is considered key to preventing premature institutionalization (Kalymun 1990).

Residents in *long-term care* (LTC) facilities, sometimes called nursing homes, require services that range in intensity from moderate to moderately high. Some residents are mobile, while others are bedridden. Most are wheelchair bound. Residents may require assistance with most or all ADLs. A distinguishable characteristic of nursing homes is the availability of medical care provided by licensed nursing staff. All meals, housekeeping, and assistance with all activities are included in an LTC service program.

Since residents of LTC arrangements are high consumers of medical services, there has been a tendency to design these facilities like hospitals as opposed to homes. Emphasis is placed on the delivery of medical services and the needs of care providers, as opposed to the need of residents and family members for a homelike setting. Institutional settings typically consist of double-loaded corridors (resident rooms on each side of the hallway) with private or semiprivate rooms. Some residents are located next to a window, others are not. Florescent lighting is placed overhead and controlled by staff. Privacy is established by curtains that surround the bed. Bathroom facilities are shared. Control of entry into the room is in the hands of staff as opposed to residents.

The most intensive accommodations for elders are provided by *acute care hospitals* or *rehabilitation centers*. These facilities provide diagnoses, medical supervision, surgery, and therapy. The level of services made available to achieve ADLs is high. The architectural qualities of these facilities are largely oriented to providing medical service. Emphasis is placed on a design that accommodates medical staff as they provide care, as opposed to what might be environmentally appropriate for residents. For example, patient need for space to display greeting cards, family photographs, and calendars competes with the need of care providers for space to store dressings, treat-

ments, and other medical accessories. The night table and windowsill are equally coveted by medical care providers and family members. Seating accommodations for guests are limited. Often the scale of furnishings is inappropriate for the space available (Kalymun 1997).

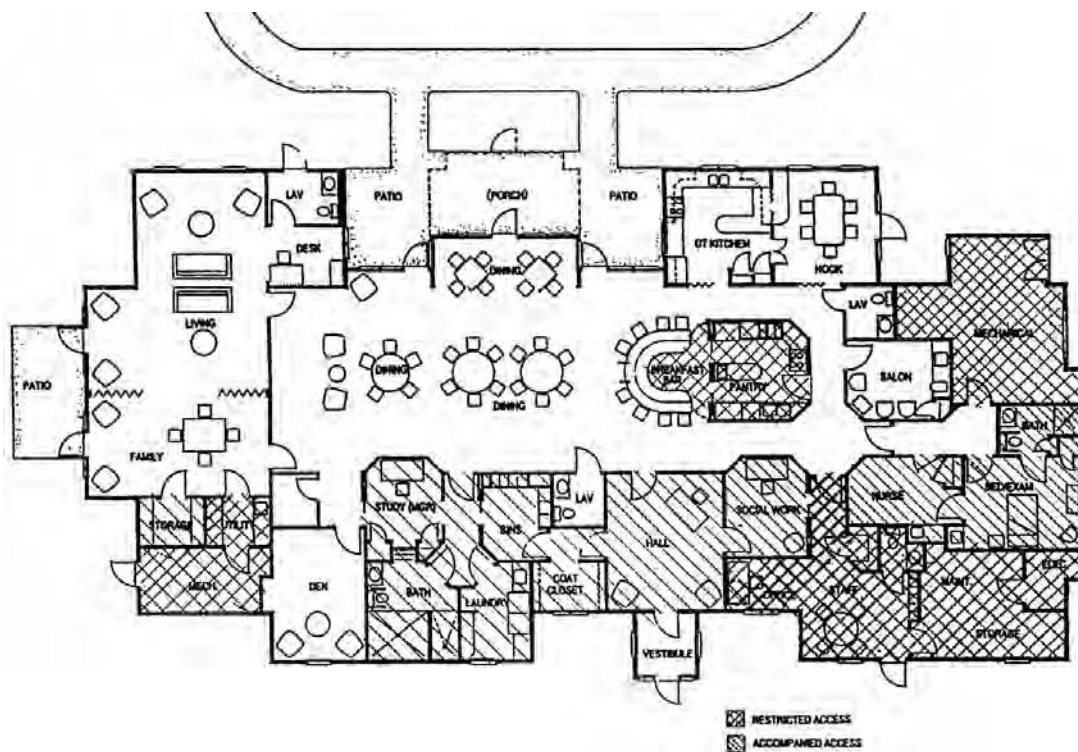
What often happens at this point within the COC sequence are periodic shifts in residence from LTC facility to acute care hospital. This back and forth occurs when elders are in need of more intensive medical service not provided by LTC facilities, or when elders recover from the condition that made them need a hospital and take up dwelling in a LTC facility.

A *short-term care* component that sometimes intervenes within the COC sequence is hospice care. It provides support to terminally ill patients who reside somewhere within the COC framework. In some instances, elders live at a hospice care facility, while in others, hospice care comes to the home. An environmental philosophy of hospice care is to create a homelike setting for the recipient of care and family members.

Current Trends and Design Innovations: Settings for Alzheimer's Patients

Obviously some of the current components of the COC sequence leave something to be desired, but new approaches offer the possibility of real improvement. For example, those who design long-term care facilities could learn from design innovations being suggested for Alzheimer's patients.

What do we know about Alzheimer's disease that would guide the design decisions for specialized settings? Problematic areas for people with this disease involve a decline in brain function. For example, short-term memory loss is demonstrated when individuals are unable to recall what they ate for breakfast minutes after having eaten. With the loss of communication skills, it becomes difficult to complete a thought or find the right word to articulate an idea. People become disoriented in time, not knowing the time of day, day of the week, or season of the year. Disorientation in place is characterized by not remembering how to get from one location to another. A person may be able to navigate from the bedroom to the bathroom but not be able to find the way back. Eventually, disorientation in regard to people occurs when close relatives are not recognized or are mistaken for others.



Home care suite, floor plan (Journal of Applied Gerontology 16:4, p. 463)

Gradual and consistent decline in ability to achieve ADLs is compounded by incontinence and disturbances in the sleep and wake cycle. Night walking and wandering are common. Psychological and emotional disturbances are demonstrated by inappropriate social behavior; being agitated and restless; and being suspicious, angry, hostile, and fearful. Paranoia, hallucinations, and catastrophic reactions may result from misinterpreting environmental cues. Watching a televised report of a fire may be interpreted as a fire in the special care facility.

Researchers (Cohen and Weisman 1991) have suggested that these problematic behaviors be addressed by formulating therapeutic goals that would guide the physical design of special care units. John Zeisel and his associates (1992) have identified critical areas of concern when designing special care units for Alzheimer's day care. They include the following:

- Residential scale
- Exit control
- Common spaces

- Individual private spaces
- Wandering paths
- Autonomy support
- Noise comprehension
- Outdoor freedom

Residential scale is achieved through the size of spaces and ways in which size conveys a sense of familiarity to clients. Rooms that accommodate six to eight people are similar in size to those in a traditional home. When residential furnishings and accessories are added, clients experience the home setting as a familiar place, one that they recognize as a place to relax. In this type of setting, staff members are inclined to relate to clients personally. Large spaces cause overstimulation, confusion, and disorientation. In institutionally furnished surroundings, clients are likely to become restless, disoriented, depressed, and apathetic.

Exit control is extremely important to ensure the safety of clients and to minimize heightened anxiety and management problems. Unobtrusive exits avoid visual cues that encourage clients to leave the facility. When doors and handles are



Flexible life span option, exterior view (courtesy of the author)

painted the same color as the surrounding walls, they fade into the background and become unrecognizable. Viewing the parking lot cues clients with a desire to leave the facility; therefore, fabric shades are used to avoid such cuing. Other measures used to control exits rely on signals and devices, like keypad controls and delayed action panic bars. Controlled access to areas within a facility is also achieved through the use of gates, Dutch doors, and a receptionist.

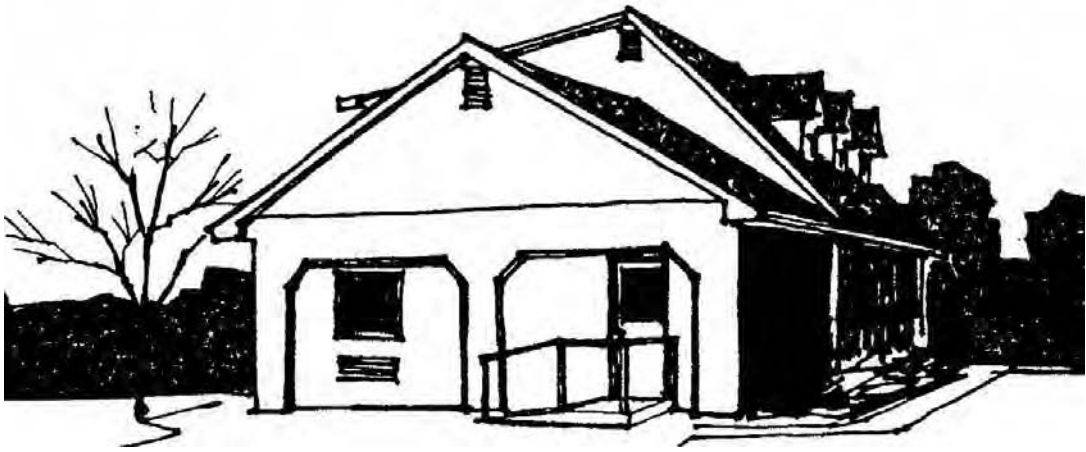
Some areas are intended to function as *common spaces* wherein clients come together for social interaction. These areas provide cues for appropriate behavior. In the kitchen, a client is cued to cook, bake, do the dishes, or help herself to snacks as appropriate. The living room cues sitting, looking through magazines, talking, observing the outdoors, or perhaps listening to music. Each of these spaces provides residents with opportunities for therapeutic social interaction by providing cues and supporting appropriate behaviors.

Individual private spaces are located out of the mainstream. They are useful in calming clients when highly restless, anxious, and agitated, or ill. When clients become overly stimulated, these areas function as places to retreat and regain sta-

bility. Remote areas often support small-group activities that involve quiet mental exercises or discussion groups. In residential, as opposed to day-care facilities, this is the space that serves as a person's bedroom, with personal belongings that reinforce a sense of identity.

Wandering paths help to reduce anxiety and restlessness in clients. When continuous, as in a loop, they spare individuals being confronted with a dead end without any place to go. Wandering loops provide the opportunity to walk endlessly. Interesting things to taste, smell, or touch along the way stimulate the senses. Therapeutic walking is enhanced by providing individuals with opportunities for engaging activities that divert them from the path. Views into an activity area like a dinette, kitchen (for occupational therapy), living, dining, or family room, den, or patio provide opportunities for involvement in recognizable and meaningful activities. These involvements reinforce a sense of competence.

When facilities encourage clients to use their remaining abilities for self-care without the danger of hurting themselves or others, clients are being given effective *autonomy support*. For example, as a way of enabling clients to dress them-



Exterior view, Louis Feinstein Alzheimer Daycare Center, Cranston, Rhode Island (Architect: John Robinson of Robinson Design, Smithfield, Rhode Island)

selves, staff members might suggest a choice between two outfits, as opposed to several. As this ability diminishes, items of clothing might be laid out on the bed in the order of dressing to achieve the same goal. Similarly, the ability to feed oneself may be prolonged by introducing a slightly modified use of dinnerware and flatware. Good sight lines for constant staff surveillance are essential for autonomy support.

The need for easy *noise comprehension* requires making it easy for clients to understand and interpret the sounds they hear. People become confused when sensory signals are complex and coming at them too fast to interpret. Hearing music, which is then overridden by intercom announcements, and hearing outside noise from trucks and pedestrian traffic at the same time contributes to confusion. A therapeutic environment for sensory stimulation provides moderate amounts of sounds, sights, smells, tastes, and tactile experiences with content that is understandable and meaningful to the client.

In order for clients to enjoy *outdoor freedom*, they must have immediate access to the outside, requiring the outdoor area to be on the same level as the special care unit. Direct access facilitates maximum use of the outdoors by clients and easy surveillance by staff. With secure outdoor spaces, clients are able to move about freely. Therapeutic benefits are derived from exposure to daylight and direct sunlight, and from the experience of seasonal temperatures and various weather conditions. Planters of standing height allow clients to

have contact with the earth while attending to an herbal or flower garden. Accordingly, nonpoisonous plants are selected to guard against clients ingesting vegetation that could be harmful. Doors to the inside of the facility must remain visible to clients so that they can independently return when they wish. Each of these measures is helpful to support optimal functioning among clients.

Prolonging Residency in a Single-Family Home

Attempts are continually being made to develop houses that would be suitable to elders as they decline in function. As ability to travel distances and use stairs diminishes, elders tend to cluster their activities into a central area. Two-story homes are often modified by making available areas for sleeping, bathing, and toileting on the first floor.

In a single-story home, the living and sleeping areas (zones) gradually come together as one, no longer divided and physically distant. The living area, consisting of living, dining and family rooms, often adjacent to a half-bath and laundry room, becomes an independent unit when one of the rooms from the living area is converted into a bedroom. The new way in which these spaces are used eliminates distances and reduces the area used for daily living.

A third model accommodates more than one family. It consists of a single-family home with an annex that provides exclusive living accommodations for elders. This arrangement may consist of a self-contained unit that is attached or unattached to the main house; or it may represent converted

space within the main house that functions independently. Current models are being developed as a new long-term care alternative and a flexible life span option.

Home Care Suites: A New Long-Term Care Option

Home care suites are being studied as a new long-term care option for families who wish to care for their elder members at home. This arrangement represents a private fully accessible modular unit, temporarily installed in an attached garage.

Installation and removal of the suite can be accomplished within forty-eight hours, and all utilities are connected to the main house. Safety and accessibility features include nonskid flooring, pull-out shelves, slide-in bathtub, grab bars, intercom for communication between the apartment and the main house, and fire sprinklers. The front of the apartment takes the place of garage doors and is equipped with a ramp or wheelchair lift that leads to the interior of the apartment (Altus and Matthews 1999).

The interior space consists of a combined living and sleeping area, a full bathroom, and a doorway leading to the adjoining house. When accommodations in a home care suite are compared in cost to institutional living, the former is estimated as half, without the added expense of food, care, and utilities.

For home care suites to succeed as LTC, they must be recommended by professionals and endorsed by caregivers. Recent studies have shown that caregivers are more likely to consider this model when elders live in the community and require added care. This model is used to replace institutional care. The advantages of a home care suite include privacy for elders and proximity to caregivers. Disadvantages have to do with the danger of caregiver burnout (Altus, Matthews, and Kosloski 1997).

A current model providing a *flexible life span option* is being driven by the real estate market to enhance investment potential by using what is called universal design, appropriate to meet various situations during the life span. This concept is based on creating a user-friendly physical environment without visual evidence of catering to any specific population with special needs. A floor plan that originates with this design concept is characterized by its flexibility in meeting the needs of various circumstances throughout the life course.

Spatial configurations can be readily modified (twist and bend) as need demands.

This highly flexible plan takes into account the needs of elders to prolong their independence. An apartment with a private front entry consists of spaces that are consolidated, useful, and efficient. (See Figure 6, Floor Plan.) Spaces are configured in a circle, with the kitchen being central. The living room, bedroom, dining area, and bathroom surround the kitchen. This plan diminishes distances, and structurally it provides physical supports to lean on and rest as individuals travel around the loop. In the bathroom, the vanity is extended to provide a leaning surface that helps propel a person from a seated to a standing position. The floor surface is level throughout, without the obstruction of thresholds or doors. This feature accommodates easier maneuverability if a walker or wheelchair becomes useful. Generous amounts of natural light are present at every point in the unit, with numerous outdoor views.

A particular challenge for designers is to create spaces that can be modified or manipulated as needs develop. In this plan, an entry closet has dimensions to accommodate a stackable washer and dryer. Expandable screens may be used to add privacy between areas, especially between the bedroom and living room. A study area with built-in shelves and desk may be useful as a hobby area; or, with a dresser, as a display area for meaningful objects. Ample display areas are available throughout the apartment, with the availability of picture frame moldings and surfaces above the kitchen cabinets. As Mary Kalymun observed (1986a), elders value display areas for meaningful objects that remind them of who they are. Transition space between the main house and the apartment consists of a solarium that affords protected exposure to the outdoors.

This plan lends itself to meeting the changing needs of elders prior to and during the continuum of care spectrum. For example, it may function as a rental unit during the earlier years, and as the need for space diminishes, owners may decide to live in the apartment and rent the main house. This plan provides flexibility for travel options during the retirement years. Furthermore, it accommodates multigenerational living, wherein middle-aged families are accessible to elderly parents. Mary Kalymun observed (1986b) that multigenerational households are most desirable when

they afford privacy, suitable spatial arrangements, and a sense of territoriality for elders.

Mary Kalymun

See also: Aging and Technology; Death: A Family Perspective; End-of-Life Decision Making; Housing and Older Adults; Mental Illness in Old Age; Older Adults: Preparation for Future Care; Outdoor Mobility in Old Age; Place Attachment

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Low Birth Weight Infants

Low birth weight is second only to congenital birth anomalies as a leading cause of infant mortality in the United States (National Center for Health Statistics 1998). The most common contributor to low birth weight in the United States is preterm birth, an event whose etiology is largely unknown (Widerstrom, Moudar, and Sandall 1997, 12). An infant born weighing less than 2,500 grams, or 5.5 pounds is classified as a low birth weight infant (LBW). An infant born weighing less than 1,500 grams, or 3.5 pounds, at birth is classified as a very low birth weight infant (VLBW). Those weighing less than 1,000 grams, or 2 pounds, are described as extremely low birth weight infants, and those weighing less than 800 grams, or 1 pound, 12 ounces, are considered micropremies (Bernbaum and Batshaw 1997, 115; Snow 1998, 64). "A small for gestational age (SGA) infant refers to a newborn whose weight is below the 10th percentile for gestational age" (Bernbaum and Batshaw 1997, 115). Infants who are born low birth weight or small for gestational age may be premature or born at term.

Multiple systems influence the developmental as well as the physiological outcomes for infants born low birth weight. Many factors contribute to an infant's survival in the outside world, birth weight and gestational age being two of the most important contributing factors (Snow 1998, 64). Infants born low birth weight have higher rates of neonatal complications, neurodevelopmental impairment, and death than full-term appropriate for gestational age (AGA) infants (Bernbaum and Batshaw 1997, 116; Kohlhauser et al. 2000, 445). Neonatal complications, related to low birth weight, can lead to cerebral palsy, learning disabilities, and multiple developmental delays. Unfortunately, we do not understand all the factors that contribute to low birth weight in infants. More is known about the outcomes of low birth weight than the causes. However, with infants born at term, intrauterine growth retardation has been identified as causing low birth weight. Some known causes of intrauterine growth retardation are genetic conditions, congenital infections, maternal malnutrition, placental abnormalities, and



Infant weighing less than 5.5 pounds (Elizabeth Crews)

maternal ingestion of adverse substances (Snow 1998, 69).

In an attempt to improve the outcomes of infants born with low birth weight, neonatal intensive care units (NICUs) were established to provide specialized care to the infant and family. The NICU becomes the infants' microsystem. Infants born early and with low birth weight are at high risk for developing chronic lung disease, intraventricular hemorrhage, retinopathy of prematurity, and necrotizing enterocolitis, thus requiring intensive medical care (Als and McAnulty 1996, 21). Advances made by neonatal intensive care units have greatly decreased the mortality rate and occurrence of disability for low birth weight preterm infants (Als and McAnulty 1996, 21).

In addition to the necessary medical care, an infant in the NICU must receive specific individualized developmental care. "Neurodevelopmental care recognizes the infant as an active participant in their own development and supports the family in their role as the infants' most important nurturers" (Als and McAnulty 1996, 21). For parents of low birth weight infants there are many uncertainties,

including how to parent a child who is medically fragile. Parents often do not know what kind of expectations to have if their infant is born low birth weight and/or preterm. Infants born too small are at risk for a number of complications during the newborn period and early infancy; these complications can place low birth weight infants at increased risk for developmental disabilities (Bernbaum and Batshaw 1997, 115; Kohlhauser 2000, 442). Developmental delays in language, perception, and motoric and cognitive skills, along with behavioral issues, are also associated with low birth weight. As birth weight decreases, developmental problems often increase (Hack, Klein, and Taylor 1995, 1). Low birth weight infants also experience more health-related problems leading to limitations affecting normal daily living (Hack, Klein, and Taylor 1995, 1), attachment issues, and social competence. The manner in which the family and the health care professionals bridge the multiple systems of care has influence on the infant's developmental and physical outcomes.

Early developmental care along with early intervention or enrichment programs are important

in the process of monitoring development and remediating delays associated with low birth weight. Enrichment programs help families connect with their infant by focusing on all aspects of the infant's development and encouraging them in their role as primary caregivers. Such programs provide parents with opportunities to share their experiences with other families and increase their interaction techniques. Research indicates that programs that are designed with a strong family support system along with educational curriculum and medical follow up demonstrate improvements in IQ scores and social skills for low birth weight infants (Hack, Klein, and Taylor 1995, 12).

Julie C. Parker

See also: Birth; Bronfenbrenner, Urie; Child and Family Poverty; Lead Poisoning; Prenatal Development and Care; Smoking and Tobacco Use; Women, Infants and Children (WIC), Special Supplemental Nutrition Program

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M

Macy, Icie G.

Icie G. Macy was a pioneer women scientist. She contributed notable information on the nutritional needs of mothers during pregnancy and lactation and on the growth and development of children; her work included determining the composition of human milk. It would be of interest to know how it came about that Icie Macy's field of specialization was a physiological chemistry, and more especially, what prompted her to use that training in research for the well-being of children and their mothers.

She was born in 1892 on a farm near Gallatin, Missouri. Her parents wanted all of their children to be educated, their two daughters as well as their two sons. Icie and her sister attended Central College for Women, where Icie majored in music. When she learned that giving a piano recital was a requirement for graduation in the music major, she was distressed and shifted to an English major. At the college, there was one course that genuinely interested her. That course was biology, which gave her a glimpse into science. On her graduation from Central College for Women with a B.A. degree, she made it known to her parents that she wished to continue her studies and to do so in science. She then became a student at Randolph Macon College for Women during 1914–1915. There she had her first course in chemistry. Her favorite teacher was a part-time graduate student in chemistry at the University of Chicago. This teacher encouraged Icie to study more chemistry and to do so at the University of Chicago. Her adviser there was the eminent chemist, Alfred Stieglitz. After graduation

from the University of Chicago in 1916 with a B.S. degree, she had a position at the University of Colorado as a teaching assistant in freshman chemistry. She was the first woman to teach chemistry there. In addition to teaching, she studied for her master of science degree in chemistry.

In her second year, something significant in Icie Macy's career happened. She was assigned to be an assistant in the physiological chemistry course under the direction of Robert C. Lewis, who had just earned his Ph.D. degree at Yale University. He told her that physiological chemistry and nutrition were ideal fields for women. He encouraged her to go to Yale to study for her doctorate, which she did. Her adviser was Lafayette B. Mendel, whom she called her friend and "revered" counselor. She graduated from Yale with the Ph.D. degree in 1920. Now that her education was complete, she expressed herself concerning the kind of work she would like to do: to apply chemistry to the health problems and the lives of humans.

Her career began with a yearlong service as a biochemist in a hospital laboratory in the city of Pittsburgh, Pennsylvania. Her chief was a man, who treated her less well than the rest of his staff because she was a woman. When a dinner was given for all, she was not invited. Her next position was at the University of California at Berkeley, in the Department of Household Science, where she taught food chemistry.

Then came the opportunity for the position Macy had dreamed of having: She was invited to develop a Nutrition Research Project at the Merrill-Palmer School of Motherhood and Child De-

velopment in Detroit, Michigan. She accepted the offer and established the Nutrition Research Laboratory of the Merrill-Palmer School. It was in full operation at the Children's Hospital of Michigan when that Detroit institution was looted during the 1924 race riots. In 1931, the program was transferred to the Children's Fund of Michigan, a charitable organization promoting the well-being of children.

The object of Macy's research was to improve the health and nutrition of children, beginning with the gestation and lactation periods of motherhood. At that time, the nutritional requirements of women during reproduction had not been studied. Macy initiated a series of metabolism studies of women during pregnancy and lactation, measuring the chemical intake of nutrients in food and the outgo in excretion. The amount retained indicated the need. The findings showed that well-nourished mothers provided for the needs of pregnancy and lactation and remained well.

The chemical composition of mother's milk, the ideal food for infants, was yet to be studied. Macy seized upon the opportunity to study it in cooperation with the Mother's Milk Bureau of Women's Hospital in Detroit. Mothers who produced more milk than their own infants needed would express the remainder for use by the hospital, thus providing milk for Macy's studies. Her findings provided the information needed to create infant formula and other foods for infants.

Another contribution of note was the study of the need for minerals (calcium, iron, and others) in school age children. The intake was determined by chemical analysis of food eaten and of the excretion. Children who were undernourished retained more of the nutrients in their bodies because their need was greater.

Something happened in Macy's life aside from her work. It was her marriage. She described the years when she was the wife of Raymond Hoobler as her happiest ones. She was 46 and he was 66 years old when they were married in June 1938. He was a well-known pediatrician who had been associated with Macy in some of her research. Their happy life together ended in June 1943 with Hoobler's death.

Soon after Macy had taken the position at the Merrill-Palmer School, her nieces Christine and Helen came to live with her. It was their mother's request at her death that they be cared for and ed-

ucated by Icie Macy. They were 7 and 8 years old when they came to live with their Aunt Icie. A kind and responsible housekeeper helped Macy make a home for the girls. Things worked out well, and they were happy living together.

Dr. Macy completed her professional career in 1954. She found her retirement years interesting. Arts, music, some travel, and association with educational and philanthropic groups were all a part of her interest. Her life ended in January 1964.

Eva D. Wilson

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Management

In a world filled with complexity and communication overload, it can be very challenging to focus upon the necessary information in order to set and meet objectives. The management process tries to make sense of information and assemble it so that objectives can be achieved. Although management is often identified with business, good management can also be applied in a much wider array of applications. There are four areas that have long been considered the foundation of effective management. These areas are *planning*, *organizing*, *leading*, and *controlling*. Many forms of management will focus upon one area in particular; it is not necessary for all four areas to be applied with the same intensity in order for the process involved to be considered management.

Planning involves setting goals and considering the best approach to achieving them. When we set goals, we are thinking about what it is that we would like to achieve over time, such as a high average in a physics class in school. If we are more specific in setting our goal, such as achieving an A average in physics, it becomes easier to identify when we have reached our objective. Planning also considers the path we may have to take in order to achieve our objective. For instance, if we know we want to attain an A average in science, we may plan

to finish all of the homework before each class, do assignments on time, and study for tests.

Organizing requires us to think about how we will manage our resources, such as time and money, in order to attain the goals we set in planning. As part of organizing to reach our goal of achieving an A in physics, we may establish when and how long we will study. We may also determine whether we need more books from the library or whether we should buy some from a bookstore. Organizing intends to establish and quantify the actions necessary to carry out our goals.

Leading is an essential component in management when undertaking activities with teams or large groups. Leading involves communicating with and influencing other members of the group so that everyone shares the same goal and is able to work cooperatively toward achieving the goal. In a team assignment, we may take a leadership role so that we are able to have others share our goal of attaining an A in physics. By our efforts, we may be able to motivate our team to produce a quality project that moves us closer to our own goal, while satisfying the shared goals of the team.

The *controlling* activity in management involves monitoring progress toward our goals and checking to see if we are on track or will be able to attain them as planned. For example, with our goal of an A in physics, we may need to check how other students are doing in the class to see if we are on our way to a high mark. If most people are doing better in their assignments and tests than we are it may be necessary to make some changes in how we are working toward our goal. Maybe it is necessary to increase the time spent studying, or introducing some extra time reviewing the material with a friend or tutor. The intent of the control activity is to ensure we meet our goals.

Andrew J. Gaudes

See also: Family Resource Management; Merchandise Management

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Maternal Deprivation

The term "maternal deprivation" describes the situation of a young child suffering prolonged physical and emotional neglect resulting from the absence of positive interpersonal relationships with caregivers. Maternal deprivation may have long-lasting effects on a child's psychological and physical development. John Bowlby was the first to use the term "maternal deprivation" in his 1951 World Health Organization (WHO) monograph, *Maternal Care and Mental Health*. This work led to the development of attachment theory, which has illustrated the developmental importance of parents forming an ongoing, consistent, and healthy relationship with their children.

The term "attachment" is used to describe the process that takes place between infants and mothers during the first few years of life. When an infant experiences discomfort or is in need of something, the mother responds by soothing and attending to the infant's needs. In response, the infant is comforted, and as this cycle is repeated during the first few years of an infant's life, an attachment relationship develops. However, children who have experienced severe early neglect or disrupted relationships with their mothers may form an attachment disorder or no attachment at all. These children may have a difficult or impossible time establishing relationships with others in the future, including their own children.

A variety of risk factors, or experiences, are associated with maternal deprivation. However, the consequences associated with these experiences are not inevitable. Certain consequences of maternal deprivation may apply only to children who are unusually vulnerable, due to their genetic predisposition or prior experiences. In addition, the length and severity of privation may also have an impact on whether or not a child will experience any behavioral difficulties or have difficulties in forming attachments with people in the future.

Reasons for Separation from Mother

Nonparental Caregiving

Previous research has shown that children receiving nonparental care, including institutional rearing, family foster care, and low-quality child care, tend to show higher rates of emotional and behavioral difficulties. In nonparental care, there can be fewer opportunities for children to form attach-

ments with their caregivers because caregiving may be inconsistent. Children cope well with having numerous adults looking after them, provided they are adequately and consistently cared for. Additionally, it is difficult to know whether the emotional and behavioral difficulties some children develop derive from the actual nonparental care experiences, or from genetic risk, or adverse experiences prior to receiving nonparental care.

Severely Stressful Separations

The effects of parental disharmony, separation, divorce, or death can be devastating for a child. There is significant empirical evidence that prolonged separations, particularly when preceded or followed by discordant and disrupted relationships, may cause the child to develop emotional and behavioral problems later in life. Parental death and separation from the parent, as in the case of extended hospitalization or parental separation, should be distinguished, however, because they involve substantially different experiences. The immediate loss a child feels after the death of a parent is immense. Nonetheless, if a child is able to maintain or develop an attachment with the surviving caregiver, long-term psychopathological effects can be avoided. On the other hand, parental divorce and subsequent emotional and behavioral problems in children are not uncommon. This may be related to the disrupted parental care some children receive after the separation, but it is more likely due to maternal stress, pre-separation conflict, or general discord between parents after a separation. The general feeling of loss a child feels after the death or separation from a parent can be very similar. However, it is the range of other adverse experiences, more than simply the loss itself, which causes subsequent problems in children.

Single Parenthood

Parents who rear their children without the assistance and support of a coparent have an increased risk of children with behavior problems. Single parenthood per se may not be responsible for negative child outcomes as much as the situational factors associated with single-parent families. Single parents, when compared to similar married counterparts, tend to work longer hours, face more frequent life stressors, and receive less emotional support. Children reared by single parents tend to manifest more behavior problems, lower social

competence, and poorer academic performance in their preadolescence than children whose parents are married. Although single parents tend to experience more stress on a daily basis and receive less emotional support, these factors tend not to impact their child-rearing practices and interactions with their child. However, the combination of frequent maternal stress and emotional and parental isolation in many single parents may directly affect the child above and beyond the direct effects of parenting behaviors.

Emily E. Beatty

See also: Child Care: Issues for Infants and Children; Divorce, Children's Adjustment to; Parent-Child Synchrony

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Maternal Education

Education is usually based on the number of years of school achievement, although education also reflects life experience. Education is the most commonly used indicator of social class; the level of education of a child's mother correlates with the child's overall socioeconomic status (SES); and maternal and paternal education are highly correlated. Education is associated with many lifestyle traits, connotes level of acquired knowledge and cultural tastes (Liberatos, Link, and Kelsy 1988), and is normally stable in adulthood.

Parental (particularly maternal) education has been associated with similar parenting behaviors, even across ethnic groups and cultures (Kelly,



Mother helping child with homework (Elizabeth Crews)

Sanchez-Hucles, and Walker 1993; Kohn 1963). For example, maternal education is associated with the quantity and quality of speech to children and the nature of discipline practices used (Hoff, Laursen, and Tardif 2002). Through this relation, maternal education has an impact on child health and development across a wide range of child ages and across ethnic groups (Ramey and Ramey 1999; Sandqvist 1995; Sonnander and Classon 1999; Terrisse et al. 1998).

Maternal education is a common stand-in measure of SES. Mothers are children's primary caregivers, and alternative SES measures of maternal occupation or income (especially during early childhood) are normally more variable and less valid. Psychometrically, education is quick and easy information to obtain, it is accurately reported, it has established short-term reliability, and it is more stable than occupation or income (Liberatos, Link, and Kelsy 1988; Susser, Watson, and Hopper 1985).

Level of education has real meaning for mothers and for the "human capital" (Coleman 1988) mothers provide their children. Increases in education improve parents' perspectives on their lives,

enhance their own cognitive and literacy skills, and spill over to increased feelings of mastery and competence, in the sense that education helps parents organize their lives and mobilize their resources efficaciously with respect to their goals. Education is associated with greater knowledge about child rearing and child development, and more years of schooling are associated with acquiring skills valued in the labor market. Education is associated with a more verbal style, and education places parents in a position to provide their children with a cognitively enriched environment. It is heartening in this connection that consistent increases have occurred in mothers' educational attainments: Between 1950 and 2000, for example, the proportion of U.S. adult women completing high school increased from 36 percent to 84 percent (National Research Council 2000).

Marc H. Bornstein

See also: Early Childhood Education; Intelligence and Parenting; National Association for the Education of Young Children (NAEYC); Parent Education Programs for Immigrant Families; Parent-Child Synchrony

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Mead, Margaret

Margaret Mead (1901–1978), the best-known anthropologist of the twentieth century, was famous for her statement, "Never doubt that a small group of thoughtful, committed citizens can change the world." She was a pioneer of cultural anthropology and an influential public figure. Her early career was devoted to exploring how cultures differentially affect human development—especially among children and adolescents—and how inter-

generational relations differ from one culture to the next. She sought answers by conducting fieldwork in a variety of cultures in the South Pacific. She was thus the first anthropologist to study human development in a cross-cultural perspective, prefiguring the human ecology paradigm.

Mead's fieldwork was largely carried out during the 1920s and 1930s. As an anthropologist she worked with a sense of urgency to study cultures that she felt were soon to be transformed by Western influence (Mead 1972). For her, anthropology was a calling to learn how human cultures bear on our future. Indeed, World War II was pivotal in terms of Western influence in the South Pacific. Her later career was devoted in part to understanding those influences, and drawing lessons from them that might better guide our way into the future (Howard 1984).

Mead had a penchant for taking her anthropological insights to the general public, beginning with her first book, *Coming of Age in Samoa*, published in 1928. This book became a best-seller—in fact, the best-selling anthropology book ever—and was translated into a number of languages. Its appeal to the public was the idea that adolescence is shaped by cultural demands and social expectations; therefore it can be relatively stress-free if cultural conditions are right. It also addressed educational issues, suggesting ways the "civilized" world might learn something from the "primitive" one, especially on the issue of how young people are affected when they are given greater control over their own lives.

While the world was still reading her first book, Mead returned to the field, to Manus Island in New Guinea. There she studied how play and the imaginations of younger children were shaped by adult society. This research, published as *Growing Up in New Guinea*, refuted the then common notion that "primitive" peoples are childlike. Subsequently, between 1931 and 1933, Mead studied three tribes on mainland New Guinea, finding evidence that gender roles can differ dramatically from one society to another, further evidence that culture can be at least as important as biology in human development. Then, in Bali from 1936 through 1939, she explored new ways of documenting the connection between childbearing and adult culture, and the way in which these are symbolically interwoven (Intercultural Studies Institute 2001).

Mead's legacy is to have taught the world about anthropology and its appreciation of the richness and variety of cultural forms that the human species can create. She showed how anthropologists can interconnect various aspects of human culture: Human development can be altered by the latitude of choice a culture gives adolescents, food production can be related to ritual, and politics can be affected by art. Mead took these insights further, speaking out on a wide range of social and political issues: race relations, gender roles, environmental justice, education, child rearing, and community empowerment. By applying the knowledge she brought back from the field to issues of modern life, she showed Westerners how to learn from those societies, by thinking differently about themselves and the possibilities for social reform and justice (Intercultural Studies Institute 2001).

When cut off from field research during World War II, Mead founded the Institute for Intercultural Studies, dedicated to applying anthropological techniques to the study of contemporary cultures. Mead returned to Manus in 1953 to document the changes brought on by the World War. *New Lives for Old* reported this research, offering new evidence of the human capacity to direct our cultural futures toward less racist, violent, and exploitative outcomes. Her belief in that capacity lay behind her famous expression: "Never doubt that a small group of thoughtful, committed citizens can change the world" (Intercultural Studies Institute 2001).

Over her career, Mead authored or coauthored some forty books and numerous journal articles. She was also a regular contributor to *Redbook* magazine, offering child-rearing advice to the public. In addition to earning her own doctorate in the 1920s, she received twenty-eight honorary doctorates. As a leader in her field she served as president of the American Anthropological Association and the American Association for the Advancement of Science. Following her death she was awarded the Presidential Medal of Freedom. The Institute for Intercultural Studies is still in existence, carrying on her visions of social reform based on scientific insights (Howard 1984).

James E. Côté

See also: Adolescence in a Cultural Context

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Memory

Human memory does not resemble a highly veridical mechanical storage and retrieval device, such as a computer hard-drive or a video camera. Memories that seem vivid, and about whose accuracy in recalling an occurrence we are confident, are in fact not necessarily accurate. Numerous studies have shown that even emotionally intense events may be misremembered. Consider the following: After the space shuttle Challenger exploded, Ulric Neisser and Neena Harsch (1992) asked students to record the activities they were engaged in when they heard the news. Several years later the same students were asked again to recall what they had been doing when they first heard the news. They were surprisingly inaccurate. And the same is true of witnesses to crimes, natural disasters, and the assassination of former President Kennedy. Such results indicate that remembering is more than mechanically accessing a stored scene in the brain and "playing it back." Rather, the mind actively constructs a memory, adding information that may not have been part of the stored experience, deleting other information that actually was stored. Recollections may change over time, and for this reason memory is referred to as constructive.

Memory construction is an active process of integrating information from multiple sources. Sources of information include perceptions (vision, hearing, etc.), internal thoughts, and interactions with others. Over time, a memory can be reconstructed as people make use of new information, often unconsciously, to modify, condense, embellish, and omit originally stored information. Consequently, what is remembered may contain information that differs from what was originally encoded and stored. For example, people's current knowledge of the world and their ex-

pectations can influence how they interpret a prior experience. Further, people may fill in gaps in their memory for a previous event using information remembered from a recent discussion with friends. Thus, because memory is constructive, it is vulnerable to bias and error.

The classic demonstration of memory's constructive nature was provided by the English researcher Sir Frederick Bartlett in 1932. He asked people to recall a folk story called "War of the Ghosts" about two seal hunters who encounter a war party in canoes and an ensuing war on a neighboring village. For twentieth-century Englishmen the story was hard to comprehend because of its use of surreal imagery and American Indian folk beliefs. When asked to recall the story after varying delays, Bartlett's participants showed clear alterations in their memories of the story, and the distortions grew over time. He found that his subjects omitted details that were ambiguous or that did not fit with their expectations, imported new information to help explain incongruous passages, and changed details to fit their own general knowledge. For example, for many of the participants, "something black came out of his mouth" in the original story was remembered as "he vomited" or "he frothed at the mouth," "seal hunting" was reported as "fishing" and "canoe" was changed to "boat." Bartlett concluded that participants unknowingly used their past experiences to construct a coherent story, but at the cost of accuracy. The inaccuracies, however, were not accidental; they were guided by existing knowledge and stereotypes.

Schema and Remembering

The term "schema" refers to a mental representation of knowledge that consists of expectations about familiar objects, scenes, and events that we construct through experience. For example, a schema for "going to a restaurant" might include expectations about the appropriate sequence of events, such as waiting to be seated, receiving a menu, ordering, eating, and paying the bill. Schemata provide a processing advantage by efficiently accessing past experience for present use to allow us to anticipate and predict events in our world. Schemata are constantly updated from incoming information.

When an experience occurs, our schema can direct our attention to expected aspects of it so

that our minds are not overloaded by attending to everything that bombards our senses. If we did not filter out some stimuli, a trip to a restaurant would be an overwhelming nightmare of sensory experiences. But typical restaurant behavior is relatively automatic; we do not have to work hard to remember to study the menu, to eat our entree before ordering dessert, or to pay the bill before leaving. This is made easy because the appropriate sequence of events is schematically constructed in our memories. For the most part, we behave relatively automatically, due to the influence of schemata. Under most conditions, schemata facilitate memory because they provide individuals a context for interpreting and remembering the persons, actions, objects, and relations within an experience.

Sources of Inaccuracy

Although schemata foster memory efficiency, they can also produce inaccuracies by biasing our attention, recall, and recognition. The potential negative effects of schemata on the accuracy of recall become increasingly apparent over time, as the details of a specific experience fade and we unconsciously fill in the gaps in our memory with our current knowledge. Schematic biases are based on stereotypes, expectations, goals, source misattributions, misinformation effects, and the context of recall, both physical and historical. The paragraphs that follow provide a glimpse into each of these potential sources of error.

Stereotypes

Stereotypes (or social schemata) can lead to biased memory reconstructions because they direct us to include expected aspects of an experience in our recollections of a particular experience, even if those aspects were not present. For example, suppose your stereotype of someone is that he is incredibly selfish, never sharing things, taking things that are needed more by others. Given this stereotype, there is a risk that we will recollect him behaving selfishly on a particular occasion even though he acted uncharacteristically unselfishly. A large body of research demonstrates that this kind of misremembering can happen.

Expectations

The example above from Bartlett's use of the folk tale "War of the Ghosts" shows that during encod-

ing and recall, expectations cause us to focus our attention on particular details while ignoring others. Expectations can be based on our implicit theories and attitudes about the world. For example, we consult our beliefs about how consistent our traits are over time. Ross (1989) has shown that people overestimate the positive effects of a learning skills program, because they believe the program causes improvement. They therefore underestimate how good their study skills were before they began the program. Similarly, we tend to claim we voted for whichever political party we currently belong to, even if we once voted oppositely. As a final example, Ross (1989) showed that women's recall of their moods during their menstrual cycle can be biased by their expectancies about their symptoms. In one study, women kept daily records of their physical and emotional symptoms over several weeks. Women who believed their periods were painful overestimated the negative symptoms during recall.

Goals

During encoding we also filter out information depending on our goal at the time. Studies show that people attend to different details depending on what their goal is. For example, when asked to draw a diagram of your neighborhood for a visitor, you might remember landmarks surrounding your house and the location of schools and parks. However, when drawing a diagram of your neighborhood for the city planning commission, you might suddenly remember the location of stoplights, mailboxes, and fire hydrants, which you previously did not recall. Finally, if your goal was to draw a diagram for a burglar, you would no doubt remember all sorts of other details (whether there was a first-floor bathroom window, neighbors with unimpeded visibility, and the like). It is quite surprising how much information we have stored in memory; when our goals demand it, much of this information can be retrieved.

Personal goals can also influence people's recollections of events they have experienced. For instance, Thomas Gilovich (1983) showed that many gamblers persist in gambling because they reconstruct memories of their earlier losses as occurrences for which they were not responsible.

Source Misattributions

Source misattribution is another mechanism un-

derlying erroneous memory reconstruction. Source misattribution, or source monitoring error, refers to the inability to distinguish a memory's true origins as a result of blending information from multiple sources, such as information acquired from witnessed events, imagined experiences, and family stories. For example, a chestnut horse swishing its tail in a pasture may be familiar to us because we saw it on television, but we may misattribute its familiarity to having seen it on a walk in the country. Likewise, we may misattribute something we heard to something we saw, or vice versa. Debra Poole and Stephen Lindsay (2001) have demonstrated that subtle interventions, such as parents' reading of a book to their child, can lead some children to report nonexperienced but heard-about activities as having been actually experienced. It is common to retain memories long after we lose their source.

Misinformation

In a classic study of memory reconstruction, Elizabeth Loftus, Dale Miller, and Henry Burns (1978) showed that verbal information can later be integrated into a visual memory. They presented a series of slides that depicted a red car passing through an intersection and striking a pedestrian. A stop sign appeared at the intersection for half of the participants, and a yield sign appeared at the intersection for the other half. Afterward, the experimenters gave half of the participants accurate verbal information concerning which sign they had seen and gave the other half inaccurate information. During the recognition test that followed, participants who received inaccurate information were less accurate in recognizing which slide they had seen than were students who received accurate information. This study provided evidence that adults can absorb misleading postevent information and use it to recall false details about a staged event they have witnessed. More recent studies have shown that people also integrate misleading information into events they have experienced themselves. Young children, particularly preschoolers, have been shown to incorporate suggestions from others into memory (see Ceci and Bruck 1993 for a review).

In addition, memory constructions can mingle information from our own thoughts and imaginations with reality. Remembering our third birthday party potentially involves a construction of accu-

rate memory traces, imagined features, details from photographs, and stories repeated by parents and siblings. Once these sources are integrated into a coherent memory of the event, distinguishing reality from fantasy becomes nearly impossible without corroboration.

Contexts of Recall

Inaccuracies in memory may be due to the physical, social, and historical contexts of recall. For example, Stephen Ceci and Maggie Bruck (1993) reviewed evidence that children's memory can be altered by an interviewer's behavior, a form of social context. To illustrate, interviewers who hold strong beliefs about the occurrence of certain events can influence children to provide memory reports that are consistent with these beliefs, regardless of whether or not the beliefs reflect what was actually experienced by the child.

In a well-known example of a physical contextual effect, Alan Baddeley (1990) reported that words memorized while learners were submerged under water were better recalled when the learners were placed back under water than if they tried to recall them on dry land. This suggests that context gets encoded along with the content of a memory trace, and therefore reinstating the original context facilitates the retrieval of the memory.

Conclusion

Although inaccuracies based on biased encoding and retrieval offer evidence for the constructive nature of memory, constructive processes do not inevitably lead to false memories. Recognizing a sample of speech as one's native language, recognizing entities in the world as familiar, recalling autobiographical memories, and many other daily functions entail integrating incoming perceptual information with knowledge already stored in the brain, and the constructed results are typically accurate enough to allow us to survive and thrive.

Communities and cultures rely on long-term memories to glue together a coherent history and identity. These can be constructed with the aid of schemata, goals, expectancies, and stereotypes in such a manner that the results are less than accurate, and one social group remembers an event differently from another.

Although the constructive nature of memory poses risks for assessing the accuracy of a memory report, it provides critical flexibility to human cog-

nition. This type of memory balances low-effort automatic processes with high-effort conscious recall in a way that economizes our limited cognitive resources to allow humans to experience the present in coherence with the past.

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See also: Ceci, Stephen J.; Investigative Interviews with Children; Real World Memory

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Menarche

Menarche is the onset of the menstrual cycle, the biological cycle that begins with ovulation and ends with the shedding of the inner lining of the uterus. Menarche occurs in later puberty, typically after the peak growth spurt and emergence of secondary sex characteristics, including start of breast development, growth of axillary and pubic hair, weight gain and increase in body fat, and feminizing changes in body contours. Menarche signals a girl's ability to become pregnant and is marked by her first period, or time of menstrual bleeding. Average age of menarche in North America is about 12.3 years, but it ranges from 9 years to

17 years. The age of menarche reflects substantial individual and cultural variation, influenced by biological and psychosocial factors (Eveleth and Tanner 1990; Tanner 1991). Biological factors include heredity and health history (i.e., nutrition, skeletal maturation, physical activity, weight, and weight for height, or body mass index, BMI). Psychosocial factors include family composition, socioeconomic status (SES), urban versus rural environment, and stress. Emotionally and socioculturally, menarche constitutes a distinct point in time for reevaluation of body image and sexual identification. A girl's reaction to menarche depends on her prior knowledge or preparation for menstruation, her perception of her timing of menarche (whether she sees herself as early, on time, or late), and familial and cultural attitudes toward menstruation. In response to a girl's new developmental and reproductive status, family interactions may also change in terms of limit setting, personal responsibility, closeness, and amount of conflict.

Western industrialized countries have observed a secular, or generational, trend favoring early menarche. Average age of menarche decreased approximately three months per decade and then stabilized at about 12.3 years from the 1940s onward. This secular trend was observed across ethnic groups (African Americans, European Americans, Mexican Americans, and Puerto Ricans), as well as in developing countries (e.g., China and Japan), and was attributed to a response to improved conditions of life, particularly better nutrition and increased standards of living, resulting in better health.

With an earlier age of reproductive maturity comes a greater number of adolescent females capable of becoming pregnant, despite the transient period of adolescent infertility (about twelve to eighteen months beyond menarche). Teenage pregnancy and motherhood are issues in terms of biological and psychological consequences for the teenage mother and her offspring in addition to society at-large (i.e., medical care, social services, and welfare).

Individual variation of menarcheal age is influenced by a number of biological and psychosocial factors. Biological factors include heredity and health history. The menarcheal ages of mothers and daughters and between sisters have been found to be similar. Paternal genes may also influ-

ence menarcheal age. Shared environmental factors may explain or compound similarities within families. Health history (i.e., critical bone mass, adequate nutrition, amount of physical activity, body weight, and BMI) also plays a pivotal role in pubertal timing, in that heavier or larger or better-nourished girls attain menarche earlier than lower-weight, leaner, or poorly nourished girls.

Psychosocial factors of menarcheal timing include family composition, socioeconomic status (SES), and stress. In families in which related males (i.e., father, brothers, and uncles) are present, girls tend to have later menarche. In families in which unrelated males (e.g., stepfather) are present or the biological father is absent, girls experience earlier menarche. Socioeconomic status (parental education, occupation, and income) is also thought to influence age of menarche; however evidence is inconsistent as to its exact effects (i.e., whether higher SES leads to accelerated or delayed menarche), if any. Urban populations also show a more accelerated growth rate than rural populations. Finally, stress (caused by family conflict, life events, and psychological problems) has been found to have additive and accelerating effects on menarcheal age. The greater and more frequent the family conflict (i.e., discord between parents and between parent and child) was throughout childhood, the earlier the age of menarche. Stress caused by life events (e.g., starting a new school, death of a parent, marital separation, divorce, change in parents' financial status) and psychological adjustment problems (e.g., depressive affect and acting out) were also associated with earlier menarche.

These same biological and psychosocial factors may accelerate or delay menarche to an abnormal degree. Delay is more common in highly trained athletes (e.g., ballet dancers, cross-country skiers, gymnasts, and runners), who engage in intense physical exercise and diet restriction, which can inhibit normal skeletal development and weight gain. Other more serious and less frequent causes of delay relate to inadequate hormone secretion or anatomical or genetic defect.

Menarche before age 8 is referred to as precocious, or early puberty. One possible cause of precocious puberty is early release and overabundance of hormone secretion brought on by abnormal functioning of endocrine gland(s), external sources of estrogen or estrogen-like sub-

stances, or other medical problems (i.e., ovarian cysts, for menarcheal age under age 6). Early puberty is more common in overweight children. Severe trauma, such as sexual abuse or sexual assault, may also cause very early menarche. However, in most cases of precocious puberty, no specific cause is found.

Emotionally and socioculturally, menarche constitutes a distinct point in time for reevaluation of body image and sexual identity. Menarche provides stark “proof” of physical maturity and womanhood and signifies new expectations and rights associated with the girl’s new reproductive status. Thus, the postmenarcheal girl views herself and is viewed by others as more sexually mature. In response to a girl’s new developmental and reproductive status, family interactions may change in terms of limit setting, personal responsibility, closeness, and amount of conflict. Parents may have more mature expectations for the postmenarcheal girl, while she continues to assert her autonomy and biological sexual maturity.

In terms of initial reactions to menarche, girls’ reactions tend to be mixed and quite diverse. Positive reactions associate menarche with maturity, womanhood, the ability to have children, and similarity to friends. Negative reactions associate menarche with inconvenience, physical discomfort, behavioral limitations, and emotional changes. Worries relate to uncertainty and embarrassment. Concerns with secrecy are usually short-lived, and symptoms (i.e., discomfort, pain, and moodiness) are moderate.

A girl responds to menarche according to her prior knowledge or preparation for menstruation, age of menarche (i.e., early, on-time, or late), and surrounding attitudes (i.e., those of her family, school, peers, and culture) toward menstruation. In about half of the world’s cultures, menarche is a major religious, community, or even economic event, marked by elaborate rituals and ceremonies. Such cultural rituals may serve to enhance the menarcheal experience, whereas the lack of preparation for first period may cause the menarche to be perceived as a terrifying, negative life trauma. Girls who feel unprepared for their first menstruation experience more negative reactions, and girls who feel prepared experience more positive reactions to menarche. In Western culture, most information about menstruation comes from mothers and sisters and school, and then media and peers.

Optimal preparation has been described as including not only basic, practical knowledge about menstrual physiology and hygiene, but also information about not only the positive but the negative aspects (e.g., embarrassment, messiness, and inconvenience) to help a girl form a balanced but realistic view.

Menarcheal age, whether a girl is early, on time, or late in comparison to her peers, also affects initial reactions to menarche. Early maturers often have less time emotionally and practically to prepare, and they feel set apart from their peer group. During a time when peer conformity reaches its maximum, such distinction from peers may bring about feelings of insecurity, especially since the early maturers will stand out physically (in terms of their height, weight, and body contours) in the eyes of the peer group. Therefore, early maturers tend to report more negative and less positive reactions to menarche than those girls who are on time or late. Early menarche may also be linked to several possible negative psychological effects, such as negative attitudes toward menstruation, more reporting of symptoms, lower self-esteem, poor body image, and—particularly for those who begin very early—greater experience of depressive mood. The possible stress of early maturation may also exacerbate the risk of existent problem behavior, such as delinquency, drug and alcohol abuse, and promiscuity. Late maturers also may feel set apart from their peer group; however, late maturers are more likely to be prepared, and insecurities diminish after menarche. However, late maturers do ultimately reach menarche, and although they may suffer from being set apart from the group for a time, they have had time to prepare and have attitudes and adjustment similar to those girls who are on time.

Surrounding attitudes by family, school, peers, and culture toward menstruation influence reactions to menarche as well. Positive attitudes toward menstruation lead to more positive evaluations of menarche. In the West, however, menstruation bears pervasive negative stereotypes and myths, and it is often portrayed by school materials and the media in Western culture as more of a hygienic issue and less of a maturational issue. Cultural beliefs that menstruation is associated with need for secrecy, physical discomfort, increased emotionality, and disruption of activities and social interactions are well embedded within individual percep-

tions of menstruation even before menarche. Thus, premenarcheal girls tend to hold more negative attitudes toward menstruation until they experience menarche for themselves.

Overall, there is no evidence of a broad impact of menarche on self-concept or self-esteem. With longer experience with menstruation, embarrassment and worry decrease. Whether reactions to menarche are positive and negative, the concurrent and prevailing belief is that menstruation is a normal and natural event.

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See also: Adolescence in a Cultural Context; Pubertal Development

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Mental Illness

Mental illness in the family is said to occur when at least one member in the family is afflicted with a mental illness, defined as an illness for which there is no known cure and episodic but chronic in nature. Such an illness may be covered by any one of a number of different diagnoses. The most observable characteristic of mental illness consists in the way an individual behaves, especially in interaction with others, which is usually bizarre or unusual. Some of the major mental illnesses include (a) schizophrenia—disordered or fragmented thoughts, (b) bipolar disorder—extreme highs and lows in moods, (c) major depression—extreme low mood, and (d) anxiety disorder—unusual preoccupation with others' perceptions leading to phobias or compulsive behaviors.

Most mental health professionals (psychiatrists, psychologists, social workers, psychiatric nurses) use the same source in arriving at a diagnosis, the *Diagnostic and Statistical Manual, DSM IV* (American Psychiatric Association 1994). According to this manual, mental illnesses are different from mental retardation in that most people with mental illnesses have average to above average intelligence and would be able to manage daily tasks such as working, owning or renting a home, cooking, cleaning, and raising a family except that their illnesses keep them from being able to focus on these activities for much of the time. On the other hand, people with mental retardation usually need assistance in daily tasks, mainly due to their lower intellectual capabilities. With treatment (medication, counseling or therapy, and for some, group home placement), people with mental illnesses can lead productive lives. For detailed information about mental illnesses, treatment approaches, and support groups, the following Web site from the National Alliance for the Mentally Ill (2002) is an excellent resource: <http://www.nami.org/illness/index.html>.

It is estimated that 20 percent of people in the United States experience mental illness in a given year (U.S. Department of Health and Human Services 1999) at a cost of more than \$78.6 billion (Rice and Miller 1996). These data do not include people who visit a doctor for other reasons than a mental illness and then receive medication that is primarily prescribed for a mental illness (i.e., depression or anxiety disorder). For example, a patient visits a doctor because of sleeplessness, irri-



Family member suffering from mental illness (Laura Dwight)

tability, and feelings of exhaustion. The doctor may prescribe sleeping medication along with an antidepressant medication. However, the patient does not seek mental health services to understand the issues behind the symptoms. Why is this so? For some, the reason lies in the negative perception they have about mental health services and more generally the idea of having a mental illness.

Negative stereotypes about mental illness still exist. They range from believing that people with a mental illness are possessed by demons all the way to thinking that depression is just something a person needs to snap out of. This negative perception then gets transferred to the person with the mental illness, and the person is led to feel guilty about having a mental illness. To put it another way, a stigma is attached to mental illness. In a video entitled *Conversation at the Carter Center: Coping with the Stigma of Mental Illness* (Carter and Woodward 1996), former first lady Rosalyn Carter defines a stigma as “a feeling of shame, embarrassment, and/or social isolation.” When the stigma attached to a condition leads to being locked out of a job, a place to live, or even a place to receive medical treatment, it then becomes discrimination. The experience of discrimination is very real among people with a mental illness (Goffman 1963). People have learned to fear the illness and the people suffering from it, and they discriminate against them.

How did this stigma come about? The answer lies partly in our ignorance about this kind of illness (exacerbated by the negative portrayal of mental illness in the media) and partly in the structure of our current health system. For example, when one examines the medical insurance provided by most employers, one notices a cap on the amount paid for mental health services. However, this same boundary does not exist to the same extent for other chronic illnesses, such as diabetes or heart disease. In fact, a recent Surgeon General’s Report states, “Even for people with health insurance, whether public or private insurance, there are greater restrictions on coverage for mental disorders than for other illnesses” (U.S. Department of Health and Human Services 2001). Because of stigma and poor mental health treatment, many people are not well informed about how to manage mental illness and are reluctant to seek mental health treatment. It is estimated that two-thirds of the 44 million people in the United

States with a diagnosable mental illness do not seek treatment (U.S. Department of Health and Human Services 1999). So what happens to the people who are not receiving adequate mental health treatment? For the most part, the burden of care rests on family members and other social service agencies (nursing homes, jails, and hospitals) to assume this responsibility. Many of the people providing care are not adequately trained or educated about mental illness, though they try their best to get help.

A Brief History

Prior to the late 1950s, families with mentally ill members had easy access to care, including psychiatric hospitalization if deemed necessary. The person with a mental illness was taken to a hospital, evaluated by a mental health professional, and admitted for a lengthy stay, either voluntarily or involuntarily. Family members were discouraged from visiting their ill relatives in the hospital (Bernheim 1989). Thus, people with a mental illness were segregated from the rest of society. Profound changes occurred in the mid-1950s that have had dramatic effects on our society. Psychiatric hospitals began closing as a result of three main factors: (1) improved psychiatric medication—hope for a cure, (2) changed perceptions about civil liberties for people with a mental illness—these individuals had rights, including a right to as much freedom as possible; and (3) increased economic costs of running the facilities (Bachrach 1992; Sullivan 1992). The effect of the closing of many psychiatric facilities on those with mental illness is commonly referred to as deinstitutionalization. After release from the hospitals, patients had to find places to live. Community mental health centers were created to facilitate this transition. However, the planning for these centers was often insufficient, and the demand for care far exceeded the capabilities of many of the programs offered through the centers (Marsh 1992). As a result, many people with mental illness live on our streets, in nursing homes, in jails, and with family members. Many individuals are not receiving the mental health services they desperately need. Some professionals have argued that the United States needs to seriously consider the current mental health crisis and think of alternatives to the present living conditions of many of its citizens (U.S. Department of Health and Human Services 2001; Onaga, McKinney and Pfaff 2000; Torrey 1997).

Successful Community Programs

There are successful programs serving people with mental illnesses, but they often do not receive enough financial and political support to meet the needs of all their constituents. E. Fuller Torrey has written extensively about this dilemma. In his 1997 book, *Out of the Shadows: Confronting America's Mental Illness Crisis*, he describes three successful programs that have served as models for others and that deserve serious consideration as models for components of any plan to restructure the current mental health system: (1) Program in Assertive Community Treatment (PACT), (2) Fountain House clubhouse, and (3) Fairweather Lodge (see pages 116–119 in the book for detailed descriptions of the programs). All of these programs serve to empower people with a mental illness; programs that follow the Fairweather Lodge model assist individuals in finding and maintaining secure employment. The following Web site provides a description of one of the most successful lodge programs: <http://www.tasksunlimited.org>.

Common Myths of Mental Illness

Not everyone will find it necessary to advocate for changing the environmental conditions of people with a mental illness, but there are certain misconceptions about mental illness everyone can try to correct. The following statements are a list of myths associated with mental illness (in italics) and then a description of how our current understanding dispels these myths.

1. *Once a person has been diagnosed with a mental illness, she will have the symptoms for the rest of her life.* Many people diagnosed with schizophrenia in their early adult years are finding that later in life the symptoms of the illness, most notably hallucinations, dissipate. John Nash's story from the movie *A Beautiful Mind* is one example of this phenomenon.

2. *Being diagnosed with a particular mental disorder/illness means that one shares all the same symptoms with other people diagnosed with the disorder and that the prognosis is the same.* This myth can be harmful because it assumes that every illness has the same symptoms and prognosis in every individual, when in fact some cases of illnesses are more severe than others, just as in other medical illnesses.

3. *Rehabilitation can only be provided after stabilization has occurred.* Many people diagnosed

with mental illnesses benefit from treatment while they are still in the hospital. As a matter of fact, the best form of treatment starts soon after the initial symptoms are displayed.

4. *People with mental illnesses are only able to work at menial jobs.* There have been several famous, productive people with mental illness: Albert Einstein, Vincent Van Gogh, Winston Churchill, and Kay Redfield Jamison—professor of psychiatry at Johns Hopkins University—are just a few examples. Jamison (1995) has written a book detailing her experiences with bipolar disorder.

5. *Families cause mental illnesses.* Families' roles in causing mental illness are no more profound than for any other disease, such as cancer, heart disease, or alcoholism. It is believed that, for many forms of mental illness, individuals may inherit a predisposition, but the environment may then serve either as a buffer against the illness or as a facilitator of those risk factors that promote the disease (see Brown, Birley, and Wing 1972; Marsh 1992).

6. *People with a mental illness are more violent than people without a mental illness.* Although there is a slight risk in the case of people with severe and persistent mental illnesses who do not comply with taking their medication, the overall risk is low (Swanson 1994).

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See also: Homelessness

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- Center for Mental Health Services Substance Abuse and Mental Health Services Administration Knowledge Exchange Network (KEN), <http://www.mentalhealth.org>

Mental Illness in Old Age

As the percentage of the population that is older increases, mental health in the elderly will play an increasingly important role in determining the overall quality of life of our society. Among older individuals, the two most prevalent mental health disorders are dementia and depression (Qualls 1999). Those with depression experience an abnormally depressed mood, characterized by symptoms such as sleep disturbance, loss of energy, and abnormal preoccupation with death. Those with dementia experience a gradual loss of cognitive function, such as memory and the ability to perform general daily tasks. This entry will outline how a human ecological perspective can shed light on how to prevent, treat, manage and perhaps even reverse depression and dementia in the elderly.

Depression in Older Individuals

Although estimates of the rate of depression among older adults vary considerably, primarily due to differences in how studies define depression, most studies have found lower rates in the elderly than in younger adults. These lower rates have been attributed to several causes, including environmental. For example, it has been speculated that older individuals who have lived through challenging events, such as World War II and the Depression, are less vulnerable to psychological depression. However, very few studies have examined how the symptoms of depression in older adults may differ from symptoms in younger adults, so it is possible that some cases of depression in the elderly are overlooked. Depression may be the most reversible mental illness, but "without treatment, depression in old age becomes a chronic disorder that produces high levels of morbidity and mortality" (Anderson 2001, 13). Common treatments for depression in older adults are electroconvulsive therapy and antidepressant medications. The ideal treatment, however, would involve an interdisciplinary process and would include psychotherapy, help with ameliorating the common risk factors for depression in old age (social isolation, loneliness, and disability), and possibly family therapy, in addition to medication (Anderson 2001).

Dementia in Older Individuals

Dementia is found in approximately 6–8 percent of people aged 65, "with the risk doubling approximately every 5 years such that about 30 percent of



Older adult suffering from either dementia or depression (Laura Dwight)

persons over age 85 are diagnosable with dementia” (Qualls 1999, 309). Alzheimer’s disease (AD) and vascular dementias, which share similar symptoms, account for about 90 percent of the dementias in the elderly. At present, the most precise way to distinguish the two illnesses is through examining individuals’ brains: An AD brain is covered with plaques and tangles, whereas the vascular dementia brain includes tissue damaged by strokes or bleeding (Qualls 1999). Previous approaches to managing dementia have relied solely on medications; however, the complex nature of dementia may require an interdisciplinary team that includes occupational, physical, music, and family therapists, as well as psychologists, speech pathologists, and psychiatrists (Keough and Huebner 2000).

Preventable Risk Factors for Depression and Dementia

One of the risk factors for depression and dementia that older individuals are particularly at risk for is isolation, or lack of social support. Older people are more likely to suffer from disabilities that make it difficult for them to get out of their home.

In addition, older individuals frequently experience loss of social contacts after retirement and the deaths of friends and family. Therefore, it is not uncommon for older people to report that they feel relatively isolated. Studies have shown that elderly individuals who have smaller social networks are more likely to be depressed or otherwise cognitively impaired (Palinkas, Wingard, and Barrett-Connor 1990; George et al. 1989). Other preventable risk factors for dementia include head injury, low intellectual stimulation, and poor diet (Snowdon 2001). For example, a recent study found that eating curry is associated with lower rates of Alzheimer’s disease, perhaps explaining the lower rates in India compared to the United States (Chandra et al. 2001).

What a Community Can Do

It may be possible to prevent and even reverse these illnesses by changing the way in which communities involve their elders. In a large-scale, long-term study of nuns, the investigators found that even though all the sisters showed age-related decline in mental function, those who had been teachers showed more moderate declines than

those who had spent most of their lives in service-based tasks, supporting the theory that intellectual stimulation may guard against dementia (Snowdon 2001). Communities can make use of such findings by establishing intergenerational cultural and educational centers. Encouraging older individuals to teach and take classes and engage in intergenerational performing arts groups not only facilitates mental activity, but also provides a social network to guard against isolation. Ideally the centers would be in walking distance, close to public transportation, or integrated into a shuttle service to involve those who would otherwise be housebound.

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See also: Friendship across the Life Span; Housing and Older Adults; Intergenerational Programs in Communities; Living Arrangements for Elders; Mental Illness in the Family; Old Age, Social Relationships in; Older Adults: Preparation for Future Care; Suicide in Older Adults

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Mental Retardation

Mental retardation is a disorder affecting a person's ability to learn in a variety of contexts. Three essential criteria are necessary for a diagnosis of mental retardation (American Association on Mental Retardation 1992; American Psychiatric Association 2000). First, an individual must have significant limitations in intellectual functioning, defined by an intelligence test score of 70–75 or below. Second, intellectual limitations must coexist with deficits in adaptive behavior in two or more of the following areas: communication, self-care, home living, social and interpersonal skills, community use, self-direction, health and safety, functional academics, leisure, and work. Finally, limitations in intellectual functioning and adaptive behavior must appear prior to an individual's eighteenth birthday.

Classification

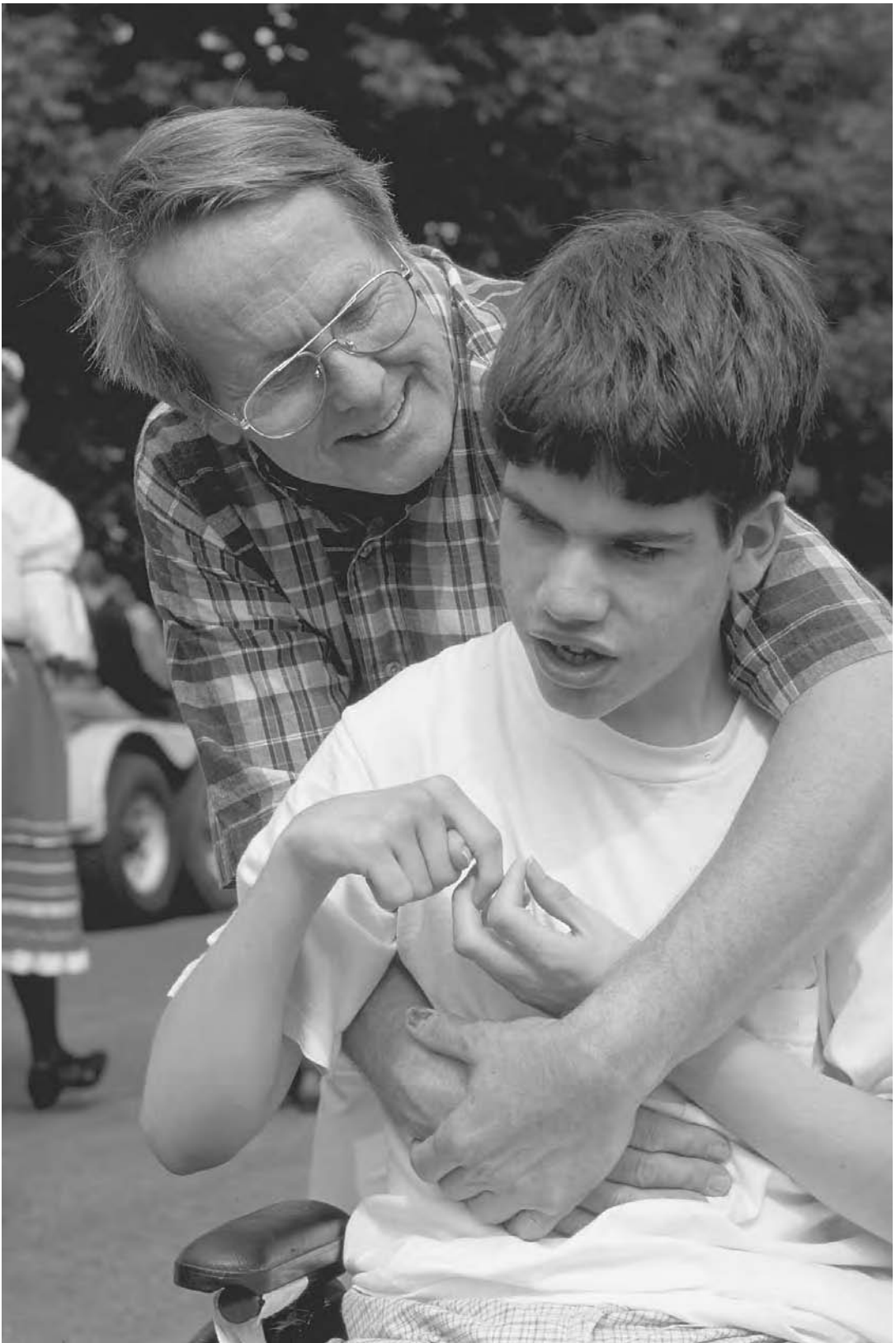
People with mental retardation can be classified into four overlapping levels of severity based upon their intelligence test scores: Mild (IQ of 50–70), Moderate (IQ of 35–55), Severe (IQ of 20–40) and Profound (IQ below 20–25) (American Psychiatric Association 2000). They can also be classified from higher to lower functioning by the type and intensity of supports needed to function in society (American Association on Mental Retardation 1992): (1) Intermittent (episodic, as-needed supports of high or low intensity); (2) Limited (constant, but time-limited supports); (3) Extensive (chronic long-term supports in some environments, e.g., home or work); and (4) Pervasive (constant, high-intensity supports across environments).

Etiology

Biological causes of mental retardation may be hereditary (e.g., Fragile X, Down syndrome), prenatal (e.g., maternal drug and alcohol abuse), or perinatal (e.g., fetal malnutrition, prematurity, hypoxia, trauma); or they may involve disease or injury (e.g., encephalitis, meningitis, head trauma). Psychosocial causes include malnutrition and lack of nurturance, stimulation, or proper medical care. The cause of mental retardation is unknown in 30 percent–40 percent of the population.

Development

The developmental course of the disorder will vary with the level of mental retardation. People with



Mentally retarded child with father (Skjold Photographs)

mild mental retardation are often indistinguishable from children without mental retardation during the preschool years, and deficits in learning are often not diagnosed until school age. During the school years, expressive speaking skills and the ability for spontaneous play with peers develop. Adolescents with mild mental retardation can achieve normal language ability and academic functioning up to a sixth-grade level, have the same kind of social interests as their typically developing peers, and show similar self-directed behavior. Adults functioning at the mild level are capable of social and vocational skills, and though they may need assistance when under stress, many can live and work independently in the community.

People classified with moderate mental retardation are more likely to be identified during the preschool years because of delays in achieving developmental milestones (e.g., standing, walking). By school age, many acquire communication skills and can attend to personal care with some supervision. Individuals with moderate mental retardation typically do not progress beyond second-grade level in academic subjects, but generally benefit from social and occupational skills training. As adolescents, their poor socialization skills may interfere with peer relations. Adults functioning at the moderate level do not commonly achieve independent social status, but with training, many adapt well to living in supervised community settings with supports.

People classified with severe mental retardation are most often identified in infancy or the first two years of life, due to substantially delayed developmental milestones or the presence of congenital anomalies, or both. In early childhood, these individuals acquire little speech, often using a single word or gesture to communicate. During the school years, basic self-care skills such as feeding and dressing can be achieved with training, and some may develop language. When they reach adolescence, the academic and adaptive skills of people with severe mental retardation are similar to those of typical 4-to-6-year-olds. As adults, they may be capable of performing self-care skills and simple work tasks in highly supervised settings and adapting to community living with families or in small group residences.

People with profound mental retardation are usually diagnosed as infants because of evident developmental delays and congenital anomalies.

In early childhood, there is often significant impairment in sensory and motor functioning. They typically have lifelong limited motor, self-care, and communication skills, which may continue to improve through training. Optimal development at all stages for people functioning at this level can only be achieved with consistent assistance in highly structured supervised contexts.

Social-Ecological Influences

The development of people with mental retardation is largely dependent upon environmental factors such as education, appropriate supports, and opportunities for growth. Historically, it was believed that people with mental retardation could not learn or contribute to society, and little was done to enhance their development. Labeled feeble-minded and mentally defective, they were segregated from society and subjected to custodial care in large overcrowded institutions. Their prognosis was poor. Over the past thirty years, changes in public policies and societal expectations have led to great strides in the treatment and education of people with mental retardation. Deinstitutionalization from congregate care facilities in the early 1970s and recognition of the positive influence of parenting led to community living with the family or in small-group home residences and the strengthening of parent and teacher advocacy. In 1975, the Education of All Handicapped Children Act (PL-94-142; retitled the Individuals with Disabilities Education Act in 1990) and subsequent amendments ensured free and appropriate educational services in the least restricted environment for all children with mental retardation from 3 through 21 years.

Today, advanced assessment techniques facilitate early identification of developmental disabilities, enabling infants who are days old to receive an array of support services intended to enhance their development to typical levels. In public schools, many students with disabilities attend regular classrooms, learning with peers their own age. A willingness of the business community to employ people with mental retardation has enabled many adults to work and live in the community. Some are married, raising children, and experiencing full citizenship. With ongoing environmental opportunities and supports and the evolving expectations of those around them, the functioning of people with mental retardation will continue to improve,

enabling many more individuals to become more independent and productive members of the society in which they live.

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See also: Early Intervention and the Individuals with Disabilities Education Act (IDEA)

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Mentoring

See Youth Mentoring

Merchandise Management

The American economy is noted for a wide array of goods and services. Arguably, the American consumer is more advantaged than counterparts in other parts of the industrialized world in having available a range of items to purchase that vary in price and quality. How such choices provided to American consumers? The retail buyer is often identified as a key position in the retail organization because retail buyers are responsible for ensuring that a retailer has the merchandise to meet the needs of the consumers. Retail buying may be defined as purchasing merchandise (also referred to as goods, products, stock, or inventory) from manufacturers to be resold to the ultimate consumer.

Buyers are responsible for purchasing one or more categories of merchandise in a retail organization. For example, in a department store operation, categories might include men's suits, handbags, dresses, linens, infants and toddlers, shoes, furniture, and sporting goods. Categories are grouped together in retail organizations, and the groupings are typically called divisions, such as men's wear, ladies' accessories, home furnishings, or children's wear. A divisional merchandise manager, who reports to the company's general merchandise manager, usually a vice president, oversees each division. In addition to department, specialty, or discount stores, other concerns, such as Internet retailers, catalog companies, television shopping networks, fast-food restaurants, and grocery stores, also need buyers.

Retail buying involves planning, inventory management, and control. Buyers must be able to plan merchandise budgets, as well as merchandise assortments, and know what and how much merchandise to buy. It is also essential that buyers understand their target customer. They must be aware of evolving fashion trends, economic trends, and consumer purchasing patterns. Several factors affect the buyer's job responsibilities, including economic conditions, technological advancements, governmental regulations, and competition. Retail buyers need to monitor these factors and examine how they affect the retail environment (Bohlinger 2001).

Retail buyers generally purchase merchandise from manufacturers referred to as vendors. There are several ways buyers can make their purchases. They may travel to wholesale markets such as New York, Dallas, Chicago, Atlanta, Paris, or Hong Kong where vendors show their merchandise in showrooms. Also, vendor sales representatives may come to their office or store and show them merchandise, or they may purchase from catalogs, videos, or DVDs sent to them from vendors (Diamond and Pintel 2001).

When planning their purchases, buyers must consider the company's merchandising policies, such as what quality of goods are carried in the stores, at what prices, and how much variety and what kind of assortment the store wants to offer the customer (Diamond and Pintel 2001). Merchandise assortments are often described as deep, narrow, broad, or shallow. Deep assortments offer the customer many styles; narrow assortments

offer the customer a limited number of categories. For example, long-sleeve, crewneck, and turtle-neck sweaters would be a deep and narrow assortment of sweaters. Broad assortments offer several categories of merchandise, and shallow assortments offer a limited number of styles. For example, a ladies' specialty store might carry shirts, pants, skirts, sweaters, and jackets, but they may only offer two or three styles in each category, thus carrying a broad and shallow assortment (Bohlinger 2001).

Mathematical and analytical skills are also necessary for retail buyers, because they have to know how much money they have to spend on goods. This amount is called their open-to-buy. Buyers must also know how to calculate prices, markup percentages, markdown percentages, stock-to-sales ratios and stock turnover figures. Merchandising mathematics consists of adding, subtracting, multiplying, and dividing procedures following various formulas. Analysis of various numerical data is a large and critical aspect of a buyer's job.

Merchandise planning and buying can be an exciting career. It is hard work, but provides rewarding benefits like travel, directing product trends, and providing customers with merchandise to meet their needs. An educational background in merchandising, good analytical skills, knowledge of computer applications, enthusiasm, product knowledge, and excellent written and oral communication skills are considered necessary for a successful career in merchandise buying.

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See also: Management

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Methods and Criteria in the Study of Human Ecology

Results reported from research in human ecology and in the empirical sciences in general must meet a number of criteria to be usable for interventions of any sort, including preventive and curative interventions. These criteria include the basic principle that proper methods must be used when scientific research is conducted. This entry discusses

both the criteria for usable research and the methods of research in the field of human ecology.

Four criteria must be met for research results to be applicable, that is, useful in real-life applications. These criteria are that research must be (1) reliable, (2), valid, (3) objective (Anastasi 1968), and (4) causally firm (von Eye and Brandtstädter 1998; von Eye and Schuster 1999).

Reliability

One major reason why so much effort and so many resources are invested in scientific research is that statements that result from scientific research are typically more precise than statements from everyday observation or speculation. The degree of precision that comes with scientific statements is termed reliability.

There are a number of ways in which the degree of reliability can be determined. The most frequently used way is to repeat the scientific research and to try to come to the same result a second time, or even more often. If the results are repeatedly the same, the degree of reliability is high. If there are discrepancies, the degree of reliability is low.

Although this way of determining reliability can be useful, the method of replicating research or assessments is of limited use in two areas of human ecology. The first area is that of states that naturally change relatively frequently. Examples of such states are emotions. Emotions are known to change from one situation to the next, in particular in children and adolescents. Therefore, if repeated observation of emotions does not result in the same description or assessment, that does not necessarily mean that the observation is unreliable. It can as well be a reflection of changing emotions. The second area in which repeat observation is of limited use is that of development. By definition, development changes individuals, environments, and the responses of individuals to environments. Again, when change is the norm, repeat observation is not the method of choice to determine reliability.

Two methods to determine the reliability of statements are the comparison of parallel statements and the method of split-half reliability. The latter is popular as a way of assessing the reliability of psychological tests. Tests typically consist of a number of items each of which measures the same behavior domain. If these items and thus the



Dr. Anne Anastasi (Courtesy of Department of Psychology, Fordham University)

entire test are perfectly reliable, a respondent will give consistent answers. As a result, the result from one random half of the items will be the same as the result from the other half of the items. When that is the case, the two random halves are said to correlate. If this correlation is high, the reliability is also high.

The concept of parallel statements involves using two or more parallel observations. Consider a traffic accident. If this accident is observed by a number of bystanders, each of the bystanders can give her description of the accident. If the descriptions correlate highly, we have a reliable rendering of the course of events.

It should be noted that this rendering is reliable only in the sense that the observers agree. It

is possible that they all fell for an illusion or they all were blinded by the sun. In these cases, one would not challenge the reliability of the descriptions. One would wonder, however, whether the description is *valid*, an issue that is taken up in the next section.

Validity

A scientific statement is valid if it indeed covers the topic it is intended to cover. Consider a situation in which researchers are interested in verbal performance in a group of adolescents in semi-rural Michigan. A random sample of boys and girls, equal in age and a number of other related variables, such as family income, number of siblings, and physical pubertal status, is assessed.

Then, the students perform a series of verbal tasks involving word definitions, verbal memory, alliterations, and synonyms. When can we say that this experiment validly assesses the verbal performance of the students? In order to answer the question, we must look at both *internal* and *external validity*.

An experiment is internally valid if its results reflect results known from earlier studies, if they were expected from theory, and if they are plausible. In the above study, the researchers know about the vocabulary of the students in the adolescent age bracket, they also know that the average student can remember about seven items after a single presentation, they know that alliterations first come rapidly and then very slowly, and they also know that the ability of finding synonyms correlates to an average degree with vocabulary. In addition, the researchers know that during adolescence, girls begin to outperform boys in verbal tasks. If all this and additional knowledge and theory available to the researchers is confirmed in this study, the study can be deemed internally valid.

An empirical study is *externally valid* or *ecologically valid* if its results conform to external criteria one can employ to check results against. The study on verbal performance of adolescents is externally valid if the students with good results also have good grades in English, perhaps also in foreign languages, and if the students with the good results are also member of the literature circle and the journalism club.

Objectivity

If the results of an experiment can be found by only one researcher and all other researchers performing the same experiment fail to reach the same results, one wonders whether this one researcher presented correct data. If, in contrast, all researchers who use the same methods come to the same conclusions, doubts are hard to justify. Thus we call results objective if they are based on observations, surveys, or experiments that are independent of such external variables as the tester, the situation, and other possibly disturbing marginal effects. Only if results are objective, can they also be valid and reliable. Objectivity is thus a logical precondition of validity and reliability. The following are the three most frequently discussed components of objectivity:

Objectivity in Regard to Administration

If the person of the experimenter or tester has no effect on the results of a study, the study is deemed objective in regard to administration.

Objectivity in Regard to Coding

Here, the results of coding of responses must be independent of the person who performs the coding. This criterion is most important in what are called field studies. These are studies in which it is impossible to set experimental and well-controlled conditions, and observations are therefore performed without manipulation of events. While field studies are often considered ecologically more valid than controlled experiments, researchers must make sure that they are also reliable. Objective coding is an important way of ensuring the quality of observational, non-experimental studies.

Objectivity in Regard to Data

Analysis and Interpretation

One would assume that data analysis is as objective as can be. When provided with the same data, computers, and data analysis software, data analysts should always create identical results. This, however, is not the case. Data analysts and statisticians often need to make assumptions concerning probabilities of events. If these assumptions differ, outcomes and conclusions can differ widely.

Consider the following example (Isaac 1996). A man is accused of having fathered a child. He disputes this accusation. Now, this man has a genetic marker that (1) occurs in the population only in 1 out of 100 cases and (2) is transmitted only by males. The child also has this marker. In court, the prosecution's statisticians discuss the probability that this man fathered the child, noting that one does not know a priori whether the man is the father. Therefore, one has to assume that the two a priori possibilities *father* and *not-father* have, in general, equal probabilities, which in this case means $p_{father} = p_{not-father} = 0.5$. Based on this assumption, the probability of this particular man being the father of this particular child is 0.99. The prosecution thus concludes that it is close to certain that this man has fathered the child and proposes that the man pay child alimony. The defendant's statistician disputes this conclusion with the following argument: The assumption of equal probabilities is arbitrary. Many other men could theoretically be the father of the child. If one as-

sumes that, in general, the a priori probabilities of $p_{father} = 0.001$ and $p_{not-father} = 0.999$, then the probability that this particular man is the father of this particular child is only 0.09, a value too low to come to the verdict of guilty. Obviously, these two conclusions are widely discrepant. Therefore, neither is objective.

The Causal Foundation of Research

The first three criteria have also been discussed in other contexts than research, for instance diagnostics (Anastasi 1968). The concept of causality is uniquely a criterion of research. In particular, it is of fundamental importance in intervention research of all kinds. Therapists as well as educators, politicians, parents, doctors, and applied researchers in prevention, all need to have some basis for believing that their interventions will cause development and change. Without this belief, their acts would probably seem to them futile. Because of this fundamental importance, there exists a large body of literature on causality in all areas of the sciences. We find philosophical tractates, mathematical theorems, and statistical concepts. As can be expected, the authors largely disagree on the basic nature and definition of causality. However, there exist three criteria that seem generally accepted for good empirical research that is based on the idea that causal processes are at work (Bollen 1989; von Eye and Schuster 1999).

The first of these criteria is *isolation*. Consider an outcome variable, Y , that is isolated from all possible influences that other variables might have on it, except for the influence that variable X has on it. Then, variable X can be called a cause of Y if a change in X goes hand in hand with a change in Y . In ecological research, it is virtually impossible to completely isolate variables from all influences but one. Experimental research in the laboratory is one attempt at accomplishing isolation. Therefore, researchers try to attempt to achieve reasonably high degrees isolation in ecological research using statistical means and repeated observations.

The second criterion is *association*. Variables are typically associated or correlated if they are causally related to each other. It is, however, well established that association is only a necessary but not a sufficient condition. Two variables can be associated because they both depend on a third variable. Such a relationship is called spurious.

The third criterion is the *direction* of the causal influence. It must be clear that one variable is the cause of the change in the other and not the other way around. In empirical research, the criterion of *direction* has been proven elusive. Consider the following example. In some districts of the California school system, teachers try to instill self-confidence in students because high levels of academic performance and high degrees of self-confidence are known to come together. The idea is, that by increasing self-confidence one would also increase academic performance. This attempt has been criticized, however, because the direction of the causal effect is not clear. It might as well be that students are self-confident in particular when and *because* their performance is high.

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See also: Hermeneutics and Human Ecology; Participatory Action Research; Philosophy of Human Ecology; Qualitative Research; Quantitative Research

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Moen, Phyllis

Phyllis Moen received her B.S. in 1971 and her M.A. (in sociology) in 1973 from the University of North Dakota, while commuting there from a small farm in Crookston, Minnesota, where she and her husband Arnie raised Arabian horses and two young daughters. Arnie's unexpected death in 1974 meant a new life and new goals, as well as loss. In 1978, following the completion of her Ph.D. in sociology (with mentors Reuben Hill, Bob Leik, and Jeylan Mortimer) at the University of Minnesota, Phyllis joined Cornell University as an assistant professor in human development and family studies. At Cornell, she acquired new mentors: life course sociologist Glen Elder Jr. and develop-

mental psychologist Urie Bronfenbrenner. Years later (in 1992) she founded the Bronfenbrenner Life Course Center (BLCC), testimony to the importance of understanding the interplay of contexts with the development of lives over time. In that same year, Moen was awarded an endowed chair, the Ferris Family Professor of Life Course Studies. Currently the BLCC serves as an umbrella organization, housing the Cornell Employment and Family Careers Institute, the Cornell Gerontology Research Institute, and the Pathways to Life Quality Project. The BLCC remains a vital force in a life course, ecological framing of issues for interdisciplinary research, education, and outreach.

In an ambitious and far-reaching program of research, Moen documents the diverse pathways followed by men and women. She examines transitions and trajectories extending from early stages (young adults anticipating forming meaningful work and family relationships) all the way to retirement and life after retirement. Her ecological, life course approach shows how individual experiences occur within the confluence of structural and cultural constraints and opportunities. Her analyses also highlight the agentic role of individuals, the ways that people plan and shape their life courses in the face of ongoing constraints.

Within the life course perspective, Phyllis Moen's research highlights the importance of lives lived in context. One such context is historical location. For instance Moen and her colleagues, in the late 1980s studied women's roles and well-being by relocating and reinterviewing women who were first interviewed thirty years earlier (in 1956). This study highlights the importance of civic involvement (volunteering and belonging to clubs and organizations in the 1950s) for both longevity and health in later adulthood (Moen, Dempster-McClain, and Williams 1989, 1992). Another set of contexts involves geographic and cultural location. In this case, Moen and her coauthors (Moen, Sweet, Townsend, and others 2001) illustrate the power of these forces, showing that most upstate New Yorkers define their communities and workplaces as family-friendly but see areas for improvement.

Perhaps Phyllis Moen's greatest contribution to human ecology will emerge as others follow her mandate to study the context of linked lives. Few currently study how dual-earner couples' careers operate in a tandem fashion, at times operating in

synchronicity, and at other times, out of step. The consequences of these sequential patterns can be profound for both men's and women's lives.

Phyllis Moen's research has also identified many structural lags, obsolete templates for work and family life, developed during the industrial economy of the twentieth century. In an effort to reshape policies for creating healthy work and family lives, Moen formed the first Sloan Center for the Study of Working Families in 1997. This highly visible institute works as an active agent in identifying structural leads, innovative practices of employers, communities, and working families that employ effective strategies of accommodating dual-career families.

Phyllis Moen is a respected life course scholar. She has generated substantial funding from government (e.g., grants from National Institutes of Health [NIH], National Institute on Aging [NIA], National Science Foundation [NSF], United States Department of Agriculture [USDA], Department of Labor [DL]) and foundations (e.g., grants from the Alfred P. Sloan Foundation and Atlantic Philanthropic Services) to support ambitious research projects studying the ecology of human development. She is author or coauthor of six books, most recently *Social Integration in the Second Half of Life* and *A Nation Divided: Diversity, Inequality, and Community in American Society*. Other books include: *The State of Americans: This Generation and Next*; *Examining Lives in Context: Perspectives on the Ecology of Human Development*; *Women's Two Roles: A Contemporary Dilemma*; and *Working Parents: Transformations in Gender Roles and Public Policies in Sweden*.

Phyllis Moen's collective body of research also includes numerous book chapters and scores of peer-reviewed journal articles, all of which are in the most coveted of journals, including *The American Sociological Review*, *American Journal of Sociology*, *The Gerontologist*, *Social Problems*, *Journal of Marriage and the Family*, *Social Forces*, *Sociological Quarterly*, and *Journal of Health and Social Behavior*, to name but a few examples. Phyllis Moen is also the recipient of numerous awards, including, in 2001, the American Sociological Association Award for Distinguished Scholarship in Aging and the Life Course, and the Constance E. Cook and Alice H. Cook Mentoring Award, Cornell University in 2000.

At present, Phyllis Moen is the Ferris Family

Professor of Life Course Studies at Cornell University and professor of human development and sociology. She also directs the Bronfenbrenner Life Course Center and the Cornell Employment and Family Careers Institute, and is co-director of the Cornell Gerontological Research Institute. When not writing, she relaxes and travels with her husband and compadre, Richard Shore.

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Mold and Health

Mold and mildew are common terms for microscopic fungi that grow on organic materials; some of these fungi produce spores, toxins, and other products that can cause health problems. There are many tens of thousands of species of fungus, and they are ubiquitous. All that these organisms need for growth is moisture, oxygen, and an organic food source. In effect, fungi will grow almost anywhere as long as there is sufficient moisture. In the

larger scheme of things, fungi play a critically important role in the environment, as they break down and recycle dead organic matter. However, the growth of fungal molds in buildings can cause a problem. Besides damaging building components and contents, molds can cause health problems for occupants.

Mold spores pervade our environment. Any surface composed of or covered with organic material can provide a substrate for mold colonization and growth, as long as there is sufficient moisture and air. In most instances, moisture is the limiting factor, since air and organic materials (even in the form of thin films) are ubiquitous. The most common indoor molds are *Cladosporidium*, *Penicillium*, *Aspergillus*, and *Alternaria* (National Center For Environmental Health 2001).

Several materials produced by some mold species can cause health problems. Mold spores are an irritant to many individuals. Those with allergies may be especially affected. Fragments of mold cells can also cause health problems; the problems are attributed in part to poisonous metabolites (called mycotoxins) produced by the fungus to prevent encroachment of other competing fungi on colonized areas. (Some of these are valuable as antibiotics; others are potent carcinogens.) The toxicity of these chemicals varies not only from species to species, but may also depend on the specific characteristics of growing conditions. Besides spores and toxic cellular components, molds also produce microbial volatile organic compounds (MVOCs). These include xylenes, toluene, benzene, and other compounds. These are metabolic waste products that pollute the indoor air and account for mold's characteristic smell. In addition, some molds can cause infectious diseases in humans.

The most common health effects of mold exposure include irritation of the eyes, nose and throat, breathing difficulties, skin rashes, headache, and coughing. These symptoms are common to many indoor pollutants. Molds can also trigger asthma attacks in some asthmatics. More severe problems, usually seen only in heavy occupational exposures, may include fever and shortness of breath. Heavy occupational exposure to mold (seen, for example, in farmers working with moldy hay) can cause severe illnesses such as organic dust toxic syndrome (ODTS), humidifier fever, or hypersensitivity pneumonitis. (This latter disease resembles bacte-

rial pneumonia and is uncommon.) The elderly, the very young, and those with compromised immune systems (AIDS patients, transplant patients, and others) are especially susceptible to the harmful effects of mold exposure. This group may be at risk of fungal infections of the lung.

Skin contact or ingestion of moldy foods can also cause health problems. Aflatoxin is a carcinogen that can grow on peanuts infected with *Aspergillus flavus*. Ergot alkaloids are compounds produced when rye or other grasses become infected with fungi of the genus *Claviceps*. When consumed in large doses, these alkaloids can cause cramping and a form of gangrene.

One particular mold, *Stachybotrys atra* (also known as *S. chartarum*) has gained notoriety after a 1994 report linking its presence to pulmonary hemorrhagic disease and death in infants. Subsequent investigation failed to establish a convincing causal relationship to mold exposure (Center For Disease Control 2000, 2–3). Nevertheless, media reports of these events, combined with several highly publicized incidents in which occupants of *Stachybotrys*-infested homes developed neurological impairments and other symptoms attributed to this mold, have caused great concern among the public about “killer mold.”

Stachybotrys chartarum is a greenish-black slimy mold that can grow on cellulose-based materials (wood, paper, drywall, ceiling tiles, and the like) if they remain wet for periods of days or weeks. The mold produces a mycotoxin, trichothecene, which can be extremely toxic. While agents such as bleach can kill mold cells, the toxins are not inactivated by bleach. Hence, cleanup of large areas must be done with caution.

Though public concerns about this mold continue, it is the consensus of some health officials (New York City Department of Health 2001) that health risks are more importantly related to the magnitude of mold exposure; the particular type of mold involved is said to be of lesser importance.

There are a variety of ways that exposure to mold can occur. Spores and MVOC's are spontaneously released into the air. Cells and cell debris can be released into the air during cleaning or other mechanical disturbance. Mold growing in ductwork or condensate trays can be distributed by air flow. Mold and other microorganisms growing in standing water can also be dispersed into the environment when the water is disturbed or

aerated. For example, mold growing in some types of humidifiers can become airborne during operation of this equipment. Besides inhalation, skin contact or ingestion of mold can cause adverse health effects.

There are several analytic methods for the detection of mold. Samples of the contaminated material (called bulk samples) may be sent to the laboratory for analysis. Samples of the mold can be collected, using transparent tape, and analyzed in the laboratory. It is also possible to sample the air for spores; using a calibrated pump, a known volume of air is drawn through a filter, which is analyzed in the laboratory. The first two methods can provide information on the species of mold in the samples. Air testing also yields quantitative information on the number of culture-forming units in the air sample. This is typically reported as CFUs per cubic meter of air. It is not currently possible to specify a concentration level that is safe or harmful in respect to human health. However, comparison to a simultaneous outdoor air sample can reveal the extent of mold growth within the building.

The practicality of such tests is limited, and primarily of value in research and legal applications or in conjunction with a medical evaluation. It is generally believed that mold problems extensive enough to cause health problems will be evidenced by visible mold growth or odors, and that resources should be directed to moisture mitigation and mold cleanup. (New York City Department of Health 2001, 7 and National Center For Environmental Health 2001, 2).

Prevention of mold growth is a matter of controlling moisture problems. Indoor humidity should be no higher than about 40 percent to 55 percent relative humidity (National Center For Environmental Health 2001) In warm weather, some control measures include proper disposition of rainwater, use of air conditioning or dehumidifiers, exclusion of moist outdoor air, and control of indoor moisture sources. Many of these same measures are appropriate during the heating season as well. Insufficient building ventilation can be another cause of high humidity levels during cool weather. Mold growth in cooler climates is often seen as condensation forming on cooler building surfaces.

To solve a mold problem, one must identify and correct the source of excess moisture, and one

must clean up the mold. Some additional sources of moisture problems include plumbing leaks, rainwater intrusion, flooding, and improper construction detailing. (The latter problem can result in trapped moisture within building components.) If there has been substantial wetting of building materials or contents, these must be dried out as quickly as possible. Generally, porous materials such as wallboard and ceiling tiles that become saturated will need to be discarded. Carpets can be salvaged if they can be dried within a day or so after wetting. Hard or semiporous materials such as wood can be salvaged, although if damage is extensive, remediation may not be economically practical. Prompt drying will minimize the amount of cleaning needed.

Cleanup of small mold problems (i.e., covering small areas, such as mold in a shower stall, or involving items in storage, for example) can be accomplished using dilute laundry bleach (never mix bleach and ammonia; toxic gases will result) or commercial products made specifically for this purpose. For materials that may be harmed by bleach, some alternatives include rubbing alcohol or hydrogen peroxide.

When larger mold infestations (i.e., more than a couple of square feet) are cleaned, the potential for serious health consequences arises for workers as well as for occupants as the mold is disturbed. The New York City Health Department has developed a set of guidelines concerning mold cleanup in buildings (New York City Department of Health 2001). The guidelines emphasize the need for worker training and personal protection, outlining protocols for five levels of contamination. These range from areas of 10 square feet or less, to excessive contamination (100 square feet or more). The latter cleanup should be done only by trained professionals with extensive personal protection and isolation of the work area from the rest of the building. The goal of cleaning is thorough removal of mold using detergents and dust suppression measures, followed by drying and correction of the moisture problem. Use of bleach is not emphasized; while this kills spores, it does not inactivate toxins. (Note that flooding that involves sewage or other contaminants presents health hazards beyond those discussed here.)

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See also: Asthma; Healthy Indoor Air; Indoor Air Pollution

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Moral Development

Morality is a critical aspect of the social fabric of society, regardless of historical period, nation, or group. A fundamental controversy in moral psychology is whether moral ideas are universal, shared by all cultures and historical periods, or whether they are relative, so that different cultures and historical periods hold different moral values.

Moral theories seek to understand actions in particular situations, people's interpretations of them, and how such actions, situations, and interpretations are influenced by the larger spheres in which they are embedded—the essence of the human ecological approach to psychology. Although different topics make use of disparate methods of inquiry, the main lines of research in moral psychology have remained relatively stable over the last seventy-five years. The major topics covered in this chapter are moral reasoning, perspective taking, empathy, social learning of moral conventions, moral agency, moral self and identity, and cross-cultural comparison.

Historical Overview

Morality did not become an appropriate area for scientific thinking until psychology split off from philosophy some hundred years ago. Freud's theory (1959) that morality (the superego) arises as a check on human impulses and aggressiveness (the id) embodied the idea that morality is another name for internalized societal values.

The first scientific research on morality in the United States rested on the same assumption. Seventy years ago, Hugh Hartshorne and Mark May (1928–1930) sought to identify differences between children with good character (internalized morality) and those with poor character. They put children in situations where they could act honestly or cheat, show self-control or act impulsively, and perform a good service or do nothing. Results revealed that character is variable: Some of the children were moral some of the time, but none of them were moral in all situations. Because these results were interpreted as meaning that there really is no such thing as character, this series of studies deterred American psychologists from research in the field of moral psychology for the next thirty years.

Late in his career, B. F. Skinner (1971), the American behaviorist, presented a theory that morality arises from positively and negatively reinforcing specific behaviors that lead to adherence to social norms and values. Rather than looking broadly for good character as Hartshorne and May (1929–30) did, he proposed looking for specific contingencies.

In Switzerland, a different conception of morality was being investigated by Jean Piaget (1932). Piaget studied how situations, such as playing the game of marbles together, affected the development of children's judgments about rules, authority, and social relationships. He argued that children constructed their own moral ideas from experiences rather than either internalizing them as Freud theorized or having the moral norms of their parents and society contingently reinforced as Skinner proposed. Piaget's ideas were later imported to America by Lawrence Kohlberg (1964) as the basis for his seminal research on development of moral reasoning. Whereas Piaget's theory defined moral development as complete with the move from heteronomous to autonomous thinking in middle childhood; Kohlberg's longitudinal and cross-cultural research (Colby and Kohlberg 1987) showed moral reasoning developing through six

stages over the life course, thus continuing to develop well into adulthood.

Moral Reasoning and Moral Cognition

The study of the reasons people give to support their views of what is right or wrong, good or bad, and how these reasons change and become more adequate from childhood to adulthood is the focus of Kohlberg's stage theory of moral reasoning development (1984). The entry on Lawrence Kohlberg in this encyclopedia discusses his grounding in moral philosophy, particularly that of Plato, Kant, and Rawls, and lays out the assumptions and definitions of the three levels and six stages of his theory. Kohlberg sought empirical support for one philosophical viewpoint, that morality is universal; this theory remains the most controversial aspect of his work. Thus, his aims were twofold: (1) to show that individual moral reasoning develops in the same way, although the pace may differ, from childhood through adulthood in all cultures and historical periods; and (2) to show that the stages represent structural features of developing perspective-taking and logics used to understand social interactions (e.g., equality, equity, reciprocity).

Although Kohlberg argued that moral reasoning is not relative to the culture in which a human being lives, he recognized that situations and therefore the moral issues involved, or the content on which moral reasoning operates, may differ. Even on one issue such as abortion, arguments for and against rest on different opinions or accepted facts. However, the reasoning used by both sides to substantiate their views, Kohlberg held, can be analyzed according to the structural features of the six stages. The method of Kohlbergian research is individual interviewing, with a semistructured measure eliciting responses to three or more moral dilemmas, such as the well-known Heinz Dilemma (Colby and Kohlberg 1987).

Kohlberg's strong continuing influence on moral psychology lies in (1) relating psychological research to philosophical ideas; (2) seeing children as actively engaged in understanding social relationships; (3) emphasizing that morality is not primarily imposed upon children by adults; and (4) bringing out the way the positive emotions of empathy, sympathy, and altruism are part of the process of perspective-taking that is key to moral reasoning development (Turiel 1997).

Over a thousand studies using Kohlberg's theory and his Moral Judgment Interview (MJI) method have been conducted on moral reasoning over the life span, cross-culturally, with regard to sex differences, and in relation to perspective taking, personality variables, coping and defense mechanisms, parenting practices, taking responsibility, and prosocial behavior. This research was reviewed by James Rest (1983) and more recently by Elliot Turiel (1997).

An important second area of Kohlberg's work was in moral education, which allowed examination of the ecology of moral growth. Using what are called just community programs, established by Kohlberg, as labs, Clark Power, Ann Higgins, and Kohlberg (1989) examined the ecology of moral growth. Evaluation of these and comparison schools using the MJI and measures of school culture and individual students' sense of responsibility showed the interplay of individual growth in moral reasoning and behavior with positive changes in program culture. Other colleagues, Rest, Turiel, and Robert Selman, moved moral cognition in diverse, fruitful directions.

Rest developed a paper and pencil measure of preferences for different stage arguments related to moral dilemmas, the Defining Issues Test (DIT), (Rest et al. 2000). The DIT and MJI correlate similarly across age groups. Analysis of the data collected by Rest and his colleagues and data from several hundred other studies over twenty-five years shows that development on the DIT is related to education, especially college, to kinds of careers, and to work experience (Rest 1983). In addition, Rest and his colleagues emphasized the roles of perception, sensitivity, ego strength, and motivation as well as judgment in predicting moral action, and argued that moral content and stages should be tracked together, especially in cross-cultural research (Rest et al. 2000).

Turiel (1983) focused foremost on content. He proposed that children's understanding of authority relations and power are differentially determined by content; thus, he distinguished between a moral domain and a social-conventional domain. His colleagues (see Nucci 2001) added a third domain, personal jurisdiction. In the last twenty years, many studies assessing the authority of parents and other adults (e.g., teachers) and peer authority have shown that by the ages of 9 or 10, children use distinguish between the three do-

main when discussing social issues, that younger children first distinguish between the moral and conventional domains, that even fairly young children know it is wrong to commit a moral transgression (e.g., stealing or lying) even if told to do so by a parent or adult, and that these three domains are cross-culturally valid. Research is conducted using structured interviews and systematic observations. Recent work has assessed the domains using an adapted paper and pencil measure (Kuther and Higgins-D'Alessandro 2000).

Selman's theory (1980) of the development of interpersonal understanding explicitly lays out a sequence in the development of perspective-taking ability, the ability that underlies moral reasoning. The methods used are semistructured interviews and analysis of transcripts of peer and adult-child interactions. Selman and Lynn Schultz (Selman and Schultz 1990) bootstrapped research with clinical practice; the outcomes have been school intervention programs on friendships and bullying and the development of "pair therapy," in which a therapist helps a child who tends to attribute all problems to some deficiency in himself, known in the field as an internalizing, or self-changing, child and a child who tends to blame others for problems, known as an externalizing, or other-changing, child relate with each other, moderate their extreme styles, achieve better interpersonal understanding, and ameliorate their emotional problems.

Empathy, Perspective Taking, and Prosocial Behavior

Martin Hoffman (1991) and Nancy Eisenberg (2000) have argued that the development of empathy is primary and underlies perspective taking and moral judgment. Empathetic arousal may be a hardwired tendency in infants. Newborns show evidence of emotional sensitivity to the distress of other infants. Infants often initiate exchange of emotional cues with adults. In young children, empathy may be developed through social referencing, or use of parents and other adults as guides for how to react. The tacit understanding that the emotional displays of others convey information important to the child underlies social referencing (Bretherton et al. 1986).

According to Hoffman (1991), three mechanisms support the development of empathy. First, for infants, the distress of others is not separate

from self-distress. Second, young children often mimic the expressive cues of another. Third, conditioning causes the child to feel empathy through association with her own past experiences of pain or discomfort. Hoffman suggested that empathy is an evolutionarily favored capability, and that well-developed empathic responses motivate moral behavior.

Prosocial inclinations (e.g., sharing toys, expressing sympathy, and the like) are displayed from early childhood (Lapsley 1996). Prosocial behavior may be motivated either by self-oriented egoistic desires (especially in children) or by other-oriented moral values or principles (Eisenberg 2000). Prosocial behavior increases with age, with the greatest change occurring between childhood and early adolescence (Pubertal changes may increase prosocial behavior, as well as the more researched adolescent characteristics of aggressiveness, irritability, and mood swings (Fabes et al. 1999).

Emotions of Moral Evaluation

Some psychologists have argued that the negative emotions are the core of morality and essential for moral learning, the development of conscience, and the maintenance of societal values. This research has focused mostly on the emotions of guilt and shame.

Guilt and shame are regarded as “self-conscious” emotions, because a self-evaluative component is fundamental. Tamara Ferguson and Hedde Stegge (1998) defined the primary difference between guilt and shame as the degree of focus on the self, with guilt generally focused on specific aspects of one’s behavior and shame generating a condemnation of one’s entire self. Tangney (1998) found that guilt and shame were differentially related to empathy. Guilt had a positive association with adults’ self-reported empathic responsiveness, while shame was associated with personal distress, similar to a young child’s crying in mimicry of another’s distress. Kochanska (1991) used guilt as one measure of the extent to which children have developed a sense of conscience. She found that maternal child-rearing and socialization behaviors used with toddlers predicted the toddlers’ internalization or sense of conscience when measured six years later, as 8–10-year-olds.

Paul Rozin, Jonathan Haidt, and Clark McCauley (2000) have described disgust as an emo-

tion that influences moral evaluations. In their view, disgust has undergone an evolution driven by changes in culture over the course of human history from a reaction that originally protected the body from poison through oral rejection of food to a protective force against violations of the body, soul, and social order. Moral disgust, the most evolved stage, is hypothesized to motivate social behavior and opinions through the same physiological rejection mechanism.

Social Learning of Morality

Social learning occurs by watching and imitating other people. This form of modeling has been shown to promote altruistic behavior, generosity, and resistance to temptation to violate moral codes. The effects of modeling are robust and durable over time, and are enhanced when the model is powerful in the eyes of the child and when the modeled action is practiced (Lapsley 1996).

Behavioral modeling can take place through direct contact with others or through more indirect routes, such as television viewing. Paik (1995) conducted a meta-analysis of studies linking prosocial television messages to altruistic behavior as measured in lab experiments, field experiments, and survey studies. There was a strong link between modeled altruistic behaviors in all TV program formats and children’s observed altruistic behaviors. The final report of an American Psychological Association task force concluded that prosocial values in television programming can be understood and applied by viewers; however, the relationship between television content and either prosocial or antisocial behavior seems to also depend upon cognitive and personality characteristics of the viewer (Huston et al. 1992).

Social Learning and Self-Regulation; Social Cognition and Moral Identity

Recent social learning theory posits that self-regulatory processes such as self-censure, self-condemnation, self-respect, and self-satisfaction govern transgressive and prosocial conduct. Albert Bandura and his colleagues (2001) found that an individual’s perceived academic efficacy, social efficacy, and self-regulatory efficacy influenced prosocial behavior and also efforts not to harm by fostering adherence to moral self-sanctions and by dismissing social pressures.

The social cognition approach focuses on how people develop a moral identity through investigation of their social experiences and personal dilemmas. Examples of this growing area include studies in aging (e.g., Pratt et al. 1991), and in youth (e.g., Walker et al. 1995). Daniel Hart, Robert Atkins, and Debra Ford (1998) defined moral identity, developing during adolescence, as a self-aware processing of one's social experiences and choices, especially prosocial voluntary behaviors. Anne Colby and William Damon's study of adult moral exemplars (1992) showed their moral activities were grounded in empathy and perspective taking in relation to specific less fortunate groups and in seeing themselves as capable of helping, and thus responsible to help. Highlighting the role of specific environments, Ann Higgins-D'Alessandro (in press) has analyzed how responsibilities of teaching related to teachers' moral reasoning and to their positive attitudes and behaviors toward their students.

Both social learning and social cognition theories emphasize that the self, acting in specific situations, is the bridge to understanding the relationship between moral reasoning and moral behavior. Focusing on situational influences on morality raises the issues of moral relativism and moral universalism, Kohlberg's (1984) starting point, and that brings us to the next topic.

Cross-Cultural Research

Moral relativism argues that within any culture, during any time period, there is some consensus about which activities are morally acceptable and which activities transgress against moral statutes, but that these moral attitudes change over time and are different in different societies. The processes that govern both stability and change in cultural morality have been the purview of sociologists and political scientists as well as psychologists. For example, sociologist Robert Bellah and his colleagues (1985) and psychologist Elliot Turiel (2002) examined American culture and found consistency in commitment to community and to shared values over our history, rather than the moral decline the commonly accepted stereotype suggests.

Based on cross-cultural research, Richard Shweder and his colleagues (1997) suggested that three important codes of ethics underlie the morality of most cultures: The ethics of commu-

nity (duty, hierarchy, role), the ethics of autonomy (individual rights and justice), and the ethics of divinity (the self as a spiritual entity and the need to protect the sanctity of body and soul).

Many psychologists now argue that emotions help people to distinguish the moral features of specific contexts, thus universalizing their role in morality (Eisenberg 2000). Moreover, Turiel's summary of research (1997) concluded that both across and within cultures, as within individuals, there exists a limited range of moral values, specifically justice, rights, community, and welfare, supporting the universality of morality; however, many studies have also supported individual, situational, and cultural differences in prioritizing and utilizing these moral values, norms, and principles.

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See also: Bandura, Albert; Empathy; Kohlberg, Lawrence; Self-Efficacy

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Morris, Earl

Earl W. Morris is a leader in the development of a theoretical model of housing adjustment by households. This model has been used by housing researchers to analyze household decision making around housing issues. He is coauthor, with Mary Winter, of the book *Housing, Family, and Society* (1978), which has had a major influence on housing research in home economics.

The model proposed by Morris and Winter brings a sociological perspective to the study of household decisions. In short, the theory of household housing adjustment proposes that housing satisfaction is dependent on the attainment of

housing conditions congruent with cultural and family norms. Households that are dissatisfied with their housing conditions and are not constrained by such things as lack of resources or poor management skills will adjust their housing conditions based on norms. The norms proposed and tested by Morris and others include tenure, bedroom need, structure type, quality, expenditure, space, and neighborhood. The norm for bedroom need, developed by Morris and Peter Gladhart, is defined in terms of the age, sex, and marital status of individuals living in a dwelling unit. The bedroom need norm has the greatest degree of delineation among the norms described. A household with fewer than the normative number of bedrooms is theorized to have a deficit and will make a housing adjustment, such as moving or adapting the current residence, unless constrained by resources both internal and external to the household.

Morris, Winter, and many of their graduate students, as well as other researchers have used path analysis to assess the relationship between housing norms, household constraints, housing satisfaction, and housing adjustment. Much of the initial testing of the model was done during the 1970s and 1980s. During the 1980s, the model was expanded to include environmental conditions such as water usage, energy usage, and indoor air quality.

Morris was born in 1922 in Michigan. He received the B.A. degree from Western Michigan University in 1960, with a major in social science; the M.A. degree from Western Michigan University in 1963, with a major in sociology; and the Ph.D. from Cornell University in 1969, with a major in demography-ecology. His professional academic career after receiving the Ph.D. included teaching and research at Cornell University (1968–1972), Kansas State University (1972–1973), Iowa State University (1973–1988), and the University of Minnesota until his retirement in 1996. From 1991 to 1995, he was professor and department head in the Department of Design, Housing, and Apparel at the University of Minnesota. He is currently professor emeritus at the University of Minnesota and affiliate professor at Iowa State University.

Morris was principal investigator or coinvestigator of numerous research projects, many with Mary Winter. These projects included international work in Honduras, Guatemala, Puerto Rico,

Bolivia, Peru, Poland, Korea, and Mexico, as well as investigations of household housing decisions on many issues in the United States. Funders included the United States Agency for International Development (USAID), the National Science Foundation, AARP, the Andrus Foundation, various state agencies, and the Iowa Agricultural and Home Economics Experiment Station.

He has been editor of *Housing and Society*, the research journal of the American Association of Housing Educators, copy editor of the *Journal of Interior Design Education and Research*, and coeditor of *Social Science Research on Housing*. Dr. Morris has also served as a sworn deputy data analyst for the U.S. Census Bureau and an external assessor for Universiti Pertanian in Malaysia. He was a member of the board of directors for the American Association of Housing Educators for several years.

Dr. Morris is a prolific writer, with thirty-three books, monographs or book chapters; fifty refereed publications; and seventy-eight papers presented at conferences. He supervised sixteen Ph.D. dissertations and thirty-one M.S. theses. The book *Housing, Family, and Society*, was the most often cited publication in articles published in *Housing and Society* during the 1980s.

His awards and honors include the International Honorary for Leadership in University Apartment Communities (1998), the Educational Leadership Award in the College of Human Ecology at the University of Minnesota (1995), the Distinguished Service Award from the American Association of Housing Educators (1990), the Award for Outstanding Contribution to Research from the Association of College and University Housing Officers (1990), the Distinguished Lecturer at Baylor University (1987), and the Research Excellence Award from the College of Home Economics at Iowa State University (1986).

Marilyn Bode

See also: Housing

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Music

Music has been a valued part of life throughout human history. Nevertheless, much about it remains poorly understood. Today music is receiving an intense scientific examination that is both relevant to and capable of profiting from the developing study of human ecology.

First, ecology studies the interrelationships between organisms and their environment. Music helps us to see that in their ecology humans interact with environment dynamically, not only adapting to the world, but also adapting the world to themselves. That humans have consistently developed a world to live in that contains music thus must imply important human values. But what values? For the very reason that these values are still not fully understood, music can point us to things about ourselves, our needs, and our ecology that we do not appreciate sufficiently. What it can show includes the importance to our ecology of sound, individual and social emotions, development of structure and form, the need to make sense of the world, creative activity, and assessment of beauty.

Second, music is often discussed, still, as if it were something outside ourselves that humans construct and then observe. But music is developed in our minds from sounds that pass by and then are gone. Ecological models consider experience, including musical experience, as arising through interaction between the environment and the individual. The need and value for this perspective may be especially well illustrated and developed for thinking about music. Brain research technology is reaching a point where conscious human subjects listening to or making music can be studied experimentally to test and further develop the ways of thinking about music discussed here.

Third, current research is beginning to examine new opportunities for music within human ecology. Because of their love for music, many children and adults will, for example, work hard to develop the broad array of mental capabilities called upon by musical skill. There is now initial evidence for cross-connections that allow learning and development of musical skill to affect other areas of cognitive and social/emotional skill as well. Thus

the broad human love for music may increasingly be linked to new methods affecting broader learning and development.

The human love of music and its ecology deserve continuing investigation. More than 2000 years ago, Plato, in his *Republic*, warned that music had effects too important to ignore. Whether serious or ironic, his specific suggestions for music illustrate great respect. Music has been used to emphasize similarities, but also differences, build emotions of peace, but also of war, both to limit and sometimes to greatly stretch the mind and spirit. Music has the potential to be a rich contributor to our developing ecology, but it will continue to be what we, in our developing humanity, make of it.

Music as Experience

We may talk of “making music” or “listening to music” as if music were a “thing” outside of ourselves to construct or observe. But the great American philosopher John Dewey (Dewey 1932) introduced the very important idea that music is not a type of thing, but rather a type of experience. Sound is integral to music (at least, music without sound is beyond the present discussion), but it is we, as listeners, performers, or composers, who have musical experiences. Human ecology can help us to further develop the idea of music as experience by illuminating how musical experience arises as an interaction between sound and activity in the mind of the individual having the experience. If this seems strange, consider a person who does not understand Chinese listening to someone possibly speaking Chinese. The listener will hear sound, but cannot think of it as being the Chinese language unless she has a thought framework for treating it as Chinese language. Thus the difference between hearing the sound as sound and hearing it as Chinese language arises both from the sound itself (which might be spoken Chinese) and in the listener (who might be able to understand it as Chinese), and through the interaction between sound and mind. The claim here for music is analogous: Sound develops into an experience of music as the mind treats it as music.

Sound

Music, Dewey (1932) reminds us, illustrates how important sound is to our human ecology. Sound signaling change warns of foe or prepares for friend. We communicate richly emotionally and



Student learning to play an instrument (Elizabeth Crews)

verbally through sound. We often analyze what we hear for meaning that is not immediately apparent. Depending so much on thinking, processing of sound can have valued intimacy, richness, and privacy. The freedom of telephone conversations, the power of radio dramas, the richness of our interactions with music all illustrate our intimate human relationships with sound.

Emotion

The strong connections between musical experience and emotions are very obvious but still very poorly understood. Music can amplify joy at a wedding, reduce grief and add comfort at a funeral, reduce the tedium of monotonous work, refresh and entertain after the hard day. Without words, or sometimes through collaboration with words, music can provide deep, rich emotional experiences that we treasure. What we may now even take for granted must have seemed almost magical, or indeed magical, throughout much of music's history.

Music helps us to appreciate the importance of emotion to our ecology. To disparage emotional

thinking ignores the critical importance of emotion (Fischer and Bidell 1998) to the texture and regulation of our lives. Emotions help us to deal with difficulty but also guard and celebrate our need for rest. They influence us toward benefit, and away from harm. They are central to our complex social behaviors and interactions.

Music's interactions with emotion thus address an area of enormous importance. And music can inform us, can illuminate how richly, subtly, dramatically emotions can shift, how they can balance and integrate pushes and pulls in many directions.

Structure and Form

A characteristic feature of most musical experiences is their complex involvement with structure and form (for detail, see Sadie 1980). Musical sounds of a particular composition, for example, are usually limited in very specific ways. Most compositions are built upon musical scales that define discrete acceptable musical pitches through their interrelationships with one another. The arrangement of musical sounds in time (Gardiner 2002) typically involves rhythmic structures that

influence when specific sounds may or may not occur, and how long they last. Melody concerns the arrangement of musical pitches in time, harmony the interrelationships of sounds occurring together or overlapping in time, counterpoint the interrelationships among melodies overlapping in time. Larger structural forms are then built from such elements (Rattner 1977; Einstein 1954; Sadie 1980). A musical experience can involve an instant, a few moments, or many hours of time.

Music reminds us that what mankind adds to its ecology is very often based upon highly developed structures and forms. Mathematics, verbal and written languages, architecture, organization of cities and of countries—all these are other familiar examples. We will further consider why this may be shortly.

God and Man

Throughout human history music has been used within religious worship. Why? Music through its connections to emotion can address religious experience in ways that go beyond words alone. And we have noted the sense of magical power that music must often have created. Another important connection to religion may be related to an idea developed in some detail by the Greek Pythagoras and his followers more than two thousand years ago, and often considered since then. The essential point is that the qualities within music to which we respond are not distinct from, but rather are reflections of more general characteristics of the world in which we live. Music, then, can help us to experience our connection to the world, and to how it is organized. Erich Fromm (e.g., 1964), among others, emphasizes the human need to understand connection to and reduce isolation from the world as an important foundation for the development of religion.

A further, though related, connection concerns creation. However the world in which mankind finds itself may have been created, human beings must from the beginning have noticed their own creative capabilities, and honored them. Music is a persistent example of a product of human creation that, once it was discovered and further developed, improved the lives and world in which people lived. That people could create music must have been and should still be considered marvelous. It does not seem implausible that many may have reflected that some of the deeper mysteries of the

world's creation might become clearer by looking at the mystery of creation that music embodies.

Creative Activities and Musical Experience

The ecological theory of musical experience introduced here implies that creative activity is critically important to all types of musical experience. Ecological modeling helps us to face this directly. Much remains poorly understood about how we carry out creative activity. Music offers excellent opportunities to study creative activity in use, and in so doing, to advance not only the understanding of musical experience, but also the more general understanding of human creativity.

We would all agree that a composer who creates a musical composition is creating something. But what of performer, and listener? Consider first a performer. Whatever the help from memory of previous learning and prior rehearsals of the music, and, if available, from notation of written music being read that presents central aspects of the composer's intentions, the activity and experience of performing music is uniquely developed each time it occurs. A good performer must prepare, but also go beyond what is rehearsed: A teacher told me that French conductors are trained to never let an orchestra fully achieve performance in rehearsal, because the players will give their best performance only once. Musically meaningful performance has a special quality familiar to most performers and often reported, of not feeling fully in charge, but, rather, of both influencing and being influenced within a dialogue with musical experience being created and developing. Jazz musicians are often especially aware of this quality.

Next, consider the listener. Since musical experiences take place over time, mental methods of dealing with time are part of every musical experience (Gardiner 2002). The listener, as an example, must typically deal with sounds staying at the ear for only an instant. To build a musical experience, the listener must blend the moment-to-moment sound inputs with memory of prior and anticipation of future sounds, perhaps integrating other relevant memories and anticipations as well.

That the brain must assemble a musical experience presents a fresh perspective on musical structure and form. Structure within the music both influences and assists the brain's assembly task. For example, structuring can work with expectation, helping the mind to extrapolate between samples,

and thus cooperate with the music to build experiences involving tensions and resolutions of expectation, including special experiences, such as syn-copation, that depend on expectations not being fulfilled as anticipated.

Verbal speech faces similar constructional problems in developing an experience of language and linguistic meaning from the speech-carrying sounds that reach the ear. Here again the complex structuring within language, in some ways similar, in some ways different from that of music, may very well be integral to the success the brain can achieve in assembling the experience.

Like the performer, the listener is carrying out something like a dialogue with the developing experience that he assembles and creates. The sound and development within the mind interact. Something unexpected, or seeming especially beautiful, or perhaps unattractive can change the flow of emotion and the qualities of the musical experience.

The composer, even at the highest levels of creative activity, also again interacts with other influences, as well as with the musical experience that is being developed. Prior learning, prior compositional stages, current experience, and desires can all have their influence. The composer must be performer and listener when necessary, even if partially or entirely within the mind. And the interaction with the musical composition again has a quality akin to dialogue, now dialogue with an experience that increasingly appears to take on life of its own. In a different context, Robert Frost captured this quality aptly when he observed that he could hardly wait to finish writing a poem so that he could find out what it was about.

Given the complexity of creative assembly the brain must do to construct music experience, it seems very remarkable and important that almost all of us, trained or not, respond powerfully to music. This implies that music must have a strong foundation in our biology. Indeed, we are already born with complex capabilities for transforming and analyzing sounds through ears, eardrums, basilar membrane transducers, and the brain. By three months, and perhaps earlier, babies can distinguish the musical qualities of consonance and dissonance between sounds. Rhythm is central to so many activities in addition to music that it seems part of our basic design. But, as with all areas of skill (Fischer 1980), we can develop musically from these foundations.

The very existence of music not only illustrates but also celebrates the importance of creative activity to human ecology. Mozart and Beethoven and Miles Davis stand on the shoulders of individuals who first noticed acts that could produce interesting sound, and then explored further. Primitive flutes are found in the oldest archeological sites, and drumming probably preceded the use of instruments (Einstein 1954). How much further human curiosity has pushed music from such beginnings! Melody from rhythm, fugue from melody, four-hour composition from music of a few moments. How can any of this be explained without taking into account human urges to explore and create?

Beauty

Music, like other arts, is often thought to involve beauty, though exactly how it does so has been discussed and debated for centuries. Human ecology can provide a fresh perspective on this discussion. If we think of beauty as extreme attractiveness, a connection to ecology and ethology becomes apparent, since the ability to attract others can be very important among animals, a fact seen especially clearly in reproductive behavior. We notice beauty in many types of animals. This can suggest that our and their judgments of beauty may have important similarities, and that we may already be born sensitive to certain attributes of beauty. On the other hand, musical history shows that tastes for what is considered beautiful can also be strongly influenced by other factors, which include cultural development, learning, and prior experience.

Our personal musical experiences usually involve beauty. We judge and react to beauty in what we hear, we try, at our best, to play as beautifully as we can, and when composing, we presumably create in part for beauty. Such considerations of beauty may, however, be so integrated with the musical experience that we may be fully aware of their influence only after the experience, in retrospect.

Differences among individuals in consideration of beauty can be important to musical history. J. S. Bach composed music that today we can experience as exceptionally beautiful, but many of his listeners and possibly even some who performed his music may have experienced it very differently, reflecting different tastes concerning beauty in

music that had begun to develop culturally at that time. Such differences in dealing with beauty could have affected the quality of performances and, still more, the enjoyment of the listeners, and can help to explain why Bach's music fell into obscurity for almost a century after his death. But the reawakened admiration for this music in later centuries implies that not only cultural influences are at work, that a more general sense of beauty informs our judgments.

How cultural influences and the fundamental qualities of beauty interact in forming the judgment that something is beautiful remains an important area for further investigation. Music may also illustrate something more generally important to our ecology: that to us considerations of beauty and creative activity may often be intimately interrelated.

Current Areas of Research

Today research testing against alternatives and further developing the ecological models and theory introduced here can include brain research with mentally active subjects during musical experiences. Human brain activity can be studied through methods that include analysis of electrical activity from the brain recorded at the scalp (the Electroencephalogram, or EEG) and of blood flow to the brain (through positron emission tomography, or PET scans, and functional magnetic resonance imaging, or fMRI). Computer methods that are essential for such studies already exist and continue to be further developed.

Current investigation of music already includes significant attention to possibly broadened uses of music and other arts within education (Scripp 2001; Weinberger 2000; Fiske 2000). The focus of this entry is of course on music (Scripp 2001), and within music we focus here on interactions between musical and broader learning and development (Gardiner 2001; Bamberger 2001). As children or adults develop musical skill, this development may also influence their learning and development more broadly. Why?

The author of this entry (Gardiner 2001) has proposed that the interactions between musical and other learning being studied have to do with how learning of skill takes place in the brain. There is considerable evidence that the development of every type of human skill goes through stages (Fischer 1980; Fischer and Bidell 1998). As a skill is

learned and developed, the brain of the learner must develop, redevelop, refine, and further refine methods involved in that skill. To learn a verbal language, for example, as we learn words, meanings, and grammar, our brain must be developing and refining ways to store and retrieve words, and build them into grammatically correct and meaningful language.

Different skills can have some demands in common. Thus as we improve capabilities for attending, organizing, learning to learn, or we become more confident in our ability to learn a difficult skill, all such improvements can help us to improve in all types of skill if general problems in these areas are holding us back. But skills can also differ in important details. That one has learned to read at a particular level does not automatically mean that one can now immediately do math, or play the piano at the same level, until one has also learned the skills special to math and piano at this level.

On the other hand, between some skills a more direct interaction seems to be taking place. For example, studies in elementary students showed evidence that capabilities for learning to sing on pitch influenced and improved progress in math, while not affecting reading as strongly (Gardiner et al. 1996; Gardiner 2001). Such selectivity in cross-connections within learning can suggest similarities in the brain mechanisms addressing these quite different areas of thinking. Selectivity in cross-connections within learning are not easy to explain in other ways, but a lot of work remains to further test and establish this proposed explanation more firmly.

With the richness of thinking that music involves, it can provide a useful opportunity to further study cross-connections within learning. Whereas learning involving musical pitch in singing can be more closely related to learning of math than to reading, other aspects of musical learning have been found more closely related to learning of reading than math, and still other types of musical learning can have more general influence. The types of interactions and cross-connections within learning appear to depend both on the nature of skills and on how such skills are taught as part of the whole curriculum (Gardiner and Scripp 2002; Bamberger 2001; Scripp 2001). As might be expected from the nature of music, cross-connections from music appear to affect not

only cognitive but also social/emotional learning and development (Gardiner 2001). Moreover, both the developing theory and developing evidence suggest influence in both directions between two cross-connected areas of skill (Gardiner and Scripp 2002), possibly accelerating learning in both areas.

Research is addressing both theory and applications at this time. That the efforts devoted to different areas of skill can aid one another may seem almost like having one's cake and eating it too, but perhaps it only seems this way because we are so used to thinking of learning as involving either specific or very global components of skills. Between these extremes lies the possibility of more specific, focused interactions within skill learning. These possibilities are ones that music has helped to illuminate, and can further illuminate and develop as research continues.

Conclusion

The various roles of music in human ecology deserve continuing study. Music's powers to affect human beings are weak compared, for example, to those of psychoactive drugs, but the very normality of music's influence may help to explain its persistent power and multiple roles with human ecology.

Music can very possibly be especially useful to us at this time of rapid human ecological development and change. Music continually reminds us of enduring components of our humanity. The current public interest in music research can reflect hope that this much loved and admired component of our ecology may be useful to us at this time of great stress. It is plausible that it can.

Martin F. Gardiner

See also: Art Therapy; Creativity and the Arts in Child and Adolescent Development

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N

National Association for the Education of Young Children (NAEYC)

The National Association for the Education of Young Children (NAEYC) is a professional organization for persons working with children from birth through the age of 8. Formally established in 1929 as the National Association for Nursery Education (National Association for the Education of Young Children 2001), the organization now boasts more than 100,000 members and roughly 450 local, state, and regional affiliates (National Association for the Education of Young Children December 30, 2001a). According to their mission statement, “NAEYC exists for the purpose of leading and consolidating the efforts of individuals and groups working to achieve healthy development and constructive education for all young children. Primary attention is devoted to assuring the provision of high quality early childhood programs for young children” (National Association for the Education of Young Children December 30, 2001b). Though NAEYC is primarily composed of early childhood educators, administrators, and researchers, its mission, programs, and policies take into account that the young child’s development is affected by all of the environments the child is affected by and interacts with: home, school, neighborhood, city, nation, and world. In addition to promoting high quality care and education for children through professional development opportunities for teachers and family child-care providers, NAEYC promotes and provides parent education opportunities and public policies intended to establish and preserve

beneficial environments for children throughout their early years.

NAEYC strives to accomplish its mission by focusing on three main goals, the first of which includes continually improving the quality of early childhood education settings by improving professional practice and the working conditions of those in the field. The second goal addresses the larger society, and includes attempts to educate the public about the importance of quality care and education for young children that is provided in private as well as public settings. The third goal involves the maintenance of a strong professional organization in order to facilitate working towards the other goals (National Association for the Education of Young Children December 30, 2001b).

In its long history, NAEYC has devised a variety of effective means through which to attain its goals and realize its mission. It provides many avenues through which early childhood educators can improve their level of professional development, such as workshops and conferences at local, state, and national levels. Publications are numerous and include two scholarly journals, *Young Children* and *Early Childhood Research Quarterly*. Additionally, NAEYC publishes position statements outlining best practice and policies for young children in a variety of important areas, such as curriculum and assessment, standardized testing, and school readiness. The National Academy of Early Childhood Programs, a division of NAEYC, offers a voluntary accreditation program for early childhood education programs. This involves an extensive self-study process to not only meet a high stan-

ard of quality care and education, but to improve on the care and education provided, no matter what its level at the beginning of the process. Since 1971, NAEYC has also sponsored an annual celebration in April called the Week of the Young Child, which is intended to educate the public about the importance of quality care and education for children and families (National Association for the Education of Young Children 2001c).

Kathie Reid

See also: Attachment; Child Care: Issues for Infants and Children; Early Childhood Education; Head Start

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Neuropsychology

Neuropsychology is the scientific study of the relationship between the brain and resulting behavior (Zillmer and Spiers 2001). Neuropsychology differs from psychology (which is defined as the scientific study of behavior), but is related to psychology in that neuropsychology attempts to determine how the brain affects any number of differing behaviors. The notion central to much of what is known about neuropsychology is that many bodily functions (e.g., breathing, talking, walking) are controlled by various parts of the brain. The field of neuropsychology takes advantage of this important relationship and in the process attempts to determine what specific parts of the brain affect specific behaviors. Neuropsychology also attempts to provide answers to the question of what happens to specific behaviors when parts of the brain are damaged by disease (e.g., Alzheimer's disease, Parkinson's disease), accident (e.g., closed-head injury, automobile accident), or some combination of the two.

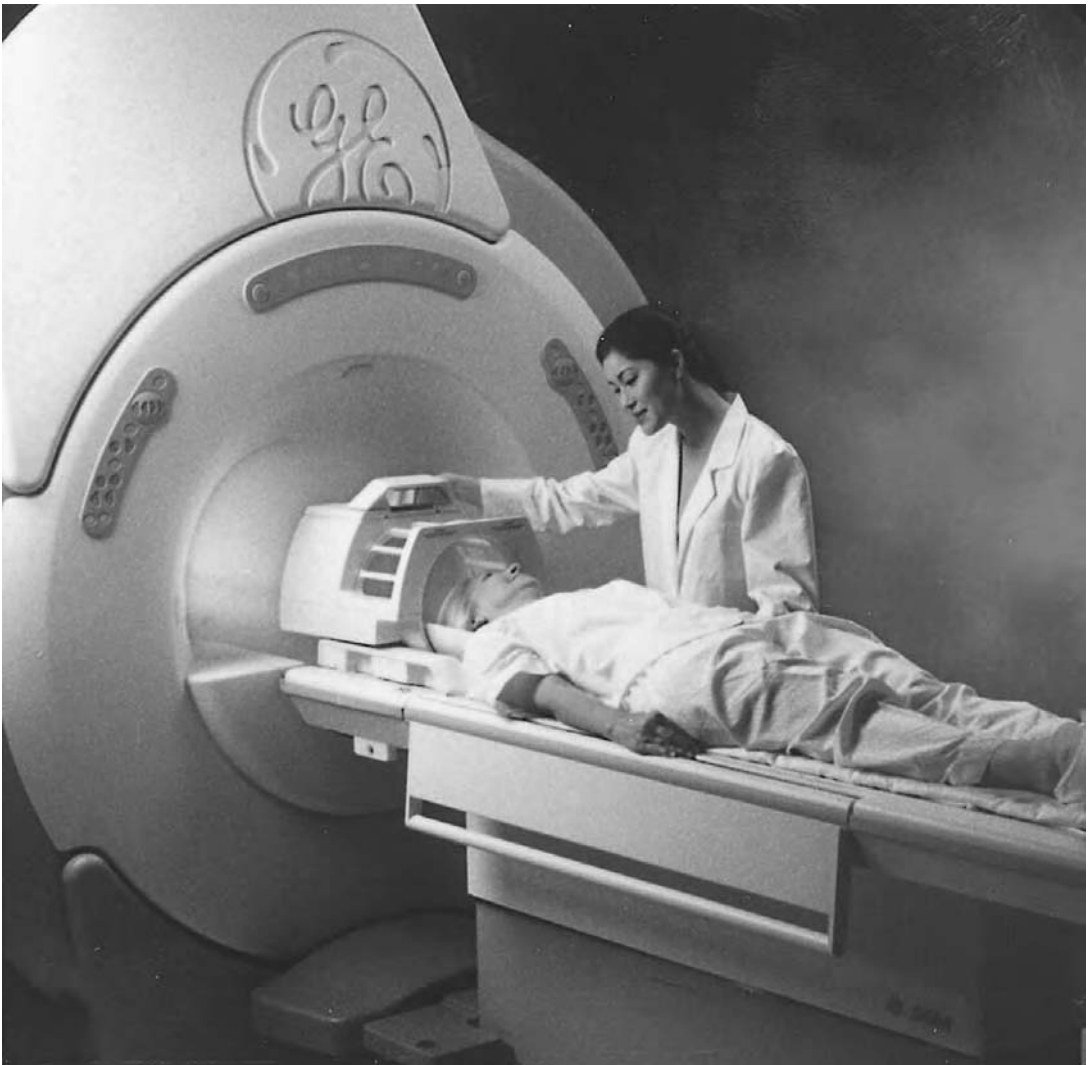
From an ecological perspective, the field of neuropsychology has many implications for family

and community members, especially within the area of education and educational intervention. Currently, many neuropsychologists are employed within school districts in an effort to properly screen and diagnose various diseases and disorders related to children. Such screening and diagnostic measures can then directly benefit the family and ultimately the community via proper introduction and execution of intervention programs designed to increase the overall learning potential of those involved. Much of the field of neuropsychology is applied in nature, and the family-community aspect of it is important on a number of levels.

Although the actual field of neuropsychology is relatively new (having become established in the mid-1940s), the history associated with it actually goes back many centuries. Ancient philosophers like Aristotle, Plato, and Hippocrates have had a great deal of influence on current discussions and suggestions regarding neuropsychology (Haeger 1988). The answers to questions of how the brain controls behavior have long intrigued scientists and laypeople alike, and it is fair to say that many of the questions that were asked centuries ago about how the brain potentially influences and controls behavior are still relevant today as they relate to neuropsychological functioning.

One development (of many) that has emerged in recent years to aid the scientific study of neuropsychology relates to various brain imaging techniques, including, but not limited to, Positron Emission Tomography (PET), Magnetic Resonance Imaging (MRI), and Computer Tomography (CT). These imaging techniques are able to take a picture of the brain at rest or while it is working (or while a person is performing a task or behavior) in real time. That is, these various techniques provide information relating to brain structure (specific parts of the brain) and brain function (behaviors that are under the control of specific brain parts and brain locations). Thus, it is possible to see the brain working in real time, and so to see exactly what brain part is related to the behavior being performed (Raichle 1983).

For instance, it is now well known that damage to specific regions of the left hemisphere results in an inability to speak or communicate effectively. These imaging techniques can also indicate the ex-



A person undergoing an MRI scan (Courtesy of GE Medical Systems)

tent of specific damage to the brain. In this case, if a person cannot perform a specific behavior or can only perform it at a very low level, it is possible to relate the specific brain area damaged to the level and extent of impairment. Despite this advance, though, there is still some question as to what brain part (or parts) controls what behavior (or behaviors).

Much information has been gained over the past twenty-five to thirty years about the field of neuropsychology, and it is becoming one of the fastest growing in terms of individuals specializing in this area. Professionals from many academic and medical disciplines now work collectively on issues related to neuropsychology, and included in

the ranks of these professionals are neuroscientists, psychologists, neurologists, neuropsychiatrists, and neuropsychologists.

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Nursing

The words “nurse” and “nursing” derive ultimately from the Latin *nutrire*, to nourish. Nursing as a profession models the field of human ecology, in that it focuses on individuals and their families within their environments and the relationships between them. Additionally, nursing has a caring focus, as the nurse strives to nurture and protect the health and well-being of the individual or family system.

A definition of nursing put forth by Florence Nightingale reflects an ecological perspective. She describes the role of the nurse as one who would “put the patient in the best condition for nature to act upon him” (Nightingale 1860, 133). A modern physician further elaborates on the ecological perspective, stating that “in the fragile ecosystem of medical care, nurses are the ones who create the protective environment essential to the well being of both doctors and patients. We cannot function without them. Their job is to provide knowledge, comfort, care and compassion” (Greenberg 2002).

Nursing is both a profession and an applied discipline. Nursing is an altruistic profession that focuses on the provision of evidence-based care, utilizing a variety of roles to maximize the optimal health of persons (Hope Nursing Faculty 2001). Nursing has also developed into a distinct discipline, one that integrates other disciplines. Although nursing shares knowledge from the natural sciences (anatomy, physiology, and biology), the social sciences (sociology, psychology, philosophy), history, and the arts, the profession of nursing continues to develop its own unique concepts and theory. This body of knowledge has developed from clinical experience (leading to expertise) and research (leading to theoretically based knowledge). It is this evolving body of knowledge that provides a foundation for nursing practice.

Nursing has often been described as both a science and an art. Margaret Doheny and her colleagues (1997) describe the science of nursing as contributing to the “body of knowledge” that has been arrived at through scientific research and logical analysis. As an applied science, nursing integrates this theory into nursing care and practice. The art of nursing can be viewed as the creative application of that knowledge base to the care of individuals, families, groups, and communities of various cultures.

In 1980, the American Nurses Association (ANA), through its social policy statement, defined nursing as “the diagnosis and treatment of human responses to actual or potential health problems” (p. 9). More recently, the ANA expanded its definition to include four essential components: “attention to the full range of human experiences and responses to health and illness without restriction to a problem-focused orientation; integration of objective data with knowledge gained from an understanding of the patient or group’s subjective experience; application of scientific knowledge to the processes of diagnosis and treatment; and provision of a caring relationship that facilitates health and healing” (1995, 6).

The central concepts that serve as the foundation to the discipline of nursing are organized into conceptual models, which taken together serve as a framework. This framework is often referred to as the metaparadigm of nursing; it provides a focus for research and theory development within the discipline of nursing. This metaparadigm shares some of its key concepts with the field of human ecology. Jacqueline Fawcett (1984) identified nursing’s metaparadigm as including the concepts of person, environment, health, and nursing. Some nursing theorists obviously question the inclusion of nursing as one of the central concepts, arguing that the concept “nursing” should not be used to define itself (Doheny, Cook, and Stopper 1997). The concepts of person, environment, and health are universally accepted. As these concepts interface with each other, they become the foundations of nursing.

Person

Person is used in a broad sense; a person may be an individual, a family, a group, or a community. Thus a person is an open system that interacts with the internal and external environment. Individuals join together into families and groups, interacting around shared interests, tasks, and purposes. Families and groups combine to form communities, leading to the development of a culture. As individuals organize in groups with common purposes, they establish standards and rules for behavior. These standards, rules, values and beliefs determine the boundaries of the system (Doheny, Cook, and Stopper 1997).

Individuals are unique, yet continually evolving entities that are in constant interaction with others



Nurse attending to a patient (Elizabeth Crews)

and with their environment. This constant interaction, with its exchange of information and knowledge, often produces change, either within the individual or the environment. Consistent with the human ecological perspective, several nursing theorists (Neuman 1982; Rogers 1970; Roy 1980) express the idea that an individual's uniqueness lies in her response to the interface with her environment.

Holism is a concept shared by both nursing and human ecology. It supports a systemic view of human developmental and environmental systems in dynamic interrelationship (Griffore and Phenice 2001). The holistic perspective recognizes the whole person within the environment and the interplay of both internal factors (bio-physiological, psychological, cultural, spiritual) and external factors (natural, sociocultural, and constructed environments) on human health and development. The concept of holism is reflected in nursing's emphasis on health promotion and health restoration, as well as facilitation of peaceful death when appropriate.

Environment

Environment is the dynamic entity comprised of multiple internal and external factors that surrounds and affects the development, behavior, and well-being of the individual, family, group, and community. The internal environment consists of all influences within the person, including bio-physical, psychological, social, spiritual, and cultural factors. The external environment comprises all the influences existing outside of the person, including the natural environment (earth-related), sociocultural environment (political, legal, economic, cultural), and the human constructed environment (structural, technological). The person adapts to the environment, influences the environment, and is influenced by the environment (Hope Nursing Faculty 2001).

Health

The World Health Organization defined health "as a complete state of physical, social, and mental well-being, which includes absence of a disability, freedom from symptoms, and a general state of

wellness” (Kaplan and Toshima 1990). In nursing, health is typically defined as a dynamic and multidimensional state of well-being in which individuals experience harmony of mind, body and spirit, as well as interrelatedness with others in the environment (Hope-Calvin Nursing Faculty 1993). Thus modern nursing reflects a positive view of health, emphasizing the strengths, resources, and capabilities of the individual rather than focusing only on existing illness or disease (Pender 1996). In attempting to improve the quality of health, the nurse collaborates with the individual in systematically and strategically planning changes, and incorporating the strengths of the individual in the plan of care (Leddy and Pepper 1998). The collaborative nature of health care now requires patients and their families to become more involved in their own health care.

Historical Perspective

Before the 1800s, nursing as a profession was not clearly defined. There is evidence, however, even in prehistoric times, that someone provided care and comfort to the sick and injured (Fitzpatrick 1983). In early civilizations, nursing and medicine were intermingled. “Healings” were the responsibility of medicine men or practitioners of witchcraft, who eventually held high positions of authority. The supernatural was used to explain the onset of illness not readily explained by injury, and magic practices were used to rid the body of disease (Doheny, Cook, and Stopper 1997). Women, however subservient, were often summoned to care for not only members of their own family but also for others in their community who were ill. Although uneducated, these women would pass on their skills to their daughters. These early nurses or caretakers were less respected because human life was not valued as it is today. One surviving nursing role since ancient times is the midwife, the individual who assists women during childbirth (Potter and Perry 1993).

Some early civilizations made significant contributions to health care. For example, the Egyptian physicians, especially Imhotep, introduced the practice of embalming and classified 250 different diseases along with their necessary treatments. However, the belief in evil spirits was so strong that medicine barely changed. Around 400 B.C., the Greek scholar Hippocrates changed medicine from “superstitious magic into a science by stressing the use of senses for assessment and gathering facts to

make a diagnosis” (Doheny, Cook, and Stopper 1997, 59). He identified the environment as contributing to disease and not the gods. Hippocrates wrote a textbook of medicine that was used for many years, and is recognized as the father of “modern medicine.” Evidence suggests that Hippocrates wanted educated nurses rather than slaves to provide bedside care. Ancient Rome contributed to nursing via its use of nurses in the military, but much of its related health care knowledge was lost with the Roman Empire’s fall.

Under the influence of the Christian church in the Middle Ages, the role of the nurse gained respect, and nursing expanded. In particular, several influential wealthy and educated women worked to establish hospitals to care for the sick and poor. During the Middle Ages, three kinds of organizations, or orders, of nurses developed: military, religious, and secular orders. A military nursing order was developed during the Crusades. These orders attracted men, who were then recognized as knights. Additionally, several religious were formed, inspired by the desire to follow the teachings of Christ, as well as by the obvious need for health care, especially during outbreaks of the bubonic plague. Several secular orders were also developed to care for the sick and carry out works of charity. Although some secular orders had close ties to the church, their members did not take religious vows. During the Renaissance, hospitals flourished, and patients were cared for by educated male and female nurses.

The Protestant Reformation of the sixteenth century brought on the darkest ages for nursing. Many of the religious orders were suppressed, while churches, monasteries, and hospitals were closed. Some hospitals reopened in response to illness and plague, but skilled nurses were replaced with lower-class, poorly educated women or criminals serving sentences. Nursing was no longer a place for respectable women. This dark age persisted until well into the eighteenth century (Deloughery 1991; Doheny, Cook, and Stopper 1997).

The Industrial Revolution that started in the mid-eighteenth century also significantly influenced nursing. The hospitals and prisons were in deplorable condition. The factories’ heavy machinery, poor working conditions, and use of child labor negatively affected the health of many workers. Many people felt the need for social reform. It was during this period that Florence Nightingale

(1820–1910) was born to a wealthy educated English family.

As a child, Florence Nightingale exhibited a strong interest in the poor and the sick. As a teenager with strong religious beliefs, she took to visiting the poor and sick in her community with her aunt. She continued to exhibit a growing desire to serve, and finally received her family's consent to enter nurse's training at the age of 31. She spent three months of study in England, and then continued her studies with the Sisters of Charity of St. Vincent de Paul in Paris. She took leadership positions in nursing with the goal of changing society's view of nurses, hoping to make them seen as well-educated caregivers. She is known for her work in the Crimean War, where she prepared nurses to care for numerous patients in war hospitals under wretched conditions. She reduced the mortality rate from "50% to just 2% by initiating care based on principle of cleanliness and nutrition" (Doheny, Cook, and Stopper 1997, 64). It was during this period that she became immortalized as the "Lady with the Lamp" in Longfellow's poem of that name, depicting her as she made rounds to wounded soldiers at night to provide comfort.

Nightingale's contributions to nursing are numerous. She published a book entitled *Notes on Nursing: What it is and What it is not*. She established the Nightingale Training School for Nurses in 1860, and developed principles of nursing education. She also emphasized many principles for improving a patient's health. She stressed fresh air, good nutrition, cleanliness, quiet, and exercise, as well as advocating a call-bell system for patients and educating the public on issues concerning health and illness. She not only elevated the nurse's position, but also significantly influenced the development of professional nursing.

The Civil War stimulated the growth of nursing in the United States. Several notable nurses made significant contribution to nursing. Clara Barton tended to soldiers on the battlefield, treating their wounds and meeting their needs. She later founded the American Red Cross. Dorothea Lynde Dix, the superintendent of female nurses of the Union Army, organized the hospitals, appointed nurses, and managed the distribution of supplies to the troops. Mother Bickering organized ambulance services, supervised nurses, and "walked the abandoned battlefields at night looking for wounded soldiers." Harriet Tubman is known for

her involvement in the Underground Railroad, leading more than 300 slaves to freedom (Potter and Perry 1993, 6). Nursing schools were developed and modeled after the Nightingale school.

Nursing in the hospitals expanded, but it did not increase in the community until social reformers such as Lillian Wald and Mary Brewster took action, most notably by establishing, in 1893, the public-health nursing service known as Henry Street Settlement in New York City. Nurses working in this settlement house often worked independently of physicians and, in addition to treating of illness, focused on restoring nutrition, providing shelter, and maintaining hygiene for many of their poor clients.

It may be important to note that the profession of nursing evolved as the health care needs of the various societies and their social policies changed over time. "It is more than just a coincidence that the development of nursing as a profession has been inextricably tied to the role of women in society at various time in history, and to the forces that have had an impact on society" (Ellis and Hartley 2001, 165). Nursing practice and nursing education are continually evolving to meet the needs of society. Today's advancing technology, the rising acuity of clients, and the globalization of health care require nurses to possess a strong and always current knowledge base to use in their practice and to be prepared for accelerating changes.

Educational Preparation

Preparation for a career as a registered nurse can be accomplished in one of three ways: through a diploma program, an associate degree program, or a baccalaureate degree program. Following the completion of one of these basic programs, the graduate nurse is eligible to take the National Council Licensing Examination for Registered Nurses (NCLEX-RN). Successful completion of this examination then allows the graduate nurse to legally practice as a registered nurse and to use the initials R.N. after his name. Employment and career opportunities vary depending on the type of program attended.

The diploma program, a hospital-based program, was the first type of nursing program in the United States. A very successful type of program, it produced numerous outstanding nurses, but more recently the number of diploma programs has

drastically declined, with the trend to move nursing education to collegiate settings.

The associate degree program, fueled from the movement of nursing education into the collegiate setting, is now the most common type of basic nursing education program and graduates more registered nurses than either diploma or baccalaureate degree programs. The accessibility of community colleges, lower tuition costs, flexibility of schedules, and shorter duration of programs (completion in two years) helped popularize the associate degree program.

The baccalaureate degree program combines nursing courses with general education courses over a four- or five-year curriculum at a college or university. Nursing studies may begin in the freshman or sophomore year or after the completion of certain liberal arts courses. Students graduate from these programs with a bachelor of science in nursing (B.S.N.). The expanded curriculum and broader socialization enables graduates to assume beginning practice positions and ultimately leadership positions in a variety of health care settings, including hospitals, community agencies, schools, clinics, and home health (National League for Nursing 1997). There are also R.N.-to-B.S.N. programs to accommodate the returning registered nurse seeking a bachelor's degree for career advancement. Many universities allow the transfer of general education credits from associate degree programs.

Nurses can also pursue advanced degrees in nursing. Nurses who have advanced degrees can become researchers, nurse practitioners, clinical specialists, educators, and administrators. The education at the master's level provides advanced knowledge and clinical practice skill in a specialized area of practice. The two most common degrees offered at the master's level are the master of science (M.S.) or the master of science in nursing (M.S.N.). Doctoral programs in nursing prepare nurses to become faculty members in universities, researchers, theorists, advanced practitioners and administrators in nursing schools or large medical centers. The doctor of nursing science (D.N.S.) is considered the professional practice degree, whereas the doctor of philosophy (Ph.D.) is an academic degree and prepares scholars for teaching, research, and development of theory (Chitty 2001).

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Nutrition Assessment

Proper nutrition is necessary to maintain the health and physical well-being of all individuals and families. Individuals who have inadequate or excessive nutrient intake have an increased risk of illness, or at the very least decreased well-being. By nutrition assessment, those who have poor nutritional status may be identified, and counseling may be given to improve dietary intake. Only by identification of the nutritional health needs of a community can useful public policy changes be enacted to reduce risk of poor nutrition. Individuals who are typically at increased risk for poor nutrition intake are the very young, the older adult, and those with impaired immunity due to disease.

In the United States, regular nutrition assessment in the community is generally done at the Department of Health or other sites where federally assistance programs are administered. The nutritional status of Americans is monitored by assessments conducted periodically by the U.S. Department of Health and Human Service in the form of the National Health and Nutrition Examination Survey (NHANES).

Nutritional health can be measured by utilizing four different methods: anthropometry, biochemical tests, clinical observations, and assessment of dietary intake.

Anthropometric measures identify those who have inappropriate long-term nutritional/calorie intake. Anthropometric measures include height, weight, skinfold, and circumference measures. These measures help to assess growth, changes in body composition, and weight loss or gain. Increases in a child's weight and height over a period of time indicate growth and adequate calorie and protein intake. An accurate body weight, best measured on a calibrated beam balance or electronic scale, is necessary to predict energy and protein needs. Weight is important, but a ratio of body weight to height is a better predictor of body composition. One such comparison is Body Mass Index (BMI), which compares weight in kilograms squared to height in meters squared. This ratio compares an individual's weight to a uniform stan-

dard that does not depend on the individual's height. For adults, desirable BMI numbers are 19–25; obesity starts at 30.

Increasing head circumference is an important growth indicator for infants and children up to age 3. For older adults, calf circumference is an indicator for muscle necessary to perform activities required for living independently (World Health Organization 1995). Increasing waist circumference indicates increased risk of cardiovascular disease (CVD). Waist-to-hip ratio is more accurate in predicting mortality associated with CVD, other cardiovascular diseases, and cancer (Folsom et al. 2000).

Anthropometric measures provide broad information about nutritional health, without being invasive. More invasive measures are biochemical tests, which measure blood and urine for specific nutrients or metabolites. Changes in an individual's nutritional status are first seen in biochemical measurements. Examples of biochemical blood tests are screening for high cholesterol, high lead levels, and anemia.

Physical exams can reveal nutritional problems. Observing an individual's weight, level of lethargy, and state of mind can help to identify health problems. Wasting of the muscles and bones reveals a low calorie and protein intake and most likely dehydration. Checking fingernails, hair, mouth, and skin may help to identify some vitamin deficiencies. For example, small pinpoint hemorrhages on the skin may be a sign of vitamin C deficiency. B vitamin deficiencies cause dry, cracked lips and sores in the corner of the lips. Poor wound healing may indicate poor zinc, vitamin C, and protein intake.

Dietary intake can be assessed in several ways. A twenty-four-hour recall asks an individual to recount everything consumed during the previous day. In order to increase accuracy of the recall, the interviewer asks probing questions, to ensure all foods are remembered. Still, some individuals may forget some foods or beverages, misjudge serving sizes, or choose not to report certain foods. One twenty-four-hour recall may not reflect an individual's nutrient intake, since day-to-day variance is large. Multiple twenty-four-hour recalls are useful for estimating an individual's nutrient intake.

To keep a food record or diary, the individual writes down all the foods and beverages eaten, amount eaten, and the method of preparation.



Dietician consulting with patient (Elizabeth Crews)

Food records identify exactly what an individual eats over the period of time, usually three to seven days. Problems with keeping a food diary are that an individual must take time to write down all the foods consumed and may change usual eating patterns and amounts if all foods must be written down.

A food frequency questionnaire allows an individual to estimate how often a specific food is routinely consumed over a specific period of time and in what quantity. This method asks questions about foods that are frequently consumed. A food frequency questionnaire most closely matches actual nutrient intake (Sawaya et al. 1996). These questionnaires are easy to administer and provide reliable information concerning dietary intake without the need of a trained interviewer.

After dietary information is collected, intake can be estimated in two ways: by food groups or by nutrients. The number of servings consumed is compared to those recommended in the Food Guide Pyramid. Estimated nutrient intake is compared to those recommended in the Dietary Reference Intake (DRI), the reference guide that recommends normal and adequate amounts of caloric intake.

Additional questions about eating patterns and lifestyle habits provide additional information about usual food intake. Other factors that influence dietary intake and nutritional health are medications, mental deterioration, health history, and an inability to chew and swallow.

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See also: Nutrition in the Elderly; Psychological Consequences of Childhood Obesity

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Nutrition in the Elderly

Health and physical well-being are important to older individuals, their families, and communities. Adequate nutrition for older adults helps to maintain health and well-being. As one ages, nutrition needs change in response to changes in body composition and function. Calorie needs decrease roughly 5 percent per decade, yet the need for vitamin and minerals remain as high or higher as the needs in early adulthood. As a result, it becomes imperative that older adults choose foods wisely to meet nutrient needs, yet not consume too many calories. If calorie intake remains at the same level as in early adulthood, overweight will occur. Overweight will increase risk for developing chronic diseases such as obesity, hypertension, cardiovascular disease, and diabetes mellitus (Elia 2001).

Protein needs are similar to those in young adulthood (0.8 gm protein/kg body weight), but some suggest that older adults need even more protein (1 gm protein/kg body weight) (Millward et al. 1997). Long-term illness, stress, and infection increase protein needs. Bones need adequate amounts of protein to maintain their internal structure to prevent osteoporosis (Hannan et al. 2000). As a result, a larger percentage of total calories should come from low-fat protein sources.

Adequate amounts of complex carbohydrates are needed so that dietary protein is not used for energy. Older adults should limit simple sugars with little other nutrient content because their energy needs are lower. High-fiber foods such as fruits, vegetables, whole grains, and legumes help maintain intestinal integrity and intestinal function. Soluble fibers such as those found in oat fiber and pectin may help reduce total blood cholesterol levels, thereby reducing the risk for cardiovascular disease.

Fat intake should be limited to less than 30 percent of total calories in adult diets. It is important that this recommendation not be taken too far.



Elderly persons at dinner (Elizabeth Crews)

Limiting fat intake entirely may lead to nutrient deficiencies (especially of fat-soluble vitamins), and weight loss can occur. Unplanned weight loss is a predictor of poor health outcomes (Jensen et al. 2001)

Adequate fluid intake is important for older adults. Dehydration, which can lead to mental confusion, is a common occurrence in older adults. Total body fat increases as one ages, and therefore total body water decreases. Moreover, thirst perception decreases as an individual ages. This can easily lead to dehydration before an older adult becomes thirsty. In addition to decreased thirst perception, increased excretion due to diuretics, caffeine, and alcohol can lead to dehydration. An increased risk for dehydration occurs during stress or hot weather. A minimum of six eight-ounce glasses of water a day is recommended to prevent dehydration.

Several vitamins and minerals are of primary concern as our nation ages. Most of the vitamins have decreased absorption or utilization associated with the physiological changes of aging. Vita-

min A is the only vitamin for which amounts needed do not increase. Vitamin and minerals associated with bone mineral density, primarily calcium and vitamin D, are important, since most adults do not meet recommended intake levels. Older adults, especially postmenopausal women, need more vitamin D and calcium now compared to what they needed as adolescents. As individuals age, lactose intolerance develops, which limits the amount of dairy foods consumed. Dietary vitamin D needs increase because the skin is unable to produce precursors for active vitamin D, especially during the wintertime. Other concerns are an increase in gastric pH, which limits absorption of vitamin B12, folic acid, calcium, iron, and zinc. Low vitamin B12, vitamin B6, and folic acid intake or utilization leads to increased levels of homocysteine, a risk factor for heart disease. Adequate amounts of the antioxidants vitamin C, vitamin E, beta-carotene, and selenium may reduce the results of oxidative stress (oxidized low-density lipoproteins) and lower immune function (Blumberg 1997). Frequently, less than optimal amounts

of vitamins and minerals can lead to subclinical deficiencies. A lifetime of low vitamin C intake can lead to increased risk for developing cataracts. A metallic taste in the mouth may be the result of zinc deficiency.

Dietary intake may not always be the underlying cause of poor nutrition within the older adult population. Many older adults take several prescribed and over-the-counter medications, a situation that may lead to drug-nutrient interaction. Many medications interfere with folate metabolism. Wide variance in daily intake of foods containing vitamin K may interfere with the effect of anticoagulant medications like warfarin. Limiting foods that contain high amounts of vitamin K, such as green leafy vegetables, may also limit intake of other nutrients.

Other non-nutrient concerns within the older adult population are physically debilitating conditions and psychological factors. Arthritis and vision problems make it difficult to shop and prepare food. Difficulty chewing and swallowing will lead to decreased nutrient intake. Other medical conditions, such as diabetes mellitus or heart disease, may require a change in customary dietary habits. Change is difficult at any age, but eating patterns are more difficult to change as one ages. Living on a fixed income may make it difficult to always buy the food one needs. Eating alone can decrease the desire to prepare and eat a complete

meal. Often snacking becomes a way of life for those elders who live alone. For every reason, then, it is crucial that all support given to older people include an awareness of their nutritional needs and potential problems.

Ardith R. Brunt

See also: Friendship across the Life Span; Housing and Older Adults; Hypertension and Blood Pressure Control; Living Arrangements for Elders; Nutrition Assessment; Older Adults: Preparation for Future Care; Osteoporosis; Social Support

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Obesity, Childhood

See Psychological Consequences of Childhood Obesity

Old Age, Social Relationships in

Most people in the United States today can expect to live into old age. Better yet, they can expect to do so in good company. Currently, women live to be approximately 79 years old and men to be 72 years old (Uhlenberg and Miner 1996). If we think of old age as beginning around age 65, many of us will spend up to one-third of adulthood in old age. Individuals who live into their nineties will spend close to half of their adulthood in old age! Retired, and with decreasing stamina, older adults could find this period of life lonely. Luckily, people form relationships that continue into old age and provide a variety of benefits in late life. Old people with close social ties are healthier, happier, and live longer than people with few close social ties (for a review of the research, see Berkman et al. 2000).

Stereotypical images suggest older adults are frail, grouchy, lonely individuals who have difficult family relationships and few, if any, friends. Research, however, indicates this image of older adults is false. In fact, the majority of older adults have good friends and positive family relationships. Nonetheless, there are age differences in the characteristics of individuals' social networks, as well as in particular relationships such as marriages and the parent-child tie.

Social Networks

Social scientists use the term "social network" to refer to the characteristics of individuals' social relationships. For example, these characteristics include the types of relationships individuals have, how often they see their social partners, and the things they do for each other (e.g., lending money, providing companionship). Toni Antonucci and her colleagues have conducted a number of studies looking at older people's social networks (e.g., Antonucci 2001). This research indicates older individuals have fewer social partners than younger adults do; however, older adults have as many *close* ties as younger adults have. As well, older adults' social networks contain proportionately more family ties than younger adults' networks do. In other words, older adults' social networks consist mostly of family and close friends, whereas the social networks of younger adults include many non-family ties and casual relationships.

Why might older adults have fewer relationships overall but maintain close ties, particularly those with family? First, older adults' daily lives change; for example, many older adults are retired, and thus they have fewer work-related relationships. Second, older adults may prefer to spend time with family and close friends. Laura Carstensen and her colleagues proposed that as individuals grow older and become aware of diminishing time, they become more invested in their closest relationships (e.g., Carstensen, Isaacowitz, and Charles 1999). Younger adults might choose to go to places where they can make new friends and meet potential romantic partners,



A group of elderly people dancing (Elizabeth Crews)

while older adults would rather spend their time with family and established friends. This theory, called the socioemotional selectivity theory, may explain why older adults have fewer social ties than younger adults, but still have many close, positive ties.

Researchers have also examined particular relationships. Specifically, social scientists have considered five types of relationships that older adults seem to highly value: ties to spouses, children, grandchildren, siblings, and friends.

Marital Ties

Relationships with spouses are important throughout adulthood. Studies of long-term marriages indicate older spouses experience less conflict and share more pleasure than middle-aged spouses (e.g., Levenson, Carstensen, and Gottman 1993). It is possible that with age and experience, spouses learn to fight and argue less. Alternatively,

marriages with a high degree of conflict may end in separation or divorce before old age.

Not all older adults, however, have a spouse. Some older adults have never married, others are divorced, and many are widowed. Given that women live longer than men, this is particularly true of women in their eighties. Data collected by the U.S. Census Bureau indicate 35 percent of women 65 to 74 are widows, while 79 percent of women over the age of 85 are widows. In contrast, less than 10 percent of men 65 to 74 are widowed, and only 38 percent of men over the age of 85 are widowed (Hobbs and Damon 1996). There are also ethnic differences in marriage and widowhood. For example, African American women are more likely to be widowed in older adulthood than either Hispanic or Caucasian American women. As a result of these differences, aging men are more likely to have a spouse to care for them if they have health problems than are aging women.

Parent-Child Ties

Relationships with sons and daughters are particularly important to older adults. Over 60 percent of older parents see at least one of their children once a week (Crimmins and Ingegneri 1990). Indeed, widowed older adults may consider their children to be their most important social ties. Older parents typically report less conflict and strain in their relationships with their children than younger parents do (Hagestad 1987). Still, older parents and their grown children experience tensions. Karen Fingerman (1996) has suggested that because parents and children are at different stages of life, they have different emotional and psychological needs. For example, parents may be more invested in the relationship than their adult child is (who may be married and have children of her own). Interestingly, parents and their adult children may avoid discussing areas of tension so they won't upset each other.

Parents, of course, don't stop caring for their children when they are adults; parents commonly give their children emotional support and advice (Cooney and Uhlenberg 1992). Interestingly, the amount of help parents give their adult children reflects the parents' resources more than the needs of their children. This reflects how important grown children are to their older parents: When aging parents are in a position to help out their adult children, they will, even if their adult children could manage without their help.

When children are grown, they also give help to their parents (Hoyert 1991). Some children become caregivers for their aging parents. These children, often daughters, experience a great deal of stress, which can lead to poorer health and lower well-being (for review see Schulz, Visintainer, and Williamson 1990). Most adult children, however, don't support their parents financially or care for them on a day-to-day basis.

Grandparent-Grandchild Ties

The word "grandparent" might bring to mind other words, such as old, gray-haired, and wrinkled. But in truth, most adults become grandparents when they are still middle-aged (Sprey and Matthews 1982). Most adults, therefore, enter old age with grandchildren—indeed, their grandchildren may be young adults. A number of social scientists have described the types of relationships between grandparents and grandchildren. Bernice Neugarten and Karol Weinstein (1964) described five

kinds of grandparents. First, there are *formal* grandparents: These grandparents are interested in their grandchildren's lives and occasionally provide help, but are not involved in their grandchildren's day-to-day lives. Second, there are *fun-seeker* grandparents, who have informal relationships with their grandchildren. Third, there are *distant* grandparents. Distant grandparents don't have much contact with their grandchildren except on holidays and special events (e.g., birthdays). Fourth, there are grandparents who see themselves as *reservoirs of family wisdom*. Finally, there are *surrogate* grandparents, who are the main caregivers for their grandchildren.

How active and involved a grandparent is depends upon several factors (Kivett 1991). Grandmothers are usually more involved in their grandchildren's lives than grandfathers, and younger grandparents are usually more involved than older grandparents. Not surprisingly, the closer grandparents live to their grandchildren and the better they get along with their grandchildren's parents, the more often they see their grandchildren. Finally, African American grandparents are usually more involved in their grandchildren's lives than European American grandparents are.

One issue that receives considerable media attention is that of surrogate grandparenting. Approximately 5.5 percent of children under the age of 18 live in their grandparent's home (Bryson and Casper 1997, 1). Grandparents become primary caregivers for many reasons including the parents' illness or death, incarceration, abuse, and the like. The good news is that many surrogate grandparents say they are in very good or excellent health, and most are under 65 years old (Bryson and Casper, 1997).

Sibling Ties

Relationships with brothers and sisters can be very special to older adults. This is easy to understand—most people have known their siblings longer than they have known anyone else. Research suggests siblings are an important source of emotional support and companionship for older adults, particularly those who are single or widowed (Bedford 1995). Life events that commonly take place in adulthood may bring siblings closer together in late life (Connidis and Davies 1992). These life events include the births and deaths of family members, and health concerns. Finally, re-

search also suggests siblings may be a more important source of support in African American families than either European or Hispanic American families (Bedford 1995).

Other Family Ties

So far, researchers have focused their attention on relationships most individuals consider to be very important, for example, ties to spouses. Currently, we don't know very much about older adults' relationships with extended family members such as great-grandchildren, nieces, nephews, and cousins. It is easy to imagine, however, older adults who are close to their extended family members. Some research suggests the extended family network is of great importance to African Americans (Dilworth-Anderson 1992). It seems likely that individuals who have ongoing, close relationships with their extended family will continue these relationships in old age.

Friendships

Friends, especially close friends, remain important to most older men and women. Throughout adulthood, friendships are characterized by intimacy, shared trust, acceptance, and mutual caring (Adams and Blieszner 1989). Older adults do many of same things with their friends that younger adults do; when asked what they did with their friends, older adults said they "just talk" and do activities like shopping and going out for lunch together (Field 1999). Clearly, friends, like family, remain an important source of companionship and emotional support in late life.

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See also: African American Families; Friendship across the Life Span; Grandparents Rearing Grandchildren; Housing and Older Adults; Intergenerational Programs in Communities; Living Arrangements for Elders; Older Adults: Preparation for Future Care; Outdoor Mobility in Old Age; Social Support

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Older Adults: Preparation for Future Care

The term "preparation for future care" (PFC) is defined by those who work in the field as the attitudes, thoughts, and actions involved in older adults' formulation of plans for where, how, and from whom they will receive care in the future. This preparation represents older adults' efforts to participate actively in selecting their environment, such as their place of residence and health care providers, and to take control of their quality of life as they become more frail. The concept of PFC implies that these preparations and choices are made before an individual develops a need for assistance with activities of daily living, just as a living will prepares in advance for death.

Preparation for future care is of prime importance to the field of human ecology because social policy makers, local communities, and families are faced with increasing numbers of older adults who need to plan for health care and residential adjustments. For example, 79 percent of persons aged 70–74 can be expected to develop limitations in physical functioning over a two-year period (Manton 1988, 158). Although few of these seniors will require residential nursing care, many will need help with tasks of everyday living, such as doing laundry and preparing meals. Lack of preparation for future care is problematic because failure to prepare adequately could lead to rushed residential and care decisions, often made without the senior's full input. This rush can increase the risk of inappropriate care placement. For example, sen-

iors may be placed in a nursing home when other types of care would have been more suitable. Such inappropriate care placement could enhance the risk for depression, physical illness, or even premature death.

The process of preparing for future care encompasses five major activities: becoming aware of future care needs, avoiding awareness, gathering information about care options, deciding on care preferences, and making concrete plans, such as making arrangements with relatives. Generally, the less concrete aspects of preparing (i.e., becoming aware) precede the more concrete aspects (i.e., gathering information, deciding on preferences, making concrete plans). However, steps are at times skipped. For example, relatives may offer care and make concrete plans for an older adult before the senior has even decided on preferences. Attitudes relevant to PFC include whether individuals expect to need care in the future and beliefs about the usefulness of planning for care. Preparation processes and attitudes are measured by the Preparation for Future Care Needs scale (PFCN; Sörensen and Pinquart 2001), which is a self-report questionnaire that also assesses the content of plans and the concreteness of each specific type of plan.

Almost 57 percent of seniors have no concrete plans for long-term care, and 20 percent actively avoid thinking about future incapacity. People who have more financial resources, more social resources, and in whose community there are more care options (e.g., home health agencies, assisted living centers) are more likely to prepare for future care (Sörensen and Pinquart 2000c, 286–289). Older adults who are more medically vulnerable (because of higher age, for example, or limitations in the ability to perform activities of daily living) also tend to plan more. Influences on PFC are sometimes complex (Sörensen 1998, 513): For example, medical vulnerability increases the likelihood of expecting care in the future, which, in turn, increases the likelihood of becoming aware of future care needs. The more people available to provide support and the more often older adults see them, the more likely the older adults are to believe in the usefulness of planning, and so to plan (Sörensen and Pinquart 2000a, 363). Individual differences such as decision-making styles also play a role (Sörensen and Pinquart 2001, 153), although definitive studies on personality and PFC have not yet been conducted.

Investigation of the content of care plans suggests that about half of older adults in Western industrialized nations prefer a mix of formal support (e.g., home health agencies, nursing homes) and informal support (e.g., family caregiving) because they like personalized assistance, but do not want to put excessive strain on relatives. However, for long-term or chronic care, about a third of seniors prefer exclusively formal help. Among formal support options, most seniors prefer community-based home care rather than nursing homes because the former allows them to remain in their neighborhoods (Pinquart and Sörensen in press-a).

Both the content and the amount of PFC may be influenced by social policy. In Western industrialized nations, formal care services are relied upon more heavily when they are more available. Cross-national studies suggest that the presence of a national health care plan (as in Canada) and of nationally funded long-term care insurance (as in Germany) increases seniors' ability to make plans for care. However, social transitions in the health care system that create uncertainty about future availability of options, such as those experienced after the reunification of East and West Germany, can substantially undermine older adults' planning efforts. Such rapid social change reduces older adults' beliefs in the usefulness of planning (Sörensen and Pinquart 2000b, 374).

It has been hypothesized that PFC will reduce the stress of decision making, leading to greater well-being of both care receivers and family caregivers, and that it will optimize the type of care. However, thinking about future care needs, particularly without taking concrete action to ensure that one's preferences are realized, may have negative effects on short-term subjective well-being. For example, greater awareness of future care needs is associated with more worry and depression. Nevertheless, more concrete aspects of preparation, such as gathering information and engaging in activities to implement plans for future care are associated with less worry, less depression, and higher satisfaction with PFC. Although studies show that individuals who actively avoid PFC have higher levels of subjective well-being in the short term, even compared to those who make concrete plans (Pinquart and Sörensen in press-b), these cross-sectional results reveal little about the possible long-term benefits of PFC. Related research suggests that seniors who are more involved in their

care-related decisions tend to be more satisfied with care arrangements, including nursing home placement and residential decisions (e.g., Coulton et al. 1989, 630). Similar longitudinal studies of PFC are necessary before precise recommendations for its enhancement can be made.

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See also: Housing and Older Adults; Living Arrangements for Elders; Mental Illness in Old Age; Nutrition in the Elderly; Old Age, Social Relationships in; Outdoor Mobility in Old Age; Suicide in Older Adults; Teaching Older Adults to Use New Technologies

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Osteoporosis

Osteoporosis is a chronic disease that develops primarily as one ages. An easily recognizable characteristic of osteoporosis is the pronounced curvature of the upper spine often found in older women, and thus called dowager's hump. Osteoporosis occurs when bone mass decreases due to a loss of minerals and structure within the bone. This deterioration of bone tissue leads to bone fragility and increased susceptibility to bone fractures, especially in the hip, spine, and wrist. Most hip fractures are associated with osteoporosis. The consequences of osteoporosis reduce the ability of an older adult to participate in usual activities of daily living. Approximately one-fourth of those fifty and older who experience a hip fracture require long-term care after the fracture, and another one-fourth die within the first year (National Institutes of Health). Caring for older adults who have osteoporosis places increased physical, emotional, and financial burdens on the older adult's family and community.

Bone is living tissue that is continually remodeled. Throughout the lifetime, osteoclasts are continually resorbing bone, while osteoblasts are producing new matrix proteins for new bone in these same areas. When more bone is resorbed than produced, bone mineral density decreases. Since osteoblasts are activated by estrogen (Robinson et al. 1997), menopausal women are at significantly increased risk of decreasing bone mineral density.

Not all individuals develop osteoporosis. It appears to depend partly on genetics and partly on other factors, including nutrition. Factors that cannot be controlled are increasing age and being a small-framed or thin Caucasian or Asian woman with a family history of osteoporosis. Risk factors that can be minimized are a diet low in calcium and vitamin D, cigarette smoking, excessive alcohol or caffeine consumption, and physical inactivity (<http://www.oste.org/oste.html>, Hansen et al. 2000). Some medications have been linked to bone loss: glucocorticoids, some diuretics, certain anti-seizure drugs, gonadotropin-releasing hormone (GnRH) analogs used to treat endometriosis, aluminum-containing antacids, and excessive thyroid hormone.

Once an individual develops osteoporosis, the loss is generally irreversible; however, further losses may be prevented. In order to decrease risk of developing osteoporosis, one must seek to max-

imize peak bone mass and minimize bone loss. Preventing osteoporosis starts in childhood and adolescence and continues through the older adult years. Higher peak bone mineral density can be reached by consuming recommended amounts of calcium and exercising throughout childhood and adolescence. Achieving recommended amounts of calcium may be a challenge, since most children and adolescents consume about half the calcium that they need (Frazao, 1999). Throughout the life span, women may successfully augment genetically determined bone mass through weight-bearing exercise like walking, stair climbing or dancing, hormone replacement therapy (if levels are low), and adequate calcium intake (Ulrich et al. 1996). In later years, if recommended intakes of calcium, vitamin D, and protein are maintained along with moderate physical activity, individuals can expect to reduce risk of developing osteoporosis (Hannan, Tucker et al. 2000; Uusi-Rasi 1998). Moreover, maintaining weight throughout the older adult years can reduce bone mineral losses (Hannan, Felson, et al. 2000).

Women who have low estrogen levels throughout their lives, for whatever reason, have increased risk of developing osteoporosis. To reduce bone loss, a physician may prescribe hormone replacement therapy (HRT). HRT helps to increase bone mineral density and reduce the risk of cardiovascular disease (Leiter 2000).

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See also: Breast-Feeding and Lactation; Nutrition Assessment; Nutrition in the Elderly

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Outcome-Based Program Evaluation

Outcome-based program evaluation involves the systematic collection and analysis of information to determine the effectiveness of an educational program in helping participants achieve the targeted outcomes. To be systematic, the evaluation must be planned as an integral part of the program planning process and not just an event that occurs at the end. Although the data obtained from an outcome-based program evaluation provides information about whether the participants have achieved the targeted outcomes, it does not prove that the program, and the program alone, caused the achievement of those outcomes. This is a key difference between outcome-based program evaluation and program impact research, which uses sophisticated statistical methods and random assignment of participants to either the program or to a control group, following the most rigorous methods of quantitative research.

Outcome-based program evaluation does, however, provide at least preliminary information about whether the program is making a difference in the lives of the participants and communities.

Table 1.

Learning Level	Action Level	Impact Level
Awareness Created	Behavior Changed	Social Impact
Attitudes Change	Practice Adopted	Economic Impact
Knowledge Gained	Decisions Made	Civic Impact
Skills Developed	Policies Changed or Adopted	Environmental Impact
Aspirations Sparked	Social Action Initiated	

Table 2. Evaluation Methodology

Quantitative	Qualitative
Tests	Interviews
Surveys	Focus Groups
Questionnaires	Case Studies
Behavior Checklist	Naturalistic Inquiry Observation
Skill Checklist	Testimonials
Product Assessment	Videos
Log	Portfolios
	Existing Data/Records

The data gathered can be used to improve programs and services, provide an accounting to community stakeholders and funding agencies, determine cost-effectiveness, and market the program and attract new participants, volunteers, and staff.

Outcome Levels

Outcomes for educational programs can be classified under three major levels: learning, action, and impact (Taylor-Powell 1999). The duration of the program (one hour, three days, year-round) relates to the level of outcomes that can be achieved. Shorter programs tend to focus on learning level outcomes. Programs with a higher number of contact hours with participants result in outcomes in the action and impact levels. The table that follows lists the specific kinds of result that might be reached in each category.

Evaluation Methodology

Basically there are two major methodologies for collecting program evaluation data: quantitative and qualitative. They can be used separately or in combination with each other. Quantitative methodology utilizes standardized measures to gather data that when statistically analyzed allows the results achieved by the program to be quantified. The results are always reported in a numeric format. Qualitative methodology utilizes an approach involves examining, describing, or

interpreting a program. A narrative description (rather than numbers) is used to describe and classify program services and what participants say about the program. Table 2 lists the types of instruments or protocols that are used to collect data.

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See also: Evaluation Research; Qualitative Research; Quantitative Research

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Outdoor Mobility in Old Age

In the history of the human species, mobility has been a key to survival. The advantages afforded by mobility to our ancestors included the acquisition of food, the avoidance of danger, and access to opportunities to reproduce. In fact, these reasons motivate the basic behavior of most living creatures. For centuries, mobility has meant locomotion on foot or on horseback and travel by cart or boat. Over the course of the nineteenth century, industrial development opened up new opportunities for individual mobility (the ability to move about) and traffic (the transportation of people, goods, and news). These new forms of locomotion have been key factors in the emergence of large cities and modern states and are still the prerequisite and engine of economic development. Whereas estimated global traffic volume amounted to approximately 5.5 trillion person-kilometers (motorized mobility per capita in eleven world regions) in 1960, this figure had risen to 23.3 trillion in 1990 (Schafer 1998). The distances traveled have especially increased: Technological advances have made high speed and flexible transportation systems possible, enabling long-distance trade and travel.

The times are now gone when the increasing density of traffic was regarded solely as an indica-

tor of personal and macrosocial prosperity. But despite a growing awareness of possible threats to the environment and limited natural resources, the total density and volume of traffic has continued to grow in recent years. The provision of extended road infrastructure accelerated the functional and spatial separation between the occupational, commercial, and private spheres of life, extensive suburban development, and the establishment of industrial and commercial enterprises beyond residential areas. The outward relocation of private households in turn increased the necessity to commute and dependency upon access to cars (World Business Council for Sustainable Development [WBCSD] 2002). At the same time, the shift to individual modes of transport often coincided with cutbacks in public transportation, and the once dense network of retail shops gave way to suburban supermarkets and downtown shopping centers oriented to car users as customers. Therefore, for every member of society, mobility is not only a basic human need for physical movement. It has become an ever more important aspect of ensuring the ability to lead one's everyday life, keep up social relations, and take part in every kind of activity outside the home. Mobility, whether by foot or with private or public means of transportation, is therefore a major prerequisite for maintaining quality of life, especially as one ages.

Mobility as Movement in Time and Space

Mobility as movement in time and space is necessary in order to overcome distances, improve accessibility to essential commodities, and pursue activities outside the home. It can be manifested in many different ways, can be motivated by diverse, often inseparably intertwined motives, and have distinct features. Mobility is performed at varying frequency (daily or unusual, routine or one-time action); within complex or simple sequences of action; in a goal-directed mode or for its own sake; by such mundane physical action as walking, by harnessing natural forces, or employing mechanical or motorized means; in an active or passive manner; at varying speeds; and over short or long distances. Its extent depends on individual capacities, needs, interests, and resources (health status, failing physical and cognitive abilities, attitudes and mental states, subjective assessment of situations and one's own abilities, economic resources, family and friendship networks); environmental



Elderly person with walking frame (Elizabeth Crews)

factors (housing conditions; geographical, topographical, and climate conditions; the built-up environment; the availability of services; traffic density; national legislation); and trip-related factors (purpose of trips, distance of destination, and availability and accessibility of public or private transport facilities).

The Significance and Meaning of Mobility in Old Age

As a person ages, the importance of mobility increases. Grown children leave home; retirement spells the end of occupational contact with people and frees up a great amount of time and energy; and one must cope with the loss of close friends and sometimes the loss of the person to whom most people relate very closely—the spouse or life partner. The observable change in family structures and the increasing individualization of ways of life have made family networks smaller and more brittle. Nor do aging persons seem able to compensate for the loss of nonfamily reference persons as easily as they once could.

All these changes demand a growing measure of mobility if the elderly person is to continue being part of society (Mollenkopf 1996). However, aging is also accompanied by the increased probability of declining physical and sensory abilities, which may restrict elders' ability to move about. Such difficulties are exacerbated by many unfavorable external circumstances. The immediate vicinity, public buildings, and the general service infrastructure are often not entirely accessible. As it continues to spread throughout society, the impact of technology, such as the automation of services and the increase in motorized traffic, can create problems for older people (Marcellini et al. 2000). Traffic speed and complexity, particularly in urban centers, have reached an extent that may unsettle elderly people and lead them to avoid venturing out. Public transport facilities are often difficult to access or are absent altogether.

However, encountering other people, getting the chance to see something new now and then, indulging in a little physical outdoor exercise, or just being able to leave the house—all these things are great needs in old age. When older adults (aged 55 years or older) were asked in case studies what it means to them to be able to move about outside their homes (Mollenkopf 1999), some of them spontaneously responded at a very abstract level,

stating simply “Joy.” At a more concrete level, their answers can be broken down into six categories, depending on their main aspects: mobility as movement per se, as a basic human need; mobility as movement in and observation of nature; moving around as a social need for integration and participation; the possibility of moving around as an expression of freedom and autonomy; mobility as a source of stimulation and diversion; and mobility as an expression of the life force one still has.

How elderly men and women manage as they go about their daily affairs and how satisfied they are depends significantly on their state of health, habits, and the means of transport available to them. The private car plays an ever more dominant role in fulfilling their mobility needs and desires.

The Role of Driving

In the United States, in particular, but increasingly also in Europe, the vast majority of the adult population is largely dependent upon access to private automobiles. The number of motor vehicles per household has grown considerably since the 1970s, when a family usually owned one car. In 1995, the number of vehicles was equal to the number of licensed drivers per household. In 1999, the median commute to work was 10 miles, and almost 80 percent of the workers commuted to work by car, driving themselves (U.S. Department of Transportation 2000, 105, 98).

Dependence on the private car has been increasing among older Americans, too. They do not make work trips any more, but they replace those trips with other trips taken by car. Between 1983 and 1995, the percentage of trips taken by car jumped from 87 percent to 92 percent among persons aged 70 to 74, that is, among those who were already using this mode of transportation relatively extensively in 1983. The increase was even more substantial (over 16 percent) among those aged 80 to 84 years. This means that there is no cohort of older Americans which takes fewer than eight out of ten trips in a car (Rosenbloom 1993, 2000, 15–16, 38; Jette and Branch 1992).

In Europe, elderly people—at least currently—are far less “auto-mobile” or self-mobile than in the United States. They make significantly fewer trips per day and travel fewer miles than comparable American elders (European Conference of Ministers of Transport [ECMT] 2000), and the percentage of pensioner households that own one or more

cars still varies greatly, depending on the size of the household, age, gender, income, and the country they are living in (Tacken et al. 1999). However, this relation will change in the coming years when the generation of people for whom driving a car has become a matter of course reach retirement age. Thus, travel trends are moving in the same direction as in the United States.

Studies on mobility that are based on the collection and analysis of statistical data on how and how much various age groups participate in traffic in terms of their transportation patterns have found that mobility definitely declines as a person ages. However, a clear gap exists between older people who don't have a driver's license or who can no longer drive, on the one hand, and those who actively drive, on the other (Rosenbloom 1993). These findings were confirmed by a recent study on the mobility needs and patterns of older adults in five European countries (Finland, Germany, Hungary, Italy, and the Netherlands; Mollenkopf et al. in press). The patterns of mobility of individuals who have a car and a driver's license clearly diverge from those of individuals without a car. In both urban and rural regions, the persons who have a private car in their households are more often on the go than those who do not have such a means of transportation at their disposal. In almost all regions, car drivers leave their homes for significantly more journeys per day than people who don't own a car. Only in Hungary, where cars are not nearly as prevalent as in the other countries studied, does having a car not particularly affect the number of journeys.

But as important as a person's access to a car is, personal satisfaction with the possibilities of getting where one has to or wants to go depends even more on whether that person can and does drive. Without exception, older adults who are able to drive and actually use a private automobile are by far more satisfied with their general mobility than those who don't have such a means of transportation available in their households or who use it as passengers only. Examining the impact of individual predictor variables on mobility satisfaction, a clear and consistent pattern was observed: Satisfaction with public transport, fair or good physical mobility, and the ability to drive (and not just to have a car available) were found to be the most important variables in almost all regions studied. Only in Hungary did the availability and use of an

automobile have no impact on satisfaction with mobility at all. These results confirm that biological age alone is not the critical factor determining the extent of satisfaction with one's possibilities to be mobile. By contrast, being physically able to move about, being satisfied with the public transport system, and being able to drive a car are more decisive variables.

Depending on elders' personal attitudes and the external circumstances in which they live, driving can be an amusing pastime or an essential means of maintaining their independence. A car can be used to bridge long distances or to compensate for advanced age and associated mobility losses. It makes a person independent of the weather and inconvenient bus schedules, gives a sense of security and privacy in public, and is an important means of transport, especially in residential areas that have no shops and too little public transport. The practicality of a motor vehicle obviously meets elderly people's desire and need for mobility best, at least given the alternatives currently offered by conventional public transport (Burkhardt 2000).

The Safety of Older Traffic Participants

In view of the increasing number of old and very old people as the general population ages, and of perpetually growing traffic volume, the safety of older traffic participants has become an issue of general concern (Transportation Research Board National Research Council 1988; ECMT 2000; Schaie and Pietrucha 2000). The problems of older drivers, in particular those that are caused by chronic illnesses, sensory and mobility impairments, or Alzheimer's disease, have been given great attention (e.g., Organisation for Economic Co-operation and Development [OECD] 1985; Brouwer and Ponds 1994; Ball and Owsley 2000).

Thanks to measures to increase safety on the roads, including expansion of the road system, mandatory use of seat belts, and safety features in vehicles, the number of accidents with personal injury has remained relatively constant over the last few decades. This is truly remarkable, given the huge increase in traffic flow between 1970 and today. With increasing age, however, there is also an increasing risk of being involved in a traffic accident. It is true that older drivers do not have a disproportionately greater frequency of involvement in accidents than younger drivers. As a per-

son ages, though, the risk of her having an accident does grow in relation to driving performance (and hence in relation to the exposure to danger) (U.S. Department of Transportation 2000). Walking or biking are not good alternatives either: Elderly people are very vulnerable as unprotected road users.

Improvements in road transport informatics and in-vehicle technologies promise to facilitate travel and improve safety for everyone, and elderly people and persons with disabilities in particular. Gradually, access to public transport vehicles, bus stops, and transit stations is also being adapted according to the needs of the older user in many countries. New intelligent systems will make it easier to traverse both small and great distances quickly and efficiently (Hanowski and Dingus 2000). Not least because of these developments, the generation of people who are used to dealing with technology every day and for whom driving a car has become a matter of course will increasingly rely on the automobile. Elderly people with an impaired ability to walk, especially those living in rural areas and suburbs with reduced local public transport service, often depend on a car to manage daily demands. On the one hand, the greater availability of private cars expands their scope of movement and action. On the other, the growing volume of traffic also increases the potential hazards of such travel. Moreover, longitudinal studies (Jette and Branch 1992) suggest that reliance on an automobile is a sociocultural phenomenon largely unrelated to a person's health.

On the whole, then, the conditions for the mobility of aging women and men are not highly favorable. Whether and how external conditions and demands of the environment can be harmonized with individual needs and resources is therefore a major question for society.

Conclusions and Outlook

Preserving and fostering the ability to engage in mobility and activities in old age is central to maintaining the quality of life experienced by elderly women and men. As a person ages, physical strength wanes, and one's action radius shrinks, environmental features take on ever greater significance. Functional disabilities that might develop have far less impact under favorable conditions than under conditions that restrict the living space of elderly people and fail to meet their needs.

When it becomes harder to see or hear, or when it becomes a problem to move and react, the effect of adverse natural environmental conditions, physical obstacles in the vicinity of the home, and difficult traffic conditions becomes much greater. Thus the elderly find the difficulties they confront ever more challenging, while the young often do not even notice them or can compensate without much trouble.

However, biological age alone is not the critical factor determining the extent of mobility and subsequent satisfaction. How agile a person is (or still is), how satisfying they find available public transport, and whether a car can be used to compensate for advanced age and associated losses of the ability to move are more decisive factors. Elderly persons who do not drive feel particularly hemmed in, whereas drivers are satisfied with their scope for mobility even with increasing age and health impairments; therefore, priority should go to bettering the situation for pedestrians and the users of public transport, that is, to calming traffic and enhancing traffic safety and to facilitating socially and environmentally sustainable mobility. The low level of satisfaction reported by people whose mobility is hampered by limitations to their physical ability to move about or by lack of private or public transport clearly shows that the decline of outdoor mobility in old age is not an entirely voluntary retreat from the world. Ensuring older people opportunities for participation in their social, built-up, and natural environments, despite the physical handicaps, possible financial constraints, and social, technological, and spatial barriers that exist in their world, would thus greatly contribute to their quality of life and well-being.

Heidrun Mollenkopf

See also: Aging and Technology; Old Age, Social Relationships in; Place Attachment; Teaching Older Adults to Use New Technologies

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Paolucci, Beatrice

Beatrice Paolucci (1920–1983), professor at Michigan State University, East Lansing, Michigan for more than twenty-five years (1951–52; 1956–57; 1958–1983), was a leader in study of the family and home as central components of the human ecosystem (Hook and Paolucci 1970). She argued that, collectively, decisions and actions of individual families have an impact on society, culture, and the natural and built environments. This impact comes about through the way families select, consume, conserve, or destroy resources; the child-bearing decisions they make; values they hold and pass on to their children; and how well they develop human capital. Paolucci considered the family ecosystem to be part of the total physical-biological, social-cultural ecosystem in which inputs of matter, energy, and information enter the family through transactions with the environment. These resources are used and transformed by the family, and in turn, human capital, goods, services, and wastes become outputs to the environment. Feedback processes operate to change the system. The world's ecological health depends on decisions and actions taken not only by nations, but by families.

Paolucci was born on August 13, 1920, in Ladd, Illinois to an Italian immigrant coal-mining family. When younger than 2 years old, she contracted infantile paralysis (polio). At that time there were few treatment methods; as a result, she had some physical limitations throughout her life. But because she did not consider herself handicapped, she was not. She made contributions in many areas of education and research and to academic and

other programs in the United States and around the world.

Educated in the public school in Sparland, Illinois, Paolucci received her B.S. degree from Illinois Wesleyan University in 1942 in home economics, a dominant field for women in that era. She taught home economics in the public schools in Laca and Park Forest, Illinois, for several years. She received her M.S. degree in family study and sociology from Columbia University in 1948 and her Ed.D. in education and family economics and management from Michigan State University in 1956. A commanding figure in raising and broadening the theoretical and intellectual level of home economics and study of the family by integrating theory and concepts from a wide range of academic disciplines, Paolucci set the pace in applying an ecological model to home economics. Subsequently, several academic home economics units adopted the name of human ecology.

Paolucci's early conceptual work was on family decision making and on the valuing processes that influence decisions. She believed that families have the opportunity and responsibility to make decisions that will help preserve our environment and resources and that will assure the continuance of what makes people human. Appropriate decisions can improve the quality of life and the quality of the environment (Paolucci, Hall, and Axinn 1977). In her later years, Paolucci focused on the significance of the family in human resource development—on the human capital that the family creates in the form of socialized and educated persons who can perform productive roles in soci-



Beatrice Paolucci (courtesy of the Paolucci family)

ety. The family creates human capital through the physical and emotional care and nurturance of its members and their socialization and education in skills, knowledge, and values. Much of the learning that goes on in the family is invisible and unrecognized. It takes place in everyday family activities and interactions and is often on the edge of consciousness. Paolucci often said that we can help to shape destiny through everyday life.

Paolucci was a dynamic teacher and speaker and influenced numerous students who became leaders in family study, human ecology, family and consumer sciences (the new name that was selected for home economics in 1994 by professional groups in the field), human services, and related fields. Her conceptual work on family ecosystems stimulated others in the field to do further theoretical work in human ecology. As a young girl, she was active in 4-H club work, an educational program of the Cooperative Extension System for rural children, youth, and families. She spoke frequently to 4-H and other extension groups and was instrumental in bringing an ecological perspective to extension programs across the United States and Canada by teaching a winter school course on family ecosystems at the University of Arizona for several years.

Paolucci worked with scholars in several disciplines, including Kenneth Boulding in economics; Elise Boulding, Marvin Sussman, and Barrie Thorne in sociology; and others in such fields as economics, philosophy, anthropology, and systems science, thereby impacting fields beyond home economics. She was influential also in bringing a human ecology model to home economics and family study programs in countries around the world (e.g., Australia, the Philippines, Sweden, and Thailand) through students, writings, speeches, and international activities. These last included consultations with the Ministry of Education in Thailand (Paolucci, Bubolz, and Rainey 1976) and elsewhere, participation in international conferences, and extensive work with the Women in Development program. She received numerous academic and professional awards. Beatrice Paolucci continued to be active professionally until her death from cancer on October 1, 1983. Starting in 1985, a series of international symposia have been held at Michigan State to honor her contributions to education and the well-being of families and to continue her visionary thinking. In 2001, Paolucci was selected to be memorialized on a mural in the Michigan State Union building as one of thirteen of the most distinguished faculty in the university since its founding in 1855. A book commemorating her life and work was published in 2002 (Bubolz 2002).

Margaret M. Bubolz

See also: Bubolz, Margaret M.; Cooperative Extension System (CES); Family Resource Management; 4-H

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Parent Education Programs for Immigrant Families

Changes in the human ecology of immigrant families occur on many levels, as elders, parents, and children adapt to very different home, neighborhood, community, and national environments. Parents who were competent in their home environments are often challenged by the values, social practices, and institutions in the host environment. Recent growth in the number and diversity of immigrant and refugee families in the United States and around the world points to the importance of culturally appropriate parenting programs to assist parents. It is not possible to cite accurate statistics on the number of legal and non-legal immigrants who come to the United States, but the best estimate is approximately 1 million annually. Of the immigrants who came to the United States between 1981–1996, 39 percent were from Asia, 34 percent from Latin America and the Caribbean, 20 percent from Europe, and 6 percent from Africa, Oceania, and Canada.

Many of the educational programs and materials currently available to immigrant families were designed for mainstream audiences and do not address the intergenerational, cross-cultural, and ecological dilemmas that confront immigrant parents and children in their daily lives. Often educational materials are available only in English. Some of the best new parent education programs for immigrant families include the diverse experiences of parents and adolescents, the voices of fathers and mothers, and culturally relevant problem-solving materials that enable families to blend their native parenting skills with the realities of life in the new environment.

Recently published research on parent education programs for immigrant families is limited, but several important issues and processes have been identified by researchers and educators that alert developers of new curricula to emerging best practices. An important first step is to develop a cross-cultural understanding of the very different contexts inhabited by immigrant parents and children, including their experiences of war, poverty, and immigration. Parent education developers need to understand the social and economic conditions of families in their homelands and in their adopted homes, their preferred family structure, and their culturally based child-rearing values (Bennett and Grimley 2000). Parenting programs

should be based on a deep understanding of the current circumstances and day-to-day realities of parent-child interactions. Parents prefer that educational programs be offered in places and at times convenient to them and in a language that is familiar (McDermott 2000). Curricular content should incorporate a definition of the family consistent with the target population's definition, including an extended kin network, and be sensitive to traditional gender role issues and religious beliefs. It should directly address the unique dilemmas confronting immigrant parents and their children in the new environment (Zegarra 1998). Parents prefer to participate in programs that have trained facilitators who are parents themselves and whom they know. They prefer child-focused content that includes extended family involvement. (Powell, Zambrana, and Silva-Palacios 1990) Some of the best examples of new immigrant parenting programs in Canada include content on intergenerational conflict, maintaining cultural heritage, cultural adaptation, and language barriers (Short and Johnston 1994).

Two exemplary programs in the United States incorporate the best-practice issues and processes described above. The MELD programs are designed for Hmong, Latino, and East African parents of preschool and school-aged children, as well as other special groups. They bring parents into supportive groups that meet over two years to become friends, solve problems, and create healthy families. Group facilitators are peer volunteers who are experienced parents, trained and supported by MELD professionals. The Helping Youth Succeed: Bicultural Parenting for Southeast Asian Families program is designed to support Vietnamese, Cambodian, Lao, and Hmong parents of adolescent children. Parents are empowered to develop their own bicultural solutions to "family stories" that present common parent-adolescent dilemmas. The stories were developed from research-based focus group discussions with parents and adolescents from each cultural group. The stories are presented in both English and the four languages of participants in text and video formats (Detzner, Xiong, and Eliason 1999).

The nature, quality, and impact of parent education curricula for immigrant parents are difficult to assess, since there is little published evaluation research on their effectiveness. A few exceptions indicate the value of culturally specific



Immigrants learning English (Michael Siluk)

parenting programs. Mexican-American mothers who participated in a Houston program granted their children greater autonomy, were less intrusive, and demonstrated greater warmth than the control group. Their children had more advanced cognitive development and higher IQ scores (Johnson et al. 1974). Observations of Hispanic mothers at risk for child abuse showed that after completing a twenty-week prevention program they were more engaged with their children in play situations than they were before the program (Herrerias 1988). Preliminary evaluations of the Helping Youth Succeed curriculum indicate that parents identify with the culturally based family story content and they appreciate the use of their native languages; and many parents say that they are willing to adopt bicultural parenting practices. These models may be useful to developers of parenting programs for new immigrant families.

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See also: Acculturation; Children from Immigrant Families; Hispanic Immigrant Experience

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Parental Development

The study of parental development (Demick, Bur-sik, and DiBiase 1993) has drawn on several strands of research, namely, work on: (a) parenthood as a developmental stage (primarily from a psychoanalytic viewpoint); (b) transition to parenthood (with respect to individual, marital, and family functioning); and (c) stages theories of parenthood (drawing on the grand developmental theories of Swiss psychologist Jean Piaget and Heinz Werner).

Parenthood as a developmental phase was first conceptualized in the psychoanalytic literature by Theresa Benedek. Specifically, parenthood was initially seen as a powerful stage in the development of women and then of both women and men. For example, Helena Deutsch (1945) proposed that parenthood (specifically, giving birth) represents the crucial fulfillment of a woman's needs. Benedek held that ". . . the study of the family as a field of transactional processes . . . is based on the proposition that the parents' drive-motivated, emotional investment in the child brings about reciprocal intrapsychic processes in the parents, which normally account for changes in their personalities" (1970, 124). Arguing that successful (or unsuccessful) relationships with children make for advances (or regressions) in the parent's personality (superego, self-esteem), she explained that "in terms of dynamic psychology it means that while the parent consciously tries to help the child achieve his developmental goal, he cannot help but deal with his own conflicts unconsciously and by this, normally, achieve a new level of maturation" (p. 131).



Father and child (Michael Siluk)

Thus, adults' conscious and unconscious ways of navigating the world are thought to change when they become parents, leading them to relive some of their own psychological vulnerabilities with their children. For example, "when a child enters school, a parent's own fear and resistance against the authority of the school may erupt and cause the parent, child or both specific difficulties. When children reach adolescence, parents have to confront their own sexuality once again" (Buchholz 2001, 441). In line with this, Benedek (1959) made inroads into the general problem of parental development by suggesting three broad phases: (a) phase one, from conception to the child's entry into school, a period of *total parenthood*, during which parents perceive children as completely their own); (b) phase two, when the youngest child reaches adolescence and parents must deal with the *empty nest* phenomenon; and (c) phase three, when parents become grandparents and instinctively indulge their grandchildren.

Further support for the notion of parenthood as a developmental stage came from the classic work of Erikson. Modifying Freudian theory in two major ways, he proposed that (a) in addition to psychosexual aspects, developmental stages have psychosocial aspects, which involve major social conflicts that the individual must resolve at each stage (e.g., basic trust vs. mistrust, autonomy vs. shame and doubt, initiative vs. guilt, in the oral, anal, and phallic stages, respectively); and (b) social development continues postadolescence (even if intellectual development does not), during which time there are three additional developmental stages (each with its own social conflict), namely, young adulthood (intimacy vs. isolation), adulthood (generativity vs. stagnation), and maturity (integrity vs. despair). The seventh stage, generativity versus stagnation, corresponds to middle adulthood. Generativity refers to the ability to give of oneself to another person or persons. Although generativity may be achieved in numerous ways (e.g., transmission of knowledge through teaching and writing, provision of empathy or protection to individuals, groups, and social institutions, or societal activities), it is ideally expressed in the context of parenthood, where parents derive fulfillment by investing in their children's lives, sharing their life experiences, and guiding and teaching them. According to Erikson, few life experiences provide as much opportunity to care for others, to

realize our need to be needed, and to exercise our innate wish to teach as parenthood.

Not surprisingly, once parenthood was conceptualized as a developmental phase, interest primarily in the beginning and secondarily in the end of this period grew; to date, significantly less research has focused on the middle phase of parenthood. For example, early sociological work (e.g., LeMasters 1957) led to the initial conceptualization of the transition to parenthood as a relatively time-limited period of crisis for new parents. However, subsequent research qualified this notion. That is, some psychologists provided extensive information on, for example, personality characteristics associated with the parental role, factors (e.g., infant temperament) mediating the impact of parenthood on personality, and areas of change within parents (e.g., affective states, personal maturity). Others treated the impact of the transition to parenthood on the marital relationship and on developmental change in the family system. For example, Carolyn Cowan and Philip Cowan (1992) provided a structural model of marital and familial adaptation focusing on the developmentally advanced state of balancing individuality and mutuality (e.g., couples characterized by positive mutuality over the transition to parenthood exhibit optimal parenting, which leads to positive child outcomes at least through kindergarten). Consistent with this research has been the work of Jay Belsky (1984), who identified as primary factors in parenting: child characteristics (e.g., temperament); the personal and psychological well-being of parents; and contextual sources of support and stress.

Theory and research on stages of parental development have also been generated from within Piaget's developmental framework. Relevant here is the work of Arnold Sameroff and Leslie Feil on parental conceptions of the child and of the parental role. These theories outlined a descriptive, developmental continuum of parental social-cognitive awareness, conceptualized in an analogous manner to Piaget's stages of the child's intellectual development. That is, the parent's conceptions of the child and of the parental role were seen as representing a cognitive structure of parenthood. Cognitive structure referred to stable patterns of thought that define how an individual (here, the parent) makes sense out of his experience and organizes his responses to it. Related to

increased interaction with the environment, the structure of a parent's thinking broadens to include a wider array of information and perspectives, as well as reflecting increased depth and flexibility. Thus, the development of the cognitive structure of parenthood was seen as aiding parents in interpreting their children's responses and behavior and in formulating policies to guide parental action.

Stated simply, Sameroff ordered parents' conceptions of their children's development into four stages, corresponding to Piaget's four stages of the child's intellectual development, namely, *symbiotic* (sensorimotor), *categorical* (preoperational), *compensating* (concrete operational), and *perspectivistic* (formal operational). He characterized the parent's earliest conceptions of her child as symbiotic, in that the parent "... is concerned primarily with the immediate relationship to the child [and] ... responds in a here and now fashion to the child's behavior. ... The skin to skin contact in breast feeding ... [etc.] ... are interpreted as consequences of the mother's efforts and serve to produce a positive affectional bond between mother and child. ... This lack of differentiation between oneself and one's child makes the ability to reflect on the developmental process impossible" (Sameroff and Feil 1975, 86–87).

Subsequent stages were seen as reflecting increasing differentiation between parent and child. Once the parent is able to differentiate between self and child as independent entities, he has advanced to the categorical stage, in which "the child's actions can be viewed as being intrinsic characteristics of the child" (p. 87), independent of whether the parent characterizes the child positively or negatively. The highest level of reasoning was termed *perspectivistic*, in the sense that parents at this stage can take on a hypothetical attitude and interpret their child's behavior in light of the complexity of experience, context, and endowment; they can think constructively about remediation to overcome either general or selected deficiencies in the child.

Framed similarly, the work of Carolyn Newberger (1987) was developed more extensively. She distinguished between parental awareness (as embodied in her stages) and parental attitudes. Specifically, she assumed that parental awareness represents an underlying cognitive structure of concepts of people and of roles, whereas parental

attitudes reflect more superficial points of view about care-taking behaviors and styles. Thus, parental awareness, which reflects the complexity and flexibility of the underlying cognitive resources available to the parent, is—unlike some attitudes—not a correct or incorrect but a deeper mode of thinking and thus might be more amenable to intervention. Newberger's theory received empirical validation, some attempts were made at incorporating it into parent education programs aimed at fostering parental development.

Specifically, Newberger's orientations, or levels, or stages, have been described as follows: (a) *egoistic orientation*, at which level a parent is self-focused, considering only his own interests and needs, and perceives the child merely as a projection of his own experience, e.g., in terms of the effect of the child on the parent; (b) *conventional orientation*, at which level, a parent understands his child in terms of externally derived definitions and explanations of children, e.g., culture, tradition, authority, age-related norms for children's development; parenting is perceived as reasoning about such issues as the most correct way, to, for example, toilet train or discipline children; and fulfilling one's role as predetermined by tradition is primary; (c) *subjective-individualistic orientation*, at which level a parent views his child as a unique individual who may now instead be understood through the parent-child relationship itself, rather than through external definitions such as norms; parents broaden their reasoning about parenting and organize it around identifying and responding to the needs of this particular child; and (d) *analytic-systems orientation*, at which level a parent understands both himself and his child as complex and changing psychological self-systems, which are embedded within interacting mutual systems that influence family, community, and global relations; the parent sees both his own and his child's development through the ongoing process of parenting, with the parent finding ways to balance his own needs and those of the child.

From a different tradition (the tradition of psychoanalytic research on normal adult development such as that of Daniel Levinson and Roger Gould), Ellen Galinsky (1981) interviewed 228 parents with 396 children among them (from 10–40 children of each chronological year from *in utero* to 18 years). These parents included mothers and fathers, parents from diverse groups (e.g.,

married, divorced, widowed, stepfamilies, adoptive families, foster families, guardians), and parents of all ages (ranging from adolescent to older parents, with one or many children), races, ethnicities, religions, income levels, and regions of the country. She then specifically proposed that parenthood progresses through a series of six stages, each with its own developmental tasks for parents:

1. *Image-making stage.* She characterized the image-making stage (pregnancy until birth) as the time “when prospective parents begin to cull through, to form, and to re-form images of what’s to come, of birth and parenthood” (p. 9). Parental tasks involve, for example, the parent preparing for a change in role, forming feelings for the baby, “reconciling the image of the child with the actual child” (p. 55), and preparing for a change in other important adult relationships.
2. *Nurturing stage.* From birth until about 2 years of age (when the child begins to say “no”), parents experience a conflict between earlier expectations of what the child might be like and the actuality of parenthood. The major task of this stage is “becoming attached to the baby”; in contrast to the initial state of symbiosis between mother and child, attachment “implies both emotional and physical separateness and connectedness” (p. 73). Here, parents assess their priorities, figuring out how much time they should devote to the baby and how much to other aspects of their lives.
3. *Authority stage.* The central task of the authority stage (2–5 years) concerns how parents handle *power*, that is, how they accept the responsibility involved, communicate effectively, select and enforce limits, decide on how much to shield and protect the child, cope with conflicts with the child, and handle or avoid battles of the will. The authority issue is not restricted to dealing with the child; the parent must also work out authority relationships with others who deal with the child, including the other parent, grandparents, babysitters, teachers, neighbors, and the like.
4. *Interpretive stage.* During the interpretive stage (5 to 12 years), for parents “the major task is to interpret the world to their chil-

dren, and that entails not only interpreting themselves to their children and interpreting and developing their children’s self concepts, but also answering their questions, providing them access to the skills and information they need, and helping them form values” (p. 178).

5. *Interdependent stage.* As the child reaches adolescence, the parent is faced with and must interact with a *new* child. All aspects of the prior relationship (e.g., communication) must be renegotiated and new issues (e.g., sexuality) addressed.
6. *Departure stage.* As the adolescent gets older, the central task becomes that “of accepting one’s grown child’s separateness and individuality, while maintaining the connection” (p. 307). “The ‘old,’ ‘original’ family has changed, the children have grown, moved away, and the parents’ roles have changed, and most parents search for new ways to say they are still a family” (p. 304). This stage is characterized by evaluations. “Parents evaluate their images of departure, when and how far they thought their child would go. They evaluate whether they’ve achieved the parent/grown child relationship they wanted as well as taking stock of their overall successes and failures” (p. 10).

More recently, Barbara Unell and Jerry Wyckoff (2000) published the volume *The Eight Seasons of Parenthood: How the Stages of Parenting Constantly Reshape Our Adult Identities*. Based on clinical interviews with several hundred parents ranging in age from 20 to 90 years, they elaborated a stage theory of parenthood with striking similarities to Galinsky’s. Specifically, they conceptualized stages of parenthood as consisting of three circles with various substages, indicated by the child’s age and developmental milestones. The first circle concerned parenting young children, which was divided into the following stages: *celebrity* (pregnancy); *sponge* (infancy); *family manager* (preschool years); *travel agent* (middle years); and *volcano dweller* (adolescence). The second circle involved parenting adult children, which was divided into the stages of: *family remodeler* (the child leave homes to become independent); and *plateau parent* (independence). The third circle involved being parented by children; the only stage within

this circle was designated as *rebounder* (caring for a parent).

While stage theories of parenthood appear intuitive, they have not been subjected to much empirical scrutiny (see Demick in press). For several reasons, I and my colleague Seymour Wapner (e.g., Wapner and Demick 1998) reframed the issue as *developmental changes in the experience and action of parents over the course of bearing and rearing children*. Above all, this conceptualization is more in line with the complexity of everyday life functioning. In fact, the classic pattern of changing self-world relationships, which sees the individual moving from a dedifferentiated state to being differentiated and isolated, differentiated and in conflict, and finally differentiated and integrated, is too simple. Change from one state to another can occur at any given moment in time, and developmental changes occur with greater frequency than stage theories have implied (Demick in press).

Specifically, whenever there is a perturbation to the system (e.g., cognitive disequilibrium in a parent related to a child's behavior), the parent must reorganize her self-world relationship (e.g., to restore cognitive equilibrium). In this way, such developmental processes most probably occur with great frequency in transacting with one's children on a daily basis. While the particular issues posed by one's children may change from one moment to the next (although some appear with great regularity), parental reactions do not necessarily change. That is, parents are constantly faced with restoring cognitive equilibrium (or equilibrium in their person-in-environment systems) in a dialectical process that may feel remarkably similar every time that they are faced with a novel (or not so novel) stimulus from one of their children. In our terms, parents are continually faced with attempting to return differentiated and in conflict person-in-environment system states to more differentiated and integrated ones.

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See also: Family Life Cycle

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Parent-Child Synchrony

The term "parent-child synchrony" refers to a smooth-flowing, reciprocal, balanced interaction style sometimes observed in the one-on-one interactions of parents with their children, an interaction style that may facilitate the child's social, emotional, and cognitive growth. Instead of describing *what* parents and children do together (e.g., have a disciplinary encounter, solve a problem together), interaction styles like synchrony describe *how* they do things together.

Characteristics

Synchronous interactions have several characteristics. When a parent and child are engaged in syn-



Parent and child engrossed in model making (Elizabeth Crews)

chrony, interactions are *extended*, lasting more than one or two turns. The parent and child are *focused* on the same thing, paying attention to each other, with neither partner being distracted. There is a *balanced*, back-and-forth, give-and-take quality to the interaction, with neither partner pushing or dominating, and both partners contributing equally. There is a *coordination* to the interactions, such that each partner's actions flows from what the other partner just did, and there is a sense of behaviors being connected or contingent, with no behavior coming "out of the blue." Finally, during synchronous interactions, neither partner is experiencing negative emotions.

Synchrony with Infants

The term synchrony was first used to describe certain interactions that were observed when child development researchers watched mothers with their very young infants (Brazelton, Koslowski, and Main 1974). Researchers noticed that some mother-child pairs were able to interact in a harmonious way, while other pairs seemed to have difficulty maintaining smooth interactions. When

the mother and child were in sync, there was a dancelike quality to the interaction: They maintained eye contact, the tone of their vocalizations was similar in pitch, their movements were coordinated. When the researchers looked at the mothers' behavior more closely, they realized that the mothers who engaged in the most synchrony with their infants tended to follow the babies' cues. For example, if the infant looked away, the mother leaned back and waited for the infant to reengage, rather than trying to get the infant's attention again. If the infant smiled and started waving her hands, the mother increased her level of activity and interest to match the infant's. Therefore, instead of trying to lead or set the pace of the interaction, the mother allowed the baby to take the lead. In this way, the baby got its needs for stimulation or rest met.

In fact, there appear to be multiple advantages for the infant who engages in high rates of synchrony with its caregiver. Research and theory suggest that synchrony facilitates the infant's development in at least four ways. First, it enhances *multisensory processing*, meaning that infants can

use perceptual information gained from one sense to enhance the processing of data from other senses. For example, gazing at caregivers (visual processing) helps infants interpret caregiver vocalizations (auditory inputs). If the caregiver and infant are in a state of synchrony, information from the caregiver is transmitted to the infant in a non-interfering way that fits with what the infant is already doing; therefore the infant's ability to process across sensory modalities should be maximized. Second, synchronous interactions appear to facilitate *homeostatic regulation*. Newborn babies have a limited ability to regulate their levels of arousal, their sleep patterns, and so on; the caregiver can help the baby establish these kind of rhythms through their interactions, until the infant gets better at self-regulation. Synchronous interactions are particularly helpful in this regard, because, if the caregiver is tuned in to the infant's cues, their interactions can help the infant transition smoothly from one state to another. This, in essence, gives the baby practice in doing what he eventually will need to do without help.

Third, synchrony appears to increase the likelihood that infants will *feel effective*. Children need to learn, early on, that what they do makes a difference, that they can express their needs and the needs will be met. They do not understand this in a conscious way, but there is reason to believe that infants feel when things are going well and when they are not. When interactions are mistimed, or when the caregiver is not responding appropriately to what the infant is doing, things do not feel right to the infant (this is seen as distress in the infant); when the caregiver and infant are interacting synchronously, things feel right to the infant, and this sense of rightness may translate into a sense of self-efficacy or self-worth for the growing child.

The fourth benefit of synchrony for the infant is related to this sense of feeling effective and worthwhile: Infants who engage in repeated episodes of synchrony with their primary caregiver are also likely to establish a *secure attachment* with the caregiver. Theorists claim that when children are in a relationship with a caregiver who is appropriately responsive to them, they learn that they are worthwhile and loveable, and that other people can be trusted to "be there" for them. These children are considered securely attached to their caregivers, and approach future relationships with positive expectations and a positive sense of them-

selves. Various studies (e.g., Isabella and Belsky 1991; Schölmerich et al. 1995) suggest that parent-child synchrony can facilitate the formation of a secure attachment, most likely because it requires sensitive responsiveness on the part of the parent.

Synchrony with Older Children

Since the original studies with mother-infant pairs, other researchers have begun to look at interactions of parents with older children to determine whether or not their interactions can be described in terms of synchrony, and it appears that they can, although synchrony may look slightly different, and serve different functions for older children (see Harrist and Waugh, in press). There is some evidence that parent-child synchrony is descriptive even for adolescent-parent interaction, but most studies have focused on early childhood.

For toddler-parent pairs, synchrony looks similar to infant-parent synchrony (interactions are prolonged, coordinated, etc.) but there is at least one difference: The toddler appears to be a more active partner in the synchronous interaction. With infants, the burden for maintaining synchrony rests largely on the parent, because the parent must to be tuned in to the infant's signals. Toddlers, however, are better able to focus on parents' signals. Also, as toddlers become verbal and more mobile, they are able to assert their desires more directly. For synchrony to occur with toddlers, then, there needs to be a sense of *mutual affiliation*, with parent and toddler both wanting to be engaged in the interaction and both being willing to focus on each other. Synchrony at this age looks more like teamwork than it did in the infant period.

What do toddlers learn when engaged in synchrony? First, synchronous interactions appear to facilitate the development of language and other *communication skills*. The turn-taking and contingent nature of synchronous interactions not only gives children practice in the give-and-take of social conversation, but also leads to the development of shared meaning between the parent and child. Toddlers, therefore, should learn more and learn more easily when learning occurs in the context of synchrony. Synchrony may also facilitate the toddler's *autonomy* development, through providing the child an easy way to practice self-regulatory skills as they learn to comply with adult wishes. Some studies (e.g., Rocissano, Slade, and Lynch 1987; Rescorla and Fechnay 1996) have in-

licated that when parents make requests of children in a synchronous manner (e.g., requests that are tied somehow into what the toddler is already doing), rather than making demands that interrupt what the child is doing, the child is more likely to cooperate with the parent. The child therefore learns to balance the demands of others with her own desires, something that is necessary if the child is to learn self-control.

Even for preschool- and kindergarten-age children, there is evidence that synchrony remains a meaningful way to describe optimal parent-child interactions. During this period, the burden for maintaining synchrony falls more equally to the child and caregiver than in previous eras. Parent and child appear as *near equals*, in the sense that children of this age have the power to engage and withdraw at will and can carry on sophisticated dialogues with adults once interaction is underway. Synchrony's function at this point seems to be in the realm of social development. Peer interactions become important for children in this stage of early childhood, and their competence with peers has a significant impact on their later personal, interpersonal, and academic adjustment. Research suggests that synchrony facilitates the development of the *social skills* that are part of social competence, such as being socially attentive, solving social problems, and being nonaggressive during play.

Facilitating Synchrony

Although parents can—and do—engage in synchrony with their children without consciously trying, it may be that certain attitudes and behaviors could be cultivated by parents to facilitate synchrony. Regardless of the child's age or stage, parents should first ask themselves whether they are fully attentive, or distracted. They should then tune into the child's nonverbal and verbal cues regarding how the interaction is going, asking themselves questions such as: Is the pacing of the interaction comfortable for my child? Does my child appear over- or understimulated? Is my child becoming distressed? Am I trying to push my own agenda? Does my behavior and expression of emotion flow from what my child is doing? Parents who are able to engage in synchrony with their children should see not only benefits to the child, but to the parent-child relationship as well.

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See also: Attachment; Cognitive and Language Skills; Early Environmental Influences on Apes; Parental Development; Parenting Styles; Play and Play Partners

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Parenting Styles

Parenting style is defined as a characteristic of the parent, a stable constellation of attitudes and beliefs that form the context in which parenting practices occur (Darling and Steinberg 1993). Human developmental ecology points out that human behavior is a consequence of the interaction between the individual and the environment (Bronfenbrenner 1979). Children develop in the context of family relationships. In other words, children grow and adapt through interchanges with their immediate microsystem, their family (Bronfenbrenner 1979). It is within this context that parenting styles or emotional climates influence the socialization of children.



Parent scolding a child (Elizabeth Crews)

Diana Baumrind's (1966, 1989, 1991) work on the classification of parenting styles has profoundly influenced how the relation between child outcome and parenting style is understood. Her early work identified three parenting styles—authoritative, authoritarian, and permissive. The permissive typology was later differentiated to include both indulgent and neglectful parents (Maccoby and Martin 1993).

Although Baumrind's parenting styles differ, depending on social context and developmental period, they share certain essential features (Baumrind 1989). Each parenting style is conceptualized as a function of two dimensions—responsiveness and demandingness (Maccoby and Martin 1993). The term “responsiveness” comes from ethology, a field of study that views humans and animals as active organisms, each living within a particular ecological niche. Responsiveness refers to synchronous behavior between infant and caretaker. It has in the past been seen in terms of the degree to which a parent shows warmth rather than hostility, but it is now understood to include both affectional warmth and cog-

nitive responsiveness (Baumrind 1989). Affectional warmth reflects emotional expressiveness, while cognitive responsiveness refers to the cognitive stimulation of the child. Responsiveness includes a parent's level of emotional supportiveness *and* the degree to which he is cued into and able to meet a child's developmental needs. Demandingness refers to parents' expectations, the supervision of children, and parents' willingness to confront their children. Through maturity demands, monitoring, and disciplinary efforts parents attempt to integrate their children into the whole family (Baumrind 1991).

Authoritative parents are said to be high in both demandingness and responsiveness. They generally encourage verbal give and take, welcome independence and conformity, and use reason to reinforce behavior. Both independent self-will and conformity are valued. Authoritative parents exert firm control without unjustified restrictions. The rights of both parents and children are emphasized. Children of authoritative parents are usually found to be socially competent, self-reliant, and responsible. They are what Baumrind (1989)

called “instrumentally competent.” These highly competent children demonstrate agency and communion. Agency refers to children’s social and intellectual self-assertion (reflecting the drive for independence and individuality), and communion reflects their need to be of service and be engaged with others (which shows itself in social responsibility).

Authoritarian parents are said to be high in demandingness but low in responsiveness. Like authoritative parents, they utilize firm control, but they are also described as being high in restrictiveness or psychological control (e.g., shaming, withdrawing of love, guilt induction). Authoritarian parents value unquestioning obedience and may use punitive forceful measures to control their children. They attempt to shape their children’s behavior in accordance with a set standard of conduct, usually based on an absolute standard. Authoritarian parents have children who may be hostile or may lack independence and dominance (Baumrind 1989). European American children of authoritarian parents are often anxious about social comparison, fail to initiate activity, and have poor self-esteem.

Permissive or indulgent parents are high in responsiveness but low in demandingness (Maccoby and Martin 1993). Permissive parents are warm and responsive but do not set limits or demand much from their children. They allow children to regulate their own activities and avoid exercising control. Many indulgent parents actively *choose* to be permissive. Their nondirectiveness stems from a commitment to children’s rights. These permissive parents do not feel they have the right to restrict their children’s actions or emotions. Their children often have poor self-control, are less socially assertive, and less achievement oriented (Baumrind 1966, 1989).

The fourth parenting style is the rejecting-neglectful or disengaged parent who is low in both demandingness and responsiveness (Maccoby and Martin 1993). They are underinvolved with their children; they respond minimally to their children’s needs and wants. Disengaged parents do not monitor their children, are not supportive, and may actively reject or neglect their child-rearing responsibilities altogether (Baumrind 1991). This inattention or indifference often arises because parents feel that it is too much of an effort to control their child.

While the influence of parental styles on child behavior is significant, it is important to recognize that parental styles may also reflect variations in children’s characteristics (Maccoby and Martin 1993). Although parenting styles have an influence on the socialization of children, it is not a unidirectional relationship. Children bring into these interactions characteristics (e.g., difficult or easy temperaments) that might change parents’ adaptation level (e.g., Darling and Steinberg 1993; Maccoby and Martin 1993). Consequently, parents’ responsiveness must match the temperament and state of the child (Baumrind 1989). Likewise, some children may react differently to the same parenting style. “A gentle, sensitive child might well react to high-power directives with passive, dependent responses, whereas an aggressive, vigorous child might react self-assertively or oppositionally, modeling himself after the aggressive parent” (Baumrind 1966, 899).

Because it has been suggested that much of the literature on parenting styles reflects a European American standard (Flynn 1994), increased attention has been given to the influence of the macrosystem, the culture (e.g., cultural values), on parenting styles and child outcomes. Differences between cultural groups may be due to variations in the definition of optimal instrumental competence (Baumrind 1989) and differences in social context and parenting practices (Brody and Flor 1998; Darling and Steinberg 1993). For instance, Baumrind (1989) pointed out that what might be important to Japanese mothers (i.e., the encouragement of dependence; a high value on communion) may not be valued within Western cultures. Likewise, while the negative outcome of authoritarian parenting is evident for European Americans, it is not so clear-cut for Hispanic or African American children. It is suspected that because some African American families are more likely to live in poorer and therefore less safe environments, heightened parental control serves a protective function that overrides the restrictive impact it seems to have on children living in more moderate community contexts. For example, Brody and Flor (1998) have identified high levels of parental control, greater than would be expected from authoritative parents, coupled with affectionate behaviors, more than would be expected from authoritarian parents, in African American parents raising children in the rural south. This form

of parenting “communicates to the child that the parent is vigilant and concerned for the child’s welfare” (Brody and Flor 1998, 805), which should consequently nurture healthy self-esteem in childhood and beyond.

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See also: Identity Statuses; Family Diversity; Intelligence and Parenting; Parental Development; Parent-Child Synchrony

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Participatory Action Research

Participatory action research (PAR) is an approach to social science and educational research that directly links research and education with social action. Participatory action research engages researchers and community members as equal participants, combines popular, experiential knowledge with that of an academic, “rational” perspective, and seeks to empower people through collective action aimed at radically transforming society. Because it addresses the relationship between the individual and the environment and draws together multiple perspectives aimed toward enhancing individual and community life,

PAR is a valuable methodology for the field of Human Ecology.

In PAR, research is done, not *for* marginalized peoples, but *with* marginalized peoples: The researcher accompanies the participant over time, participating and observing while providing resources to the participant and her community, who in turn facilitate the researcher’s understanding (Lykes 1997, 728). The community group, along with the researcher, identifies the existing problems it wishes to eliminate or change. These problems become the basis for the research, as researchers and community members collaboratively explore the structural roots of the problem and possible avenues toward change.

Through PAR, people move from being objects of intellectual inquiry to active subjects in their own research process. Community members develop an increasingly critical understanding of social problems, their underlying causes, and ways to overcome them. This process develops people’s awareness of, belief in, and abilities to organize resources. Participatory action research does not merely aim to alleviate or eliminate poverty while keeping people dependent and powerless, but intends to help oppressed people become self-reliant, self-assertive, self-determinant, self-sufficient (Park et al. 1993, 2). The principles of shared power and collective ownership of knowledge are crucial to the PAR process. The effective PAR researcher must recognize that he knows something and that the people know something, but that neither party holds the definitive answer. However, through working together, they will increase collective knowledge and learn more about how to gain and to use knowledge (Maguire 1987, 38). Still, even though PAR is a shared process, it is structured to shift the power and control of decision making increasingly into the hands of participants.

Participatory action research stems from a variety of theoretical sources, including Marxism, feminism, and critical theory. Kurt Lewin is commonly hailed as the “originator” of action research. Working in the 1940s, Lewin helped pioneer the notions that participant knowledge is foundational to research validity and that democratic and participatory research are essential for social change. Lewin refused to separate thought from action, or science from practice, and asserted that social processes can only be understood when they are changed. Central and South American

theorists and practitioners, such as Orlando Fals Borda, Paulo Freire, and Ignacio Martín-Baró helped move Lewin beyond the borders of the field of psychology into an explicit analysis of the relationship of science to social inequality, community life, and radical social change.

The PAR process should combine popular education, community-based research, and social action, depending on the needs of the community. Ideally, all three elements are included, but in what order and with what emphasis depends on the specific project. However the process is ordered, the final stage is one of shared reflection and consolidation of the learning that has taken place and a reexamination of the political, social, and economic conditions facing the community (Brydon-Miller 2001, 83).

The beginning phase of PAR focuses on identifying the problem to be addressed and on establishing relationships with community organizations, leaders, and institutions. Ideally, identification of the problem originates from within the community. However, though people are well aware of problems, since they experience them (e.g., toxic waste, inadequate housing, unemployment, drugs and crime), in reality the poor and marginalized often are unable to organize for themselves. External agents can help mobilize and organize the community for investigation and action (Park et al. 1993, 9).

As the research progresses, the researcher and the participants identify and understand the participants' perceptions of the most significant problems. Through continuing dialogue, a deeper understanding of the problem is reached. There should be an emphasis that the community decide how to formulate the problem to be investigated, what information should be sought, what methods to use, what procedures to take, how to analyze data, what to do with findings, and how to take action. The researcher acts as organizer, discussion facilitator, and technical resource person. She should help link participants' individual interpretations of problems to the broader socioeconomic context. As people increasingly begin to organize and discuss on their own, the researcher becomes more exclusively a resource person, and the people take more leadership (Park et al. 1993, 10).

The researcher plays an important role by providing methodological options and explaining their logic, efficacy, and limitations. By putting re-

search methods into the hands of the people to use as tools for empowerment, he will help demystify the research process. If the process is carried out successfully, the community will learn methodological tools and be able to use them in the future without "experts." Participatory action research draws on all available social science methodologies, save those that separate the researcher from the object to be researched or keep the subject ignorant of the purpose of the study. Methods beyond the technical and material resources of the people involved are also not used. Examples of PAR methodologies are field observation, personal history, archival and library research, questionnaires, and interviews. Participatory action research also draws on alternative approaches, such as popular theater, political action, group discussions, community seminars, educational camps, intercultural exchange programs, video productions, storytelling, and photo novella. (See Lykes 1997 and Wang 1999 for further description of creative approaches in PAR.) The unique aspect of PAR methodology is its shared dialogue and reflection, which produce not only factual knowledge but also interpersonal and critical knowledge.

Drawing on both qualitative and quantitative methods, data are collaboratively analyzed with the intention of discovering the dimensions of the problem under investigation and of coming up with a guide to collective action. Facts or findings that emerge can be used to organize which community actions to take, to shape social policies, and to implement social change measures. Research findings also serve as topics of collective reflection and dialogue throughout the process. Again, the people involved in the production of knowledge control how that knowledge will be used.

Although PAR provides a hopeful alternative to traditional research paradigms, there are several potential limitations. Great demands are placed on the researcher, who must be both educator and activist—willing to take a value position and act accordingly. The researcher must have access to institutional and financial resources. The transfer of organizational, technical, and analytic skills to participants is easier said than done. Furthermore, the eventual transfer of power over the project into the hands of community members is potentially more complex when the researcher, not the community, first identifies a problem.

As communities are heterogeneous entities, the problem articulated by some may not be salient for others. Organizations and leaders who act as advocates for oppressed people may have little interest in democratic power sharing and instead use PAR projects to enhance their own power. The most oppressed will likely still remain underrepresented and powerless. Also, how do oppressed people continue to act collectively if they continue to lack material resources?

The question of how to gain institutional support of PAR projects remains unanswered. Maguire (2001) notes that it is difficult to transform research practices in the field when the university environment continues to be highly undemocratic in terms of decision-making, resource-allocating structures and processes, and classroom practices and relationships. A final limitation of PAR is time. Participants busy with the demands of daily life simply may not have the time and energy to commit to the project.

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See also: Ethics: A Feminist Perspective; Methods and Criteria in the Study of Human Ecology; Philosophy of Human Ecology; Policy Education for Families and Children; Qualitative Research; Quantitative Research

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Peer Group Relations in Childhood and Adolescence

As children journey from early childhood through adolescence, their relationships with their peers change and take on different meanings. Although parents or other significant adults remain the primary source of social interactions, support, and learning in early childhood (2–5 years of age), children do begin to spend more time with their peers. At this time, children begin to interact with their peers rather than play beside them (in what is called parallel play), and pretend play becomes more important and complex. Children's peers are generally of the same age and gender, and peer interactions typically occur at home or at day care or preschool. Nevertheless, parental opinion remains the most important determinant of self-esteem and self-worth during this period. Children take comfort in their reliance on their parents. Most children's concept of what is right and what is wrong is based on the instruction of their parents. Parental approval is of the greatest importance to the child.

In middle childhood and into preadolescence, the number of activities in which peers are involved increases almost threefold. With few gender differences, peer interactions vary widely, and include talking (in person and on the telephone), sports, listening to music, watching television, and so on. In adolescence, the importance placed on peer interactions increases even more dramatically. Adolescents spend more than 50 percent of their waking hours with their peers, including friends and classmates. In early adolescence, teens begin to develop a strong allegiance to their friends. As they mature physically and cognitively, they become better able to express their private thoughts and feelings, and to understand their fu-



Group of adolescents interacting with each other (Elizabeth Crews)

ture and the whole process of decision making. They can also more readily consider another person's point of view, and so it is easier for them to understand a peer's thoughts.

There is also a marked increase in the desire for autonomy during this period. Accordingly, adolescents begin to question parental roles and rules, and turn to peers for guidance. Adolescents begin to look for direction on who they should be from their peers. They look to their peers for "rules" for a wide range of behaviors, such as what brand of clothing to wear, how to speak, and with whom to associate at school, as well as to learn in general what is "normal" and "acceptable." The more of these rules the adolescent can follow, the more they feel they will be socially accepted. Adolescents tend to find comfort in their fellow teens because they are all going through the same emotional, social, and physical changes. Their peers are a source of affection, sympathy, and understanding. Spending time with their peers allows teens to experiment with many facets of life while achieving autonomy from their parents.

Friends are often found in the adolescent's neighborhood, the larger community, extracurric-

ular activities, school, or athletic teams. Peer groups are characterized as having similar school aspirations, interests, and grades, and as having parallel psychological, biological, social, and cognitive maturity. Friends usually are of the same race and have similar peer group status (e.g., popular, jock, nerd). Adolescents tend to spend most of their time together participating in common activities. Some of the most common activities include going to the mall, playing video games, watching TV, and talking on the phone. Modes of entertainment often become the basis for the relationship between groups of peers. This is especially the case with music and extracurricular activities. Many peer groups define their mode of dress, hairstyle, and general lifestyle by the clique with which they are or want to be associated. For example, adolescents who are part of a sports team or artistic group often find comfort in dressing or talking in a way that allows others to know their group affiliation. When asked to describe the cliques in their schools, teens often define them in terms of their peer affiliation (the jocks, the drama kids, the headbangers, the skaters, and so on).

There are gender differences in the activities in

which adolescents engage. Although adolescent males typically have more friends than adolescent females, the male friendships are rarely as intimate as the female relationships. Females' peer groups remain more stable over time than do males'. Emotional support and sharing of themselves are more critical to adolescent females. This gender difference in relationship intimacy continues throughout the life span. Males typically prefer sports-related activities or engaging in delinquent behaviors, such as truancy or drug usage, whereas females prefer talking to their peers. Females' discussions generally center on personal development, problems, books, school, and grades.

There are also dramatic cultural differences in the role of the peer group in adolescents' lives. African American and Latino teenagers maintain a more intimate family relationship and less intense peer relations than Caucasian teenagers. Black teenagers also tend to be more flexible in their choice of friends and less dependent on peer approval. Black adolescents consider their families as safe havens in an untrustworthy world and may be less likely to distance themselves from parents. In terms of dating, underrepresented minorities in America tend to go on more group dates than do Caucasian adolescents, who tend to go on more "couple dates." In underrepresented minorities, 45 percent of the adolescents report their cousins and other close-in-age relatives as being some of their best friends. Caucasian adolescents are less likely to form intimate bonds of friendship with their cousins and other relatives. In racially diverse schools, peer groups are often defined along racial and ethnic lines.

Peer Influences

In contrast to previous views that peers are detrimental to an adolescent's development, research has shown that peers can have a positive influence on adolescents (Brown 1990). Children and adolescents who have close friends tend to have higher self-esteem and are more likely to consider themselves competent and less likely to be violent, stressed, or depressed. Adolescents with close friends also tend to do well in school. For example, contrary to prediction, peers do not actively reject gifted students. In fact, non-gifted students had a greater probability of being rejected than did their gifted same-age peers. Additionally, the gifted children were not ignored any more than were the

non-gifted students. Gifted boys had the highest number of popular votes, whereas gifted girls received the lowest number of votes in this category. Research has found that, although not disliked, gifted girls were not rated as popular either (Luftig and Nichols 1991).

The relationship between adolescents' peer network and their risk behavior is also not as originally depicted. In contrast to most parents' fear that their teen will befriend the wrong crowd and end up in trouble, it is more often the case that teens who end up in trouble seek trouble-making friends. So, rather than focusing on the question of whether the teen is in the "wrong" crowd, parents and other concerned adults would far better to ask why the teen chose the crowd. Peer relationships with negative outcomes are usually a result of teens who are searching for some positive emotion that they feel is lacking in their lives. For instance, it has been found that teens who join street gangs are often looking for a sense of family and belonging and teens who seek cliques that are bullying or harassing have low self-esteem and are seeking approval and a sense of dominance.

Interactions between Peers and Parents and Families

Although the teenage years have been called a time of rebellion, research on adolescents in the United States suggests that fewer than one out of five teenagers fit the stereotypic pattern of alienation, rebellion, and disturbance (Steinberg 2001). Emotions attending this transition period do not normally lead to family conflict of major proportions or resentment of parental or societal standards. Still, between 15 and 19 years of age, the amount of time teens spend with their parents or siblings decreases dramatically.

Adolescents who have positive relationships with their parents may be more likely to have friends who engage in socially valued activities than do adolescents with less positive parental interactions. Similarly, more involved parents may oversee and monitor their child's peer relationships more than do less involved parents, thereby reducing adolescents' undesired behaviors. Parents also have a significant amount of influence on their children's choice of friends. Parents help shape prosocial or antisocial behavior, which leads children to gravitate toward particular crowds. Parents who monitored their teen's behavior and schoolwork, encour-

aged achievement, and allowed joint decision making were more likely to rear children with higher academic achievement and self-reliance, and less risk behavior. Authoritative parenting can help teens internalize standards that insulate them against negative peer influences and open them to positive ones. Teens whose close friends were drug users tended to increase their own drug use, but this was less true of those who saw their parents as highly authoritative. In addition, adolescents whose close friends were academic achievers tended to improve their grades, but that was less true of students whose parents were not authoritative.

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See also: Adolescence in a Cultural Context; Friendship across the Life Span

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Personal Fable

See Adolescent Personal Fable

Philosophy of Human Ecology

Human ecology has its foundation in home economics and is closely tied to philosophical science. Philosophy is the study of human existence and

human understanding of truth or reality. Dating back to Socrates, Plato, and Aristotle, philosophy seeks to answer questions concerning the meaning of life, the relationships of nature, what constitutes knowledge, and the consequences of human behavior. Stemming from the Greek word *philosophia*, meaning the love of wisdom, it is a term that is used to cover a broad range of inquiry. As a formal discipline philosophy has influenced all branches of science as well as the humanities. As a form of inquiry it involves analysis, criticism, interpretation, and speculation.

Philosophy thus includes ethics and scientific thinking, and is itself an academic discipline; all these aspects of philosophy have application in human ecology. In relation to science, philosophy examines the logical processes used in designing, analyzing, and interpreting research (Edgar and Sedgwick 1999). It raises questions regarding the adequacy of a particular concept, the method that will be used in studying the concept, and the meaning of the knowledge that is being studied or gained from the study. In human ecology the guiding philosophies that have shaped research and community service activities are based on the ideas of the influential Western thinkers Auguste Comte, Immanuel Kant, Georg Wilhelm Friederich Hegel, Charles Darwin, Karl Marx, and John Dewey, with the more contemporary philosophy of Jürgen Habermas and Marjorie Brown currently reshaping practice.

The philosophy of science influenced the development of human ecology in its formative years as home economics. Home economics, as envisioned by pioneer Ellen Swallow Richards, was to concern itself with discovering empirical knowledge that could be used in helping families achieve "right living." The term "human ecology" was created by Swallow to reflect the empirical nature of the knowledge that could improve the quality of a person's home as well as reduce problems in society at large. This approach required home economists to develop educational methods that would address negative social trends influencing families. Though there was a need for research, home economists were not concerned with knowledge for the sake of knowing, they were concerned with the application of knowledge for the improvement of home life (the approach of pragmatism).

The emphasis on instruction for right living derived from the ideas expressed in Kant's *Critique of*

Practical Reason (1788), which connects reasoning using logical principles based on empirical study to the practice of right behavior. The belief was that families would use practical reason to adjust their behavior if they were aware of better ways to attend to the problems of the home; food, clothing, shelter, housekeeping, and the management of money. The use of scientific research to discover better ways of living was influenced by Comte's positivism. Positivism holds that only empirical science can produce valid knowledge through which predictions can be made. It was believed that such predictions could be used to provide a basis for improving social conditions within families, bringing the home into harmony with the industrial conditions in the larger society. *Utilitarianism*, the ethical philosophy of making decisions based on what would achieve the greatest good for the greatest number of people guided decisions regarding what would be researched and taught as means to achieving better ways of living. Much of this early activity centered on improving the physical and economic conditions of the home as a means of social progress.

Another philosophical perspective that influenced the development of human ecology was found in the biological sciences. The biological aspect of human ecology focuses on scientific methods of analysis for understanding humans as living organisms interacting with their surrounding physical environment. Emphasis on growth and development was combined with the study of disease and health, with an emphasis on Darwin's theories of adaptation and Sir Arthur Tansley's concept of ecosystems.

Also at work in the early years of home economics was a related philosophy known as social Darwinism. Based on Darwin's theory of evolution, this philosophy posited that humans, like animals, adapted to their environment, with prosperity going to those who adapted most efficiently. This belief supported a perception that the poor were genetically unable to improve their life's condition without assistance. Accordingly, the practice of teaching home science in the schools as a way of promoting adaptation became a focus for educational activities. It was believed that work with students in high school could bring about great improvements in the technical skills of family living. Such skills needed to be taught, since it was believed that families were lacking in these areas, as was shown by escalating social problems.

Feminism and Human Ecology

The ideology of feminism seeks equality of women with men in economic, political, and social arenas. Feminist issues were being raised long before home economics became a social science or an academic course of study. Often referred to as the women's rights movement, the feminist movement rose alongside of the growing academic discipline of home economics. Using Marx's ideology of dialectical materialism and socialism, women began questioning the teachings that home economics promoted. By the mid-twentieth century, home economics drew sharp criticism as supporting a patriarchal structure with social patterns of male domination and subordination of women and children. In both implicit and explicit endorsements, home economics unknowingly promoted corporate industries that exploited family life and contributed to social problems.

The socially defined expectations in homemaking standards taught in the public schools throughout the United States focused on training women to efficiently run a household, support a husband, and raise well-behaved children. Justified as "domestic economy," a politically passive form of feminism was endorsed by home economists, based on an ideology of self-sacrifice that froze the status quo for women by promoting personal identity and self-fulfillment through the home and not in any public sector. Though this perspective on domestic economy was a popular philosophy with many early leaders of home economics, it was not shared by all. Activist feminists within the discipline began calling for a more critical approach and for active political involvement of women in the public policies that were infringing on the private lives of families.

By the 1970s home economics began formally calling for active involvement of its members in advocating social policies that addressed the needs of children, women, and families. Though previously involved in policy formation affecting public institutions in such areas as health and sanitation, home economists began identifying issues concerning children and families by supporting the Child and Family Services Act in 1976, and later publicly supporting the Equal Rights Amendment. By the late 1970s the American Home Economics Association began transforming from a model of adjusting to the existing society to one of critique and change. During the early years of this

shift, the discipline of human ecology began to reemerge from home economics.

Human Ecology and Contemporary Philosophy

From the early beginnings of human ecology as home economics, recognition was given to interrelationship of humans to surrounding environments and the importance of recognizing the effects each has on the other. In trying to understand the behavior and needs of a family, attention needed to be directed to the sociocultural, technological, and natural surrounding environments. As home economics branched into human ecology, greater emphasis was placed on the interdependence of these environments, with keen interest being devoted to the social and technological effects these environments had upon families. With this shift came an overall concern for the ecological health of living organisms found in each environment.

With its foundations as an applied science, human ecology recognizes the need to develop a whole systems framework that would avoid dividing the pursuit of knowledge and the application of service. Such an approach challenges the traditional positivist view of knowledge, the goal of which is the ability to predict and control behavior. A positivist view of knowledge in social science works to identify problems and propose solutions. Research from this perspective focuses on objectivity, separating the internal dynamics of thought, emotion, and perception in the researcher from the activity of the subjects under study. In human ecology such knowledge, though valuable, is viewed as insufficient.

The qualitative research method of hermeneutics has been suggested as a means of addressing the shortcomings of traditional objective research. Hermeneutical philosophy, as envisioned by Jürgen Habermas (1971), works to achieve intersubjective agreement between the researcher and the subject being studied. Insights into human motivation as shaped by the various environments of society, culture, religion, and technology can be used to construct a broader understanding of human behavior within the larger ecosystem. Hermeneutical inquiry complements empirical research by providing greater depth in understanding how families make meaning based on needs, values and goals, and how such internal activity influences behavior.

Hermeneutical inquiry is used in the philosophy of social science known as critical theory. Critical theory as a science seeks to evaluate societal structures, such as public policies and cultural beliefs, for ideologies that are oppressive. Critical theory examines phenomena from multiple perspectives, seeking to identify the root causes of injustice and oppressive social structures that underlie a societal problem. Ecological credence is the multiple layers or interconnection of a belief that supports a social problem some having penetrating historical roots not easily identified. Critical theory demands exploration of the multiple layers and interconnections of beliefs, consisting of implicit and explicit norms, that support social problems, recognizing that many of these beliefs have deep historical roots and are not easily brought into consciousness.

As a philosophy, critical theory recognizes the influence of dogmatic ideologies in creating social environments that deny some individuals opportunity for achieving an authentic sense of self. Human ecology holds a set of core values upon which research and social service is based. Using intuitionism, a form of teleological ethics, a set of values has been identified to guide research and social service activities. These values are believed to be self-evident and universal, in that they take as an ultimate good human betterment in contrast to oppression and injustice. These values are (1) economic adequacy versus poverty, (2) justice versus injustice, (3) freedom versus coercion and confinement, and (4) peacefulness versus warfare and strife (Bubolz and Sontag 1993, 426).

Unlike other social sciences, human ecologists are urged to use value questions in guiding research, questions such as, "What changes in this situation are necessary to bring about human betterment?" Consistent with its early history in home economics, the discipline focuses on discovering empirical knowledge to improve the well-being of families. Unlike its early predecessors, human ecologists are encouraged to critically evaluate social structures, corporate interests, and political policies for imbedded beliefs and practices that discriminate or inflict oppression and erode anyone's quality of life.

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See also: Hermeneutics and Human Ecology; Methods and Criteria in the Study of Human Ecology; Participatory Action Research; Qualitative Research;

Quantitative Research; Social Justice and Human Science Programs

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Phobias in Childhood

A phobia is said to exist when fear of a specific object or situation is exaggerated, cannot be reasoned away, results in avoidance of the feared object or situation, persists over time, and is not age-specific. Approximately 5 percent of children in the general population experience these symptoms (King 1997).

In general, childhood fears, as differentiated from phobias, are quite common and normal, most often resulting from a child's emerging cognitive and representational capabilities. Many fears in children are also adaptive and emanate from the day-to-day experiences of the child. At each developmental stage there are certain fears that are especially likely to occur. Specifically, infants usually fear sudden movements, loud noises, large or distorted objects, and strangers. During preschool age, children's developing vivid imagination result in fears of monsters or scary creatures. Children in this age group, as well as school-age children, develop many "what if . . ." fears, as they now have the cognitive ability to imagine scary circumstances but still lack the life-experi-

ence to know that the events they fear rarely happen. As older children venture out into the world and become more independent, leaving behind the security of home, fears of injury, thunder and lightning, burglars, kidnappers, and natural disasters often develop. During adolescence, a heightened desire to be accepted by peers results in concerns about appearance or public ridicule (Kaduson et al. 1997).

While most childhood fears are in the normal range, some children, about 5 percent of the general population as mentioned above, begin to experience impairment in their lives (King 1997). These impairments are the result of their anxieties and their common fears, which develop into more intense specific phobias. A specific phobia is said to exist when fear of a specific object or situation is exaggerated, cannot be reasoned away, results in avoidance of the feared object or situation, persists over time, and is not age-specific (King 1997).

A common treatment method for phobias is systematic desensitization. In this paradigm, fears and phobias are viewed as learned responses that can be unlearned through specific counterconditioning procedures. In counterconditioning, the child is instructed to imagine the phobia while a stimulus that elicits a response incompatible with fear, such as the presence of complete physical relaxation in the child, is present. In its most basic form, systematic desensitization consists of three components (Wolpe 1958):

- Completely relaxing the child, which is accomplished through a variety of methods (to be discussed later).
- Developing a hierarchy of objects or situations the child fears, with the most feared being ranked first.
- Pairing of items in the hierarchy in a systematic, graduated way, with relaxation, eventually helping the child to confront the highest-ranked fear. It is imperative that the relaxation be sufficient to inhibit fear at each step of the hierarchy.

Children present some challenges to the implementation of the theory. Younger children appear to have difficulty with independently accomplishing complete relaxation, and with being able to imagine their fears clearly (King 1997). As a result, in vivo desensitization and emotive imagery have



Young child afraid or upset (Elizabeth Crews)

been created as slight variants of the original procedure to help combat the complications that children bring to treatment.

In vivo desensitization is accomplished by simply replacing the imaginary aspect of systematic desensitization with real-life experiences. In this way, children's lack of mental representation and attention span can be compensated for (King and Ollendick 1997). In emotive imagery, rather than using muscular relaxation as the anxiety inhibitor, the child is instructed to imagine an exciting story involving her favorite hero. Items from the fear hierarchy are then interwoven at various stages of the story. Feelings of positive affect created by the story serve to counter or inhibit feelings of anxiety that the child might experience as a result of the introduction of the feared stimulus into the story (Lazarus and Abramovitz 1962).

These three techniques—systematic desensitization, in vivo desensitization, and emotive imagery—are quite similar in procedure and are almost identical in their theoretical underpinnings in behavioral psychology. All are based on the concept that two opposing feelings, in this case the feelings of relaxation and anxiety, cannot be experienced at the same time. As a result, the child will learn not to fear the stimulus by continually remaining relaxed during exposure. Due to these similarities, these techniques are often used interchangeably or in conjunction with one another when childhood phobias are treated.

Phobic children's excessive anxiety can negatively impact their family environment, quality of social relationships, and school performance. Phobias affect families and siblings, as the extra attention that a phobic child requires can create competition among family members (Ollendick and King 1994). Many phobic children will avoid novel situations for fear of possibly encountering their phobic object or event. As a result of such diminished outside contact, phobic children's peer relationships may suffer. Additionally, it is common for socially phobic youngsters to refuse to attend school at all, and many phobic children experience difficulty concentrating while in school, often preoccupied by their anxiety. These circumstances can have significant consequences for children later in life by increasing their loneliness, reducing their opportunity for peer support, and decreasing their academic opportunities. In general, children who suffer from phobias miss out on normative devel-

opmental opportunities for growth and learning (Rapee et al. 2000). However, the existence of empirically supported treatments offers much hope to phobic children and their families.

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Place Attachment across the Life Span

The concept of place attachment (PA) embodies the insight that from birth, persons interact with their social and physical environment, leading to a meaningful representation of the self within the environment. According to Barbara Brown and Douglas Perkins (1992), the theory of PA describes the gamut of processes operating when individuals or groups form affective, cognitive, and behavioral bonds to a particular sociophysical setting. PA theory also covers the established bond itself, which could be interpreted as the subjective meaning of place. Thus, PA has been conceptualized as a process of transforming space into place or the state of being attached to a place (Altman and Low 1992).

Various disciplines emphasize different segments of the social and physical setting, when place attachment is the object of study. For instance, psychoanalytic theory and, to some extent, developmental psychology focus on the relation

between infant and mother and on the child's feelings for places and things that develop as an extension of its relation with its mother (e.g., Bowlby 1969). Environmental psychology and anthropology in contrast focus on physical settings on a detailed level, such as the home and areas of the home such as the bedroom, areas of the outdoor environment such as streets, yards, playgrounds, and automobiles (Chawla 1992, Hay 1998), or, on a broader scale, urban environments or natural landscapes (Görlitz et al. 1998). Besides analyzing attachment to different places, this field of study undertakes research questions about the underlying structure and type of attachment, in terms, for example, of functions or components. Furthermore, the differences in PA among different actors (such as boys versus girls) or at different stages of the life span may be the target of analysis.

The Need for A Life Span

Perspective on Place Attachment

From a life span perspective, development is a process from birth to death, and it is closely related to the sociophysical context in every life phase (Baltes 1987). Within his theory of the ecology of human development, Bronfenbrenner (1999) even defines development primarily as the ongoing interaction between the persons involved and their environment over time. Consequently, development becomes especially critical during ecological transitions, from family life, for example, to peer-group life, from school to the world of work, or from the labor force to retirement (Bronfenbrenner 1999). Within the context of lifelong development, framed in terms of ongoing person-context dynamics, it is assumed that the transaction between a person and the social and physical environment, and thus also PA, becomes increasingly complex from childhood to adult life. Among the driving forces for this increasing complexity is the challenge for each developing individual to find a balance between basic needs for a secure, safe, and stable base on the one hand and higher-order needs toward exploration, stimulation, and environmental mastery on the other hand. Besides, complexity arises from an ever increasing action range (the individual's progressive ability to crawl, walk, ride a bus alone, and later drive or even fly to different parts of the globe) and hence exploit newly "conquered" segments of the environment.

Within a general person-environment transac-

tion view of human development, PA processes and outcomes play a variety of roles and reveal a variety of faces. PA is related to different forms of environmental acquisition, from early exploratory behavior to patterns of childhood play (Muchow and Muchow 1935), everyday behavioral routines (using, acting, manipulating, producing), territoriality (occupation, ownership), and symbolic representation in young and middle adulthood to especially age-related types of bonding (Rowles 1983, Rubinstein 1989). Furthermore, PA can lead to ambivalent feelings; a child's home environment, for example, can be secure, supportive, and self-affirming, yet also disruptive, frustrating or frightening. Later in the human life course, one can assume that PA in middle and late adulthood remains quite complex and comprises much more than mere reminiscence and nostalgia. However, the objective age range typically involves fewer years again in later life.

Important Places across the Life Span

Empirical studies on childhood PA have, not unexpectedly, revealed that the life of the child is first centered on the home and facilities in the immediate environment, followed by more diverse areas of the neighborhood in middle childhood, and that adolescence preferences are divided between the home and outdoor places (Chawla 1992). Also, children shift from mixed-sex, close-to-home play in preschool years, to extensive use of the local terrain with same-sex friends in middle childhood, to diminished visible neighborhood use in adolescence. As for gender differences in early PA, after the age of 5 or 6, boys tend to explore a greater range of outdoor and indoor places, whereas girls compensate for their more limited territorial range through a more intimate knowledge of the area (Csikszentmihalyi and Rochberg-Halton 1981). Teenagers are attached to a rapidly growing array of indoor and outdoor places. A specific characteristic of PA in adolescents is that they "seek out refuges where they can be alone or with a few friends . . . where they can look out but be invisible for the rest of the world" (Chawla 1992, 82). In the rare studies on PA in early and middle adulthood, scientific interest has focused on the different role of places and favorite objects as externalized symbols of identity (e.g., Hormuth 1990).

PA in old age has drawn more empirical interest (Rubinstein and Parmelee 1992). As people

age, not only do the number of experienced and cognitively represented places increase, but the immediate home environment and the close neighborhood become more important again, both in terms of the time people spend at home, and in terms of the place where most of the daily activities occur. Observational data have shown that a tendency for environmental centralization exists in elders, especially around the most favored places at home. The adaptive potential of this lies in maintaining and enhancing control over the immediate environment and thus establishing areas that may be called control centers, or living centers (Lawton 1985, Rubinstein and Parmelee 1992). Typically, these are the most comfortable places in the home that also afford a good view outside, as well as allowing the manipulation of many necessary and preferred things close at hand. However, it is also important to mention that an increasing number of today's elders are far from being homebound. Furthermore, an increasing portion of older adults decide to relocate voluntarily, many of them not because of basic needs to stay independent, but to fulfill preferences and wishes and thus to actively seek for new PA options in the years of life remaining (Oswald et al. 2002).

Functions and Structure of Place Attachment from a Life Span Perspective

Environmental biographies, in-depth qualitative studies, and questionnaire data, mostly psychological and anthropological in nature, show some convergence as far as basic functions of PA are concerned. Based on data for children as well as persons in their middle and late adulthood, Claire Cooper Marcus (1992) was able to extract three main functions of PA: (1) gaining cognitive and behavioral control over space; (2) manipulating, molding, or decorating space in order to create a setting of physical comfort and well-being; (3) perceiving continuity with significant places and people of the past. In addition, a relationship between privacy regulation and PA was found. Exploring the meaning structure underlying PA revealed a variety of issues: emotional aspects, such as positive evaluations of the place; cognitive aspects, such as associating one's identity with the place; behavioral aspects, such as the kind of activity one can carry out in the place; and most importantly, social and physical aspects, such as the extent to which the place is connected to one's life

and with other people (Harris, Brown, and Werner et al. 1996). In a study with 150 participants aged from 2 to 102, several common aspects of PA to home were identified throughout the life span, for example, safety, rootedness, joy, privacy, togetherness, recognition, and control (Zingmark, Norberg, and Sandman 1995).

In order to measure PA in a more rigorous manner, attachment scales have been developed (e.g., McAndrew 1998). The use of one such PA questionnaire with 543 urban residents (14–93 years old) led to the identification of three different emotional types of bonding to the home environment, associated with safety, arousal, and autonomy (Fuhrer and Kaiser 1992). While safety, according to Urs Fuhrer and Florian Kaiser, is related to familiarity, arousal can be triggered by the novelty or strangeness of places. Autonomy is primarily related to the perceived behavioral competence of an individual within a place. Further analyses have revealed that high familiarity and low arousal is the most typical PA pattern in old age, characterized by lengthy residence in the same place and frequently by living alone. Women of all ages perceived significantly higher amounts of safety compared to men (Fuhrer and Kaiser 1992).

The geographer Graham Rowles applied Edward Relph's concept of insideness (1976) to PA in old age. Based on in-depth interviews, he developed the core concept of insideness of place (Rowles 1983). Whereas social insideness, or immersion, arises from everyday social exchange and living out social roles within a neighborhood over a long period of time, physical insideness, or intimacy, is characterized by familiarity with the setting itself and with the routines of living in it; that is, with that kind of familiarity one can be said "to wear the setting like a glove" (Rowles 1983, 114). The most important aspect of insideness in old age seems to be autobiographical insideness, which "stems from the temporal legacy of having lived one's life in the environment. . . . Place becomes a landscape of memories, providing a sense of identity" (Rowles 1983, 114). Basing his work on anthropological case studies, the American anthropologist Robert Rubinstein developed a model of psychological processes linking person to place. According to his terminology, social-centered processes include social norms and relationships to other persons, person-centered processes concern the expression of one's life course in features

of the environment, and body-centered processes include the “ongoing relationship of the body to the environmental features that surround it” (Rubinstein 1989, 47). Another study in this tradition of research (Oswald and Wahl 1992) was able to add to our understanding of PA in later life by taking the competence level of elders into consideration. Whereas healthy participants were more appreciative of the location, access, and amenity aspects of the home, impaired participants emphasized the cognitive-evaluative and biographical significance of the home. Concerning behavioral, emotional, and social aspects of PA, no differences were found.

Conclusion

PA reflects an important facet of life span development, particularly when the critical role of socio-physical environment for development is acknowledged. Framed within a developmental perspective, the concept of PA elucidates the dynamic flow of affective, cognitive, and behavioral bonding to sociophysical settings from birth to death. Among the future research tasks in the PA area is the better integration of this research stream with developmental and personality research, which will enrich that research and further our understanding of place attachment as well.

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See also: Aging and Technology; Child and Family Poverty; Living Arrangements for Elders

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Play and Play Partners

All human beings and even nonhuman primates, as well as many other animals, play. Theories of play focus on the functions of children's solitary play and play with peers (e.g., Freud 1959; Piaget 1952) and underscore the importance of adults and other social partners in play that supports child development (e.g., Vygotsky 1962). Broadly speaking, play serves functions in five major domains of development: psychological, mastery, cognitive, social, and cultural. Different play partners have unique characteristics and play styles that support these different functions at different developmental periods in childhood.

In the psychological domain, play is a medium through which children regulate arousal, express a range of emotions, and resolve conflicts and traumas. For example, partners who respond appropriately to children's need for more or less stimulation help contribute to children's self-regulation capacities. Play serves to expand the range of emotions that children express by enabling them to experience positive feelings, such as fun, excitement, and pleasure, as well as negative emotions, such as anger, sadness, and fear (Singer 1995). The mastery functions of play are those that help children achieve a sense of self-efficacy and motivation to persist toward goals. Pretend play enables children to master novel and complex environments in a small-scale form (Singer 1995). Empirically, play sophistication is associated with greater attention span and persistence on problem-solving tasks (Tamis-LeMonda and Bornstein 1996).

In the cognitive domain, play enables children to acquire information and skills, engage in creative and divergent thinking, and advance in representational abilities. The social functions of play are those that foster children's understanding of others' feelings, intentions, and perspectives, thereby enhancing successful social interactions and relationships. In the social domain, play sup-

ports the development of reciprocity and intersubjectivity, both of which provide a foundation for mature forms of social understanding. Last, in the cultural domain, play is a vehicle for the transmission of social roles and cultural values. Role-playing gives children the opportunity to practice behaviors they will need as adults in their society, and role-playing helps children to first understand and then acquire societal standards and beliefs (Damon 1983). Social play helps children learn traditional ways of thinking and behaving, while also inspiring cultural innovations.

The psychological, mastery, cognitive, social, and cultural functions of play are all supported by adult caregivers, siblings, and peers. Not surprisingly, the role of adult caregivers in each of these play functions is paramount during infancy. Mothers are more effective than siblings and peers at all ages in regulating children's emotions by titrating levels of stimulation and containing emotions in play. However, after the first year, play interactions with peers and siblings increase in prevalence and may be more intense and affectively charged than those with parents. The cognitive skills emphasized by parents are different from those generated in sibling and peer play: Parents are more likely to convey information about the real world and encourage conventional object use and convergent thinking. Parents use play as a vehicle for learning, whereas siblings and peers are motivated by play itself.

The play partners of infants and toddlers vary across cultures, and these differences themselves communicate information about cultural norms concerning the role of peers and adults as well as the role of the child in the larger society. In societies in which adults frequently engage in play with children, social roles and cultural values are transmitted to children from the first days of life. During infancy, peers are less likely to directly transmit specific social roles or values through role-playing, both because of a lack of competence in acting out social roles and because of a lack of knowledge of social and cultural values. By 2 to 3 years of age, peers' and siblings' contributions to certain play functions (e.g., divergent thinking, perspective taking) begin to outweigh those of adults. Thus, different play partners have unique characteristics and play styles that support different functions at different developmental periods.

Sibling play has certain characteristics that are similar to adult-child play and others that are sim-

ilar to peer-child play. Like adults, older siblings normally possess more expertise than their younger siblings and therefore are capable of modeling higher levels of play. Unlike caregivers or older siblings, peers are playmates who share similar developmental levels and relate to each other horizontally without an established hierarchy. Play partnerships between peers foster more sustained attention, pleasure, and excitement during joint episodes of physically active play than do adult-child partnerships. Different social partners contribute in unique, and often complementary, ways to children's psychological, mastery, cognitive, social, and cultural advances in play (Bornstein and O'Reilly 1993).

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See also: Freud, Sigmund; Friendship across the Life Span; Parent-Child Synchrony; Vygotsky, Lev

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Policy Education for Families and Children

The policies that influence the lives of children and families are often not informed by scientific knowledge about human development in the context of families and communities. Outlined here

are some ways that policy makers, and advocates who seek to influence policy makers, can be informed about human development in its ecological contexts.

Policy education options include briefing forums and briefing reports (Barratt 2001). Policy education can summarize research-based knowledge and offer policy options to bridge the gap between the knowledge of social science researchers and the needs of policy makers (Bogenschneider 1995, 2002). Rather than advocate for a specific piece of legislation, or support a specific position, the educational approach provides factual information and policy options. This approach is particularly suitable for educational institutions and nonprofit organizations whose credibility depends upon their perceived neutrality and perceived commitment to presenting factual, unbiased information.

Family Impact Seminars

Family impact seminars are nonpartisan educational forums for current policy makers that have been used at the federal, state, and local levels to infuse research-based information into policy decision making. These seminars offer one model of policy education. The federal family impact seminars were designed by Theodora Ooms in 1976 to bring a family perspective to federal policy making. This led to family impact seminars at the state level, beginning in Wisconsin in the early 1990s, and expanding to other states in 1999 with the creation of the Policy Institute for Family Impact Seminars at the University of Wisconsin.

Family impact seminars, as an example of policy education at the state level, use a legislative advisory committee to select topics of emerging legislative interest. The idea is to select topics on which minds are not already made up, on which there is research information, and on which legislative action may be happening in the next six months or so. Examples of topics covered in the family impact seminars in Michigan include "Child Care and Education," "Moving Families out of Poverty," "Promising Approaches for Reducing Youth Violence," "Children with Incarcerated Parents," and "Prostituted Teens."

For each topic selected by the legislative advisory committee, a seminar is organized for policy makers in the legislative and executive branches of state government; representatives from advocacy

organizations and state-level nonprofits also take part. National experts who can speak clearly in plain English about research-based information are brought in for a formal presentation and for informal discussions. Knowledge of the social science behind issues is an essential component of effective change (Kirwan 2001).

In addition to the informational forums of the family impact seminars, an extensive briefing report is prepared (for the Michigan Family Impact Seminar briefing reports, see www.icyf.msu.edu/publicats/briefs.html, Institute for Children, Youth, and Families), which includes a short executive summary for use by busy policy makers. This approach makes the information available to a broad audience statewide over a period of a few years.

Spotlight on Applied Research

“Spotlight on Applied Research” is the general title of a series of publications that offer an example of another approach to policy education (Barratt 2001; Michigan Nonprofit Association 2002). The Michigan Public Policy Initiative, sponsored by the Michigan Non-Profit Association and the Michigan Council of Foundations, has created this series of publications to inform the nonprofit sector, including government, about social science research that can affect policy and improve practice. A process for developing these briefing reports has emerged to assure that the information is accurate and useful.

As a first step in developing one of these briefing reports, scholarly research on the topic is reviewed by faculty and students—either graduate students or advanced undergraduate students. In some cases, information is also sought at this point from practitioners who work in the community. A draft review of this scholarly literature is prepared in lay language, and sections are developed that outline the implications of the research for parents and other citizens, for communities, for practitioners such as service providers, and for policy makers.

Review by scholars is used at this point to assure the accuracy of the information. In addition, focus groups are conducted to assure its relevance and usefulness. Legislative aides provide a policy-maker perspective, and citizens provide a family and community perspective. For example, in a publication addressing the risks to children of multiple moves, temporary residents of a homeless

shelter were interviewed to obtain practical suggestions from families who have moved a lot. Each of these perspectives adds ideas that are useful in outlining the implications of the research.

Other Approaches

A policy education approach can be contrasted with an advocacy approach, where the goal is to promote a particular perspective (Kirwan 2001a). Administrative advocacy can include working for middle-level and low-level policy change through work with, for example, agencies that administer policy. Legislative advocacy targets formal policy change and possibly the passage of specific legislation. Media advocacy aims to increase the salience of an issue in the minds of citizens and policy makers.

Both policy education and advocacy efforts benefit from building long-term relationships with policy makers and those who can get messages to policy makers (Askew 2001; Kirwan 2001b). Through those relationships, it is possible to convey both the passion about the issue and the information that can guide decision making.

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See also: Housing Policy; Participatory Action Research; Public Policy and Early Childhood

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Political Participation by Young People

Historically, political participation has been defined as participation in the elective or administrative processes of government, whether at the local, state, national, or even international level. Over time, this definition has broadened to include active involvement in public and private organizations and movements that work for the betterment of society (Flanagan 2000; Yates and Youniss 1998). At a minimum, for those over the age of 18, political participation means simply voting. But it also includes participation in campaigns, running for office, and serving, either in an elected or appointed capacity, in government. There are a number of instances of young people running for and winning office, primarily at the local level, and many towns have seats reserved on municipal boards for appointed high school representatives. Historically, many young people, even under the age of 18, have participated in campaigns, actively volunteering for their favorite candidates or causes (Rosenthal, Feiring, and Lewis 1998). More broadly, young people can become active in causes that include, but are not limited to, the environment, world peace, health, animal welfare, and fair housing.

Governmental agencies supporting political participation include the Peace Corps, AmeriCorps, the Freedom Corps, and, specifically for older teens and young adults, City Year programs around the United States. In addition, many non-governmental, community-based organizations are specifically designed to instill in young people a commitment to the perpetuation of civil society and to help them become active, engaged citizens (Lerner 2002). Political participation is a necessary component of the rights and responsibilities of citizenship. Through political participation, people both young and old are given the opportunity to make their communities stronger and to contribute to the perpetuation of civil society (Flanagan 2000).

When defined in the traditional sense of engagement in government affairs and elections, most data seem to show that many Americans are increasingly less likely to participate politically

(Youniss et al. 2002; Smith 1999; Torney-Purta 1990). Young people in particular appear to have low levels of traditional political participation. For instance, among people under the age of 29, the rate of voting has fallen over the past three decades from 50 percent to less than one-third (Gergen 2001, 60) and the lowest rate of voting is among people under the age of 25 (Rosenthal, Feiring, and Lewis 1998). When political participation is defined more broadly to include all activities that foster civic engagement, political participation is much more prevalent and is often a regular part of the everyday lives of young people (Youniss et al. 2002; Flanagan 2000; Yates and Youniss 1998).

In the United States, one of the markers of having reached adulthood in the political sense is attaining the right to vote. Young adults are granted the right to vote when they reach the age of 18. However, this is not always their first experience with the political process. Often, young people have been involved in politics or civic engagement in many ways prior to reaching the age of majority. This involvement can include participating in school government or political campaigns and being active in groups that attempt to influence or change policy locally, nationally, or internationally, such as environmental organizations or peace organizations. Such young people often believe in the importance of civic involvement and in the importance of their role as citizens (Rosenthal, Feiring, and Lewis 1998). Using the broader definition of political participation, it is clear that young people are very much involved, and their involvement not only benefits society, but it is an integral part of their search for identity. Their civic experiences can form the basis for their understanding of who they are as people within that society (Yates and Youniss 1998).

As young people get older, they may become more interested in political participation as they begin to settle in a community and take on the roles and responsibilities of an independent adult (Rosenthal, Feiring, and Lewis 1998). According to Erikson's theory of psychosocial development, during adolescence young people experience a crisis, as they strive to overcome a sense of role confusion or identity diffusion and develop an adult sense of identity (Lerner 2002). In order to resolve this conflict, the adolescent must choose a role in society. According to Erikson, a key aspect of identity formation during adolescence is the develop-



Adolescent in political protest (Skjold Photographs)

ment of political commitment (Yates and Youniss 1998). During this time, how an adolescent views herself and her role in society is a way of ascertaining the extent to which the young person identifies with the common good of society (Flanagan et al. 1998). Any role that a young person chooses comes with an ideology, a prescribed set of attitudes, values, and behaviors (Lerner 2002). This ideology becomes a basis for the extent to which a person feels connected to society and thus the extent to which she participates politically. Thus, a young person's current and future civic and political involvement is overwhelmingly influenced by the extent to which the adolescent adopts an identity and a role that contributes to the public interest (Flanagan et al. 1998).

The benefits of young people's political participation accrue not just to society, but also to the youth themselves. Whether they are answering phones in a campaign office, rallying for a cause at a state capital, or helping to build a house for a low-income family, young people, by doing, can learn important skills in communication, cooperation, leadership, or even trade skills for future employment. Above all, they are learning how to participate, effectively and appropriately, in the democratic process, which is vital for the preservation of a free society.

Given the importance of political participation for both young people and society, it is important to understand how people are involved and the factors that influence political participation. For example, there are differences in participation based on both gender and socioeconomic status. Research has shown that men are more interested in politics than women. However, this conclusion may be based on a more narrow definition of political participation than that given here (Flanagan et al. 1998). In addition, research shows that wealthy and middle-class citizens are more likely to be involved politically. This result may be due to the fact that there is more time available to them that does not have to be spent working. It has also been shown that the people who do participate politically do so out of interest for the common good and the betterment of society, and not out of self-interest (Flanagan and Sherrod 1998).

Historical context also influences the rate of political participation (Flanagan 2000). In times of social unrest or when democracy feels threatened, there is more interest in political participation, atti-

tudes, and identities (Flanagan and Sherrod 1998). In addition to influencing others, this political participation influences the identity of the people involved as well. For example, research on participants in the civil rights movement has shown the importance of this experience in shaping their identity. These people saw themselves as being able to change history, as being committed to social progress for everyone, and they saw themselves as being able to shape the political and moral attitudes of the country (Yates and Youniss 1998; Yates and Youniss 1996). There is also evidence that civically engaged people tend to continue this political participation and civic engagement into adulthood (Roach, Sullivan, and Wheeler 1999; Yates and Youniss 1998; Yates and Youniss 1996).

Adolescence is a time when young people are exploring their roles in society as they become more independent of their families. Sometimes the right to vote influences a young person's interest in politics, but often the interest exists prior to that, as young people are involved in service activities, political volunteering, or other instances of civic engagement. It is clear however, that civic involvement increases as young people become independent citizens in communities and as they gain a better understanding of who they are as part of that community. Preparing young people to be future civic leaders is necessary for a continued, stable political structure. Given the importance of civic involvement and political participation for the continuation of civil society, it is clear that communities should provide ample opportunities for engagement. These opportunities for civic involvement should include giving young people meaningful and increasingly responsible assignments to enable them to best prepare themselves for their roles as the leaders of the next generation. It is important that young people be provided with ample opportunity for political involvement, for modeling political behavior, and for reflection on what it means to be a member of a collective society (Youniss et al. 2002; Rosenthal, Feiring, and Lewis 1998; Flanagan and Sherrod 1998). Life in a free society includes many privileges, but it also entails responsibilities to that society and to one's fellow citizens. Without each citizen's involvement, a free society ultimately cannot be sustained. It is therefore incumbent on older citizens to encourage and nurture young people in civic life as they begin to approach the age of majority.

Families can have an influence on the political participation of young people. The values that the family passes on to the next generation will influence the political socialization of that generation (Flanagan 2000). If the family has an ethic of social responsibility, it is likely that the ethic will be passed on to the next generation (Flanagan and Sherrod 1998; Flanagan et al. 1998). In addition, young people are more likely to volunteer if their family members have a history of volunteering (Rosenthal, Feiring, and Lewis 1998). Thus, the political and civic participation of youth in large part depends on the family ecology to provide them with the model of participation.

Schools have the ability to influence the political participation of young people; they are mini-communities themselves, which come with various rights and responsibilities expected of its citizens. Attending school is an obligation, so young people must learn to get along in the school community regardless of whether there are disagreements about how things are done. This setting allows young people to understand the rights and responsibilities of citizenship in a safe setting, and they can learn how to negotiate solutions to problems (Flanagan et al. 1998). The classroom itself can also provide an opportunity for developing political and civic involvement and identification with the common good. A recent study indicated that the use by teachers of democratic practices in the classroom is associated with greater understanding of democracy on the part of students and a greater likelihood that students intended to vote (Youniss et al. 2002).

Mass media also have a pervasive influence on political participation. The various media have an everyday impact on the lives of young people (Lerner 2002). Whether in the form of television, radio, the Internet, or other media, young people are faced with a proliferation of messages every day, messages that can have a direct impact on the political and civic views of citizens. Since a free society demands an informed citizenry, responsible reporting should include raising issues of civic importance, exposing young people to different political views, and sending messages to young people (and to all people) about the importance of their involvement in the civil and political life of our free society (Youniss et al. 2002). The Internet in particular is a useful tool for civic knowledge, since it allows people to communicate readily with people

around the world and allows immediate access to political information.

In order for young people to be fully engaged in the civic and political lives of their communities, their strengths and power must be recognized. Their ecology, including the school, the family, and the media, should see young people as having the ability to contribute productively to their communities. If young people are treated as full members of their communities and given a voice and input in the policies and programs that affect them, then they will develop a sense of loyalty and obligation to those communities and will be more likely to be politically and civically engaged as adults (Flanagan and Sherrod 1998). To effectively allow young people to develop politically, they should be treated as much as possible as full citizens (especially prior to the age of 18) and given opportunities to participate in the political actions of their communities. This type of full involvement in their community will allow them to develop important civic skills and will give them a safe place to deal with the various issues facing them, including issues of race, sexuality, gender, and class (Roach, Sullivan, and Wheeler 1999).

An excellent way for young people to get involved in their communities and to develop the political and civic skills necessary to be active citizens is through service and volunteer opportunities. Through volunteering, young people are given the opportunity to relate to a larger group of people outside of themselves; volunteering can link them to other people in their community who are different from them. This can allow them to get a sense of the greater good and can allow them to identify with a larger social benefit and with the principles and values that exist in their community (Flanagan et al. 1998). Community service can thus provide them with an opportunity to think about the politics in their community, to develop their own political ideology, and to see themselves as effective in enacting community change. This service will also bring about a greater connection to the community and will help them define their political beliefs in adulthood (Yates and Youniss 1998).

Research has shown that volunteer service work during adolescence is related to political behavior as an adult, including voting behaviors and continued civic involvement (Youniss et al. 2002). Through volunteer opportunities, young people

are exposed to different political and moral values in an applied setting. They can then become part of a social identity that has both personal and historical significance (Youniss et al. 2002).

One particular type of volunteer activity that young people can be involved in is civic activism. Civic activism is a way for young people to try out their role as political actors and make changes in their communities while at the same time developing leadership skills. It is an approach that sees young people as effective in addressing problems and concerns in their communities and gives them the opportunity to make the changes rather than relying on adults to make changes for them. Civic activism is particularly effective in engaging young people who for various reasons may feel disenfranchised from traditional volunteer programs. Through civic activism, young people can struggle with issues of class, gender, sexuality, and race (Roach, Sullivan, and Wheeler 1999).

Whatever type of community organization a young person is involved in, there are positive impacts for both the person doing the service and the people or communities receiving the service. Service allows young people to develop and practice skills such as empathy, leadership, and connection to civil society. Service also helps young people develop their political identity and contributes to the likelihood that they will be participating citizens as adults. In order for civil society to continue, communities must foster a sense of connection and belonging so that citizens will voluntarily work to bring about positive changes in themselves, their families, and their communities.

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See also: Adolescent Identity Formation; Community Youth Development; Community-Based Organizations; Erikson, Erik Homburger; Extracurricular Activity Participation; 4-H Youth Development; Participatory Action Research; Self-Efficacy; Youth Development; Youth Mentoring

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Positive Development

Positive development focuses on attributes and behaviors that constitute strengths and virtues of development (Snyder and Lopez 2001). Positive developmental science has direct effects on understanding and promoting individual strengths as well as the practice of civic virtues. Positive development science has indirect effects on the prevention of illnesses; human strengths buffer against disorder, deficit, and disability.

William Bennett (1993) enumerated a set of desired outcomes for youth that included perseverance, faith, friendship, courage, responsibility, and compassion. The Search Institute (Benson 1993) identified a set of key internal assets, such as commitment to learning, positive values, social competencies, and positive identity. Richard Lerner, Celia

Fisher, and Richard Weinberg (2000) identified “5 Cs” of positive development: competence, confidence, connections, character, and caring.

More generally, three domains of positive development can be identified, each with a series of closely operationalized elements (Bornstein et al. 2002). Elements of positive development are found in physical, social and emotional, and cognitive realms of growth over the life course. The elements enumerated in each domain are not exhaustive, but represent a core set of essentials that help to define that domain and positive development overall. Positive development in the physical domain includes good nutrition, health care, physical activity, safety and security, and reproductive health. These are obvious requisites to a healthy life. The social and emotional domain of positive development encompasses an easy temperament, emotion understanding and regulation, coping and resilience, trust, a mature self-system, good character traits, and positive social relationships with parents, siblings, and peers. These essentials include multiple elements related to social intercourse. The ability to think, to communicate thought, and to make use of the products of thought in everyday life are essential to positive cognitive development. There are many specific elements within the cognitive domain, including information processing and memory, curiosity and exploration, mastery motivation, intelligence, problem solving, language and literacy, educational achievement, moral development, and talent.

No formula exists to promote positive development. Developmental science points to three general origins and motivators. First, children contribute directly to their own positive development. Second, children contribute to their positive development indirectly by the influence they exert on others, notably their caregivers. Beyond stability in children and child effects, environment and experience contribute to children’s positive development, and although many factors influence the positive development of children, parenthood is the likely final common pathway to childhood development and stature, adjustment and success. Parents influence positive development via many direct and indirect means. Positive parenting beliefs include perceptions about, attitudes toward, and knowledge of all aspects of parenting and childhood. Positive parenting behaviors are the tangible experiences parents provide children.

Mothers and fathers indirectly influence their children’s positive development in several ways as well. First, by virtue of their influence on one another, for example by marital support and communication. Second, parents coconstruct their child’s environment in terms of the ways they provision, organize, and arrange their child’s home and local developmental settings. Third, parents are citizens. Through their politics, parents influence the social health or social toxicity of the environments their children inhabit.

The discipline of positive development is still critically in need of development itself in terms of defining positive outcomes, enhancing research on positive constructs, undertaking longitudinal assessments of their value, and policing the psychometric adequacy of positive psychological constructs.

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See also: Community Youth Development; Parent-Child Synchrony; Parenting Styles; Resiliency; Search Institute; Social Support; Youth Development

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Pregnancy and Prevention

See Adolescent Pregnancy and Prevention

Prenatal Decision Making by Adolescents

Compared to all other Western industrialized countries, the United States has the highest adolescent pregnancy rate. Four out of ten adolescent females in the United States will become pregnant at least once before they reach the age of twenty. More

than one million adolescents become pregnant unintentionally each year, thus forcing pregnant adolescents to make a decision about whether to have an abortion, keep the child, or give the child up for adoption. Currently, half of the adolescent pregnancies each year end in birth, and 30 percent end in abortion (approximately 15 percent end in miscarriage).

The decisions an adolescent female makes once pregnancy has been confirmed have far-reaching consequences for the teen mother and her child. For example, given the stress of caring for a child while often simultaneously holding a job, teen mothers are less likely to complete high school and thus find it more difficult to attain stable jobs with adequate salaries. Teen mothers are also more likely to be dependent on welfare, to have more children in close succession, to be on a limited income, and to abuse or neglect the child. Negative social outcomes of adolescent parenting include higher divorce rates, strained parent-adolescent relationships, and loss of connection with nonparent peers. The specific negative consequences for adolescents who have had an abortion or given up their child for adoption are unknown.

There are also negative consequences for the children of teen parents. Children of teenage mothers do not fare as well as do children with older parents on indicators of health and social and economic well-being. Physically, children of teen mothers tend to be at a disadvantage from birth because of low birth weight, occasional mental retardation, and physical prematurity. Low birth weight, an important contributor to infant mortality and future health problems, is more common among infants of teenagers than among babies born to women in their 20s. The youngest mothers are the most likely to bear underweight babies. Babies born to young mothers are more likely than those born to older mothers to have health problems during childhood and to be hospitalized. Unfortunately, depending on the socioeconomic status of the mother, the children often do not receive sufficient health care. Further, children of teenage mothers consistently score lower than children of older mothers on measure of cognitive development. This is less a result of the young age of the mother than of the fact that the younger teen mother tends to be a single parent with low educational attainment. Unfortunately, rather than declining over time, the educational

deficits of children born to adolescent mothers appear to accumulate, causing these children to fall further behind in academics as they grow older.

So, how do teenagers make decisions concerning whether to have an abortion, keep the child, or put the child up for adoption? Prenatal decision making in adolescents is influenced by a myriad of interrelated factors, including parental and partner involvement, socioeconomic class, available health services, age of the adolescent, and legal considerations.

Age of the Pregnant Adolescent

Age tends to be one of the most influential factors in prenatal decision making. The younger a woman is, the less likely she is to receive prenatal care in the first trimester of her pregnancy. This lack of early prenatal care occurs across racial and ethnic groups. In general, younger teen mothers tend to delay making any decisions about their pregnancy longer than older teen mothers. Among pregnant women under age 18 whose male partners are also under 18, 61 percent have abortions, compared with 57 percent of those whose partners are 18–19, and 33 percent of those whose partners are aged 20 and older. Clearly the older a pregnant teen's partner is, the more likely she is to continue with the pregnancy.

Socioeconomic Status and Racial/Ethnic Background

Socioeconomic status (SES) also plays an important role in prenatal decision making in adolescents. Eighty-three percent of females aged 15–19 who gave birth in 1998 were poor or low-income mothers. Teenagers who come from poor families or who are Black or Latina are less likely to have an abortion compared to teenagers who are higher SES or White. Teens with more educated parents are more likely than those with less educated parents to end their pregnancies in abortion. Parental expectancy of higher education for their teen also deters pregnant teens from continuing with their pregnancies.

Support Systems

Adolescent mothers are more likely than other teenagers to come from single-parent households. The vast majority of these teens are living with their mothers with little or no paternal involvement. This trend is even stronger in low-income,

Latino, and Black families. Unmarried teens who choose to continue their pregnancies to birth tend to have very involved maternal figures. For these teens, the views and beliefs of their mothers play a great role in their prenatal decision-making. Willingness of the teen's parent to help in child rearing and to be a source of financial and emotional support leads to a higher acceptance of pregnancy status and less chance that the teen will have an abortion. Parents of teen mothers are more likely to be willing to provide emotional and financial support to a teen couple than the parents of the teen father.

The majority (87 percent) of pregnant teenagers are not married, with variation by age and race/ethnicity, with more Black (92 percent) and Latina (78 percent) pregnant teens being unmarried than teens of other racial/ethnic groups. The younger a teen mother is, the less likely she is to be married. Teen mothers who have actively supportive sexual partners are more likely to allow the fathers of their children to take part in prenatal decision making. Teens who foresee a future with their fetus's father are more likely to heed paternal desires for the fetus to be aborted or for the child to be given up for adoption.

Health Insurance

The ability for an adolescent to pay for an abortion consistently rates high as an influence in the decision to have an abortion or continue with the pregnancy. Adolescents are less likely to be insured than any other age group. At the same time the chances that a teen is covered by a managed health care organization have increased significantly in the last five years. Teens who are covered by Medicaid for the cost of their health care are considerably less likely to have abortions. This trend is due, in part, to the fact that most states do not pay for abortion services under Medicaid, but all states pay for prenatal care and childbirth. The average cost of an outpatient first-trimester abortion is \$250. Medicaid also offers pregnancy and parenting classes, which provides the teens with a support system to help deal with their pregnancy. Five states (Idaho, Kentucky, Missouri, North Dakota, Rhode Island) have laws that prohibit insurance coverage for abortion unless a special premium is paid. Seven states have laws that prohibit insurance coverage for abortion in certain circumstances when public funds are used or public employees are insured (Colorado, Illinois,

Massachusetts, Nebraska, Pennsylvania, Rhode Island, Virginia). Two states exclude abortion coverage from state health care programs (Illinois, Minnesota).

Legal Considerations

Adolescents' rights to make decisions concerning their pregnancy outcomes, as well as their actual prenatal decisions, are greatly restricted by federal and state laws. The competence of adolescents to make decisions about their own health has been debated for years. Some researchers and policy makers claim that adolescents are for the most part as competent as adults and should be able to provide their own consent for sensitive and often confidential health services. Others argue that adolescents are not as capable of making decisions or that decision-making competence during adolescence is situation-specific. Unfortunately, these policies and laws have been developed without strong evidence concerning the age at which one is competent to make decisions.

The laws pertaining to the competence of teens to make health-related decisions varies from state to state. States are responsible for determining whether and when teens need parental consent for health services. Some states have stricter guidelines than others. For example, some states have paternal partner agreements and some do not address partner rights at all. Adolescent patients of minority age in many states have legal rights protecting their privacy regarding the diagnosis and treatment of pregnancy, and mandate that information should not be offered to anyone, including the patient's parents, without the patient's permission. Sixteen states, as well as Washington, D.C., have never repealed restrictive laws ruled unconstitutional by *Roe vs. Wade*. Forty states and Washington, D.C., have laws banning most post-viability abortions. At least eighteen states have passed laws prohibiting partial-birth or "dilation and extraction" abortion procedures. Ten of the fifty states have unenforceable laws requiring spousal consent or notice. Thirty-eight states have laws that prevent a minor from obtaining an abortion without parental consent or notice. Nine states have parental consent laws on the books that are not enforced. One state requires counselors to discuss the possibility of parental involvement. Eighteen states have mandatory waiting periods; eleven of these states currently enforce their waiting period laws.

Thirty states have an informed consent law for abortion.

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See also: Adolescent Pregnancy and Prevention; Low Birth Weight Infants; Prenatal Development and Care; Sexual Abstinence; Adolescent Mothers

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Prenatal Development and Care

The first nine months of life, from conception to birth, are probably the most crucial for setting the course for each child's development (Widerstrom, Mowder, and Sandall 1997). During the prenatal period, the infant's brain, organs, and body are developing. Factors both internal and external to the pregnant woman and developing fetus can impact future growth and development, and fathers can play a role during pregnancy (Horn 2000).

The health and behavior of pregnant women, as well as exposure to toxic substances in the environment, can have a significant impact on fetal development. To help prevent negative outcomes, pregnant women should avoid substances that can harm the developing embryo, supplement their diet with folic acid, and begin seeing a health care provider early in the pregnancy (American College of Obstetricians and Gynecologists 2000). Pregnancy is also an important time to begin preparing to become a parent—regardless of how many other children are in the family; each time a new member is added to the family, family dynamics

change. Pregnancy and the associated changes can be very stressful for some women. Getting help with the pregnancy and issues related to parenting can relieve some of this stress (Cohen and Slade 2000).

Each stage of pregnancy brings about new growth and development for the fetus. Each phase of pregnancy brings unique critical periods for development. A critical period is a specific time in which a specific organ or body part is most susceptible to damage from teratogens, as harmful substances that can negatively affect development are called (Berger 2000). What are these teratogens? Alcohol, tobacco, and drugs (both legal and illegal) have the potential to interfere with the normal processes of fetal development. Even exposure to smoke from tobacco smoked by other people can have a negative impact on fetal growth and development. Prescription drugs and drugs that can be bought over the counter (without a prescription) and herbal remedies also have this potential.

Fetal development can also be affected by infections such as toxoplasmosis from cat feces or undercooked meat, rubella, and illnesses such as the flu (American College of Obstetricians and Gynecologists 2000). Contaminants in the environment such as lead, DDT, dioxin, and PCBs also may interfere with normal development (American College of Obstetricians and Gynecologists 2000; U.S. Food and Drug Administration 2002). These toxins may be present in some work environments and in some foods. For example, fish caught in polluted waters can have dangerously high levels of toxins such as mercury, which can cause mental retardation (U.S. Food and Drug Administration 2002). Current information about potentially harmful substances may be obtained from the March of Dimes, the U.S. Food and Drug Administration, or the U.S. National Institutes of Health, at the Web sites given in the References.

Maternal nutrition is also an important factor during the prenatal period (American College of Obstetricians and Gynecologists 2000). In particular, adequate intake of folic acid beginning one month before conception has been proven to decrease the incidence of neural tube defects, a cause of mental and physical disabilities. Because optimal early development depends on the presence of adequate folic acid, it is recommended that all women of childbearing age take folic acid supplements or multivitamins with folic acid.



Pregnant woman doing yoga (Elizabeth Crews)

Research consistently indicates that care by health care providers, including physicians, nurse practitioners, and midwives, is associated with more positive pregnancy outcomes, reduced likelihood of premature delivery, and better maternal health (American College of Obstetricians and Gynecologists 2000; United Nations Children's Fund 2002). Over the course of pregnancy, health care providers check fetal growth, monitor maternal blood pressure, and check for other conditions that may impair fetal health. Because of the crucial nature of this care, many states cover the costs of prenatal care for women without health insurance. Some communities have programs for reaching out to pregnant women to assure medical care by offering transportation, care for siblings, and other supports.

An important aspect of pregnancy is preparation for parenthood (Cohen and Slade 2000). Becoming pregnant often leads pregnant women and their partners to reflect on how they were parented and the kind of parents they hope to be. Parents who were not well cared for during their childhood, for example abused or neglected, are at increased risk of caring for their children poorly. Pregnancy can provide an impetus for women and men to obtain information about parenting and develop networks to support their family. For many women, pregnancy can be a time of great stress, as well as great happiness. Consideration of the psychological status of the pregnant woman and the impact her psychology may have on her developing fetus and future parenting should not be discounted.

Programs in some communities provide support for pregnant women, particularly those at risk for poor pregnancy outcomes or poor parenting. For example, the innovative doula program run by Ounce of Prevention in Chicago makes regular home visits to high-risk pregnant women to teach and provide support. Early Head Start and other programs may begin services by visiting pregnant women in their homes. These programs can help women learn more about having a healthy pregnancy, as well as connect them with community resources that can help once the baby is born. Connecting with others who can be supportive during and after pregnancy may help to relieve stress, and lead to better outcomes for children and their parents (Erickson and Kurz-Reimer 1999).

Pregnant women make decisions that impact the future health and development of their chil-

dren. National goals in the United States that relate to maternal and infant health (U.S. Department of Health and Human Services 2000) include increasing rates of breastfeeding. A significant body of research supports the benefits of breast milk for the health and development of infants; currently 64 percent of U.S. women initiate breastfeeding. Another national goal for pregnant women is to increase attendance by women and their partners at childbirth classes to reduce anxiety and pain.

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See also: Birth; Breast-Feeding and Lactation; Public Policy and Early Childhood

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Psychological Consequences of Childhood Obesity

Children and adolescents are becoming more overweight. At the beginning of the twenty-first century approximately one in four U.S. children between the ages of 6 and 17 are overweight or obese. This figure compares to one in eight children twenty years ago (Troiano and Flegal 1995). Overweight children face a number of problems, including not only poor health but negative psychological effects such as low self-esteem, anxiety, and depression. Causes of obesity are complex, but can be conceptualized as an ecological system (see Davison and Birch for a review). That is, characteristics of the child, including gender, age and genetic susceptibility to weight gain, interact with characteristics of the family environment (i.e., the activity and eating environment that parents create) and the social context in which the child lives (i.e., availability of physical education in schools, accessibility to parks, and the like) to place a child more or less at risk of excessive weight gain. In a similar manner, characteristics of the child, including gender, age and ethnicity, interact with features of the social environment, including general discrimination and parent and peer reactions to child weight status, to determine whether or not an overweight child experiences low self-worth as a result of her weight status.

Obesity and Psychological Well-Being among Children

There are many stereotypes associated with being overweight or obese. People who are overweight are considered lazy, sloppy, unintelligent, lacking in self-control, and emotionally unstable (see Puhl and Brownell for a review of this literature). As a result of such stereotypes, overweight individuals experience discrimination in the education system, the workforce, and the health care system. For example, research shows that overweight adolescents receive only half as many college admissions to elite universities as non-overweight adolescents with similar achievement scores. In addition, people who are overweight, in particular women, are less likely to be hired for a position and are likely to be paid less than non-overweight candidates with similar qualifications. These stereotypes and prejudicial practices are not confined to adults; research shows that children also hold negative

stereotypes toward obesity. When presented with a series of pictures depicting children with differing physical disabilities, including a child with a brace and crutches, a child sitting in a wheelchair, a child with the left hand missing, a child with a facial disfigurement, and a morbidly overweight child, both adults and children consistently rated the overweight child as the least likable.

Though such attitudes mean that overweight children and adolescents grow up in a society that devalues them, obesity stereotypes are likely to have the greatest impact on the psychological health of overweight children by their effect on interactions with significant others, including parents, peers, extended family, teachers and coaches. That is, the general social intolerance for obesity is likely to influence one-on-one interactions between an overweight child and significant others, sending a general message of failure and lack of acceptance. For example, parents may react to their child's weight status by criticizing their child or enforcing adherence to rigorous exercise and diet programs in the hope of promoting weight loss. Such reactions, however, have been linked to low self-esteem among children and may actually exacerbate weight problems (Pierce and Wardle 1993). As with negative reactions from parents, negative reactions by peers such as teasing, bullying and rejection have been associated with lower body satisfaction and self-esteem.

In this context of negativity, it is not surprising that overweight children and adolescents generally report lower body esteem, lower self-esteem, lower perceived attractiveness, and higher rates of depression than their non-overweight peers (Miller and Downey 1999). Low self-worth among children and adolescents is problematic because it is associated with an increased likelihood of school failure, social withdrawal, and binge eating and lack of exercise, which further promote weight problems. Not all overweight children, however, report negative self-evaluations. Factors such as age, sex, and ethnicity, in combination with treatment by significant others, interact to place overweight children more or less at risk of the negative psychological outcomes associated with being overweight.

Gender Differences

Overweight girls are more at risk of low self-esteem and depression than overweight boys. Gender differences in the psychological consequences



Obese child eating (Michael Siluk)

of being overweight are likely to reflect a greater desire for thinness among girls, reflected in the fact that girls express more concern about their weight and diet more frequently than boys (Collins 1991). An increased fixation on weight and a desire for thinness among girls may result from the thin female ideal portrayed in the media and the importance placed on the physical appearance of women, as shown by the fact that unattractive women are judged more negatively than unattractive men. In addition to the pervasive attitude that thin is attractive among women, reactions from parents may exacerbate girls' greater vulnerability to issues of weight-related concerns. Research shows that parents react more negatively to their daughters being overweight than their sons (Striegel-Moore and Kearney-Cooke 1994). Parents tend to rate daughters as fatter than sons, even when boys are on average fatter than girls, and parents reported higher levels of praise for their daughters' than their sons' physical appearance.

Age Differences

Overweight adolescents are more at risk of negative self-worth than overweight children (Miller and Downey 1999). This greater vulnerability

among adolescents is likely to reflect the social and physical transitions experienced during adolescence. Rapid physical changes associated with puberty may lead adolescents to be painfully aware of their bodies and their physical appearance and thus more likely to compare themselves to a predefined physical ideal. Teenage girls are most vulnerable in this situation; puberty is associated with dramatic increases in fatness among girls, which are inconsistent with the waiflike figure that is popular in magazines and on television. Adolescents may also be particularly conscious of their physical appearance as a result of increased romantic relationships, which rely heavily on physical attractiveness, and a greater need for peer approval. A greater need for approval may make adolescents particularly susceptible to weight-related teasing and rejection by peers.

Ethnic Differences

Low self-esteem and poor body image are noted more frequently among non-Hispanic Whites who are overweight than non-Hispanic Blacks (Miller and Downey 1999). This difference may be explained by the fact that Black cultures do not celebrate a thin female ideal; rather the ideal woman is

shapely and voluptuous. In addition, being thin is considered a sign of poor health. These ideals are transmitted to children, such that Black girls and boys report body shape ideals that are larger than those chosen by White children (Collins 1991). As a result, overweight Black children are less likely to be teased and tormented by peers than overweight White children. In addition, parents of overweight Black children are less likely to react negatively to their child's weight status than parents of overweight White children. While the absence of negative reactions from parents is likely to protect a child's sense of self-worth, a lack of awareness of extreme overweight among children is a health concern due to the medical consequences of being overweight. That is, research shows that mothers of markedly overweight Black children frequently do not identify their children as being overweight and are therefore unlikely to seek professional help for their children's weight problems.

Promoting Psychological and Physical Well-Being among Overweight Children and Adolescents

Obesity stereotypes and the negative treatment of overweight individuals are pervasive and threaten the psychological health of overweight children and adolescents. This problem needs to be addressed in multiple contexts. At the level of the school, there should be a systematic intolerance for weight-related harassment and established consequences for children who are disrespectful of such rules and other children. At the level of the family, parents need to be made aware of the negative impact of criticizing children about their weight. That being said, however, the serious medical consequences of childhood obesity mean that weight problems among children cannot be ignored. A more positive approach among parents would be to promote a healthier lifestyle among all family members, rather than targeting a particular child's weight problem. Furthermore, parents could provide unconditional love and acceptance for a child faced with a weight problem and negative reactions from groups outside the family.

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See also: Pubertal Development; Self, Self-Concept, and Self-Esteem

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Pubertal Development

Adolescence is characteristically the period in development with the most rapid change. These changes are brought on by the complex interactions of genes, hormones, and the brain, as well as the environmental factors surrounding the adolescent. The term "puberty" is used to describe the physical and hormonal changes that occur in adolescence. These physical changes are accompanied by changes in cognitive and emotional capacities. Pubertal development typically spans the second decade of life, during early adolescence (ages 10 to 14), middle adolescence (ages 15 to 17), and late adolescence (ages 18 to 20).

Physical and Physiological Changes

Hormones are one of the factors involved in the tremendous physical changes characteristic of puberty. While there are several hormones responsible for increases in height and weight and other physical changes, there are three main types of hormones that undergo change during puberty.

These are the gonadotropins, the gonadal hormones, and the adrenal hormones. There are two types of gonadotropin, a luteinizing and a follicle-stimulating hormone. These are produced by the pituitary gland located at the base of the brain and are responsible for the production of testosterone and estrogen. Estrogen and testosterone are gonadal hormones, that is, produced in the gonads, which are the ovaries in females and the testes in males. Estrogen production mainly takes place in the ovaries and occurs at markedly higher levels in females. Estrogen is responsible for the development of secondary sexual characteristics such as breast development. Testosterone is produced mainly by the testes in males and is responsible for the development of sperm and the penis and testicles. These gonadal hormones begin to rise around the ages of 8 or 9 in girls and 10 or 11 in boys. The final type of hormones to undergo change during puberty are the adrenal hormones, produced in the adrenal glands, which are located on top of the kidneys. These hormones begin to rise approximately around the ages of seven to eight in both boys and girls and are responsible for the growth of underarm and pubic hair, as well as the prepubertal growth spurt (Susman 2001). Though the exact time that these hormones begin to increase in level may vary widely, shortly after they do rise, physical changes begin to occur. At about six months to one year after the hormonal levels change, physical development is evident. It is during this time that a person reaches a new level of adult maturity and becomes capable of sexual reproduction.

For both girls and boys, changes involve the development of primary and secondary sexual organs. For girls, the primary sexual organs are the ovaries, which will release mature ova into the fallopian tubes. If conception does not take place, then menstruation will occur. Menarche, or the first menstruation cycle, typically occurs around the age of 12 for North American girls but can occur as early as 10 and as late as 15 years of age (Berk 1999). The uterus also begins to grow, the vaginal lining thickens, and the pelvic inlet, also known as the opening to the birth canal, begins to grow but at a slower pace. The secondary sex characteristics in females are the appearance of breasts and underarm and pubic hair, the broadening of the hips, and the addition of body fat.

The primary sexual organs in boys are the

testes, which begin to produce sperm, and the prostate, which begins to produce semen. The two come together in the vas deferens. The secondary sex characteristics in males are the enlargement of the testes and scrotum, which typically marks the beginning of puberty for boys and usually occurs about three years before the growth spurt. The appearance of pubic, underarm, and facial hair is noticeable at about the time of the growth spurt. The penis begins to grow during this time as well and will continue to grow for about two more years. About halfway through this growth and development, boys will become able to ejaculate semen and the semenarche—the first ejaculation—will occur, usually spontaneously and at night. In addition, at this time males will experience a change in voice, which is the result of the lengthening of the vocal chords and the expansion of the larynx. These changes in both boys and girls are brought on by the hormonal changes discussed previously. However, while the onset of pubertal development is approximately between the ages of 8 and 13 for girls and between 9.5 and 13 years of age for boys, both can vary in when they will exhibit the physical changes of puberty.

Researchers who have examined how adolescents react psychologically and emotionally to the physical changes of puberty find that both boys and girls react with a mixture of positive and negative emotions—“excited and pleased” as well as “scared and upset” (Brooks-Gunn 1988). These feelings are very much influenced by parental involvement and also by the cultural attitudes toward sexuality and pubertal development.

Psychological and Social Changes

Extensive research indicates that the physical changes of puberty affect the adolescent's mood and relationship with peers and family (Berk 1999; Lerner 2002). The adolescent is also capable of new kinds of cognitive or thought processes. For example, during puberty the capacity for abstract thinking begins to develop. Adolescents are able to think in more general and conceptual ways, a kind of thinking known as formal operations (Inhelder and Piaget 1958). This new way of thinking leads to dramatic revisions in the way adolescents think about themselves, others, and the world around them. Argumentativeness, idealism, criticism, self-consciousness, and self-focusing are all characteristic of the cognitive changes during pubertal de-

velopment. Adjusting to this new way of thinking can be just as challenging as coming to terms with the physical changes of puberty.

Cognitive changes lead to changes in the emotional and social development of adolescents during pubertal development. The physical changes that adolescents experience prompt them to think about who they are, and because of the new cognitive abilities to think in hypothetical terms, they are able to ponder the future and what they want to become. During puberty a mature morality develops, as well as masculine and feminine self-images. Relationships with family members, specifically with parents, change, and there is a strong emphasis on peer relationships. This is also the time in which identity formation begins, which is a major personality achievement and a crucial step to becoming a productive and happy adult.

In searching for an identity, young adolescents turn to social cues for guidance. These social cues come from various sources, including media such as television, magazines and movies. From all these sources young girls and boys learn and come to accept the cultural norms of the society in which they live. The possible negative effects of pubertal development (e.g., dissatisfaction with changes in physical appearance) can impact the psychological and social adjustment of teens. For example, if participation in aggressive sports such as football is expected of adolescent boys and is built on the premise of rigorous body building, adolescents who are not physically mature enough to participate may experience negative psychological effects (Bilalbegovic 2001).

It is important for parents, community leaders, and teachers to keep in mind that adolescents may need the opportunity to communicate concerns they may have about their changing bodies, identity dilemmas, new social relationships with peers, and the social pressures of society. By providing these opportunities, adults can make puberty a smoother transitional period for teens.

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See also: Adolescent Identity Formation; Menarche; Youth Mentoring

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Public Policy and Early Childhood

In the United States, policy regarding young children is often made at the federal level, modified at the state level, and executed at the community level. Specifically, federal policies allow for variations in implementation that result in different services in different states. There are different opportunities for citizens to become involved in the formulation of policy, especially at the community level. Serving on a local elected body such as a school board, city council, or county board is the most common way for individuals to influence the formulation of policy at the community level. Many citizens also choose to influence elected officials at the local, state, or federal level through petitions, letters and e-mails, personal visits, phone calls, testifying at hearings, and lobbying.

Policies affect the lives of young children directly and also through services provided to parents in the following areas: medical care, nutrition, income support, developmental assessment and support, child care, safety, and supports for parents (Barratt 2001). For many of these policies, communities offer parents options for participation, but not all families participate. Lack of participation by eligible families may reflect the parents' choice or their lack of knowledge about options.

Medical Care

In the United States, children are affected by medical care policies about prenatal care, health care for children, and health care for parents. Prenatal care (the care given the mother before a child is

born) is very important for preventing infant mortality and promoting infant health. Recognizing this, the U.S. government has encouraged states to provide programs that cover the costs of prenatal care for low-income pregnant women through the federal Medicaid program. Well-child care and immunizations have proven to be effective in promoting the health of infants and young children. In cases of families who cannot afford such treatment, the federal government uses Medicaid, and encourages each state to establish a Children's Health Insurance Program (CHIP) for families not poor enough to qualify for Medicaid. The CHIP has helped many states to create low-cost state insurance programs that benefit children. Limited-income families are more likely to use Medicare or state CHIP programs; middle-income and well-off families tend to use private insurance provided or subsidized by an employer. However, 14 percent of American children are covered by neither public nor private insurance (Annie E. Casey Foundation 1999). In the United States, Medicaid and CHIP programs insure poor children, but not usually their parents (Barratt 2001). This lack affects young children's health and well-being, which are supported by their parents' well-being, especially the mother's. For example, chronic depression, postpartum depression, or substance abuse suffered by a mother can influence her children. These ailments can be addressed by health care aimed at parents.

Nutrition

The nutritional well-being of an individual child depends on family and community resources. In the United States, nutrition policy addresses prenatal nutrition, breastfeeding, nutrition for infants, and food for young children. One common instrument in each government program is food vouchers. Sometimes the government also implements educational nutrition programs. The federal Special Supplemental Nutrition Program for Women, Infants and Children (WIC) provides food vouchers to pregnant women who are below 185 percent of the federal poverty level. This program is available to approximately 45 percent of pregnant women and infants in the United States (Special Supplemental Nutrition Program for Women, Infants and Children 2002). Breast-feeding clearly benefits young children's nutrition and health. For example, ear infections, allergies and respiratory

infections are less likely to afflict children who have been breastfed. Limited-income women who are breastfeeding can receive vouchers from WIC to help nourish their bodies during lactation. WIC also provides food vouchers for limited-income families who have children under 5 years old to supplement their nutritional well-being. The Child and Adult Care Food Program is a federal program subsidizing the cost of snacks and meals served to young children while they are in child-care programs. The Federal Food Stamp Program also provides food vouchers for limited-income families. The Expanded Food and Nutrition Education Program (EFNEP) is an outreach education program offered by each state's land-grant university in communities throughout the state. Food pantries and food banks are a way for food to directly be distributed to families in need. Food pantries are stocked by volunteer donations of food, formula, and diapers, as well as surplus food acquired by food banks.

Income Support

In 1996 the federal income support program, Aid to Families with Dependent Children (AFDC), was replaced by Temporary Assistance to Needy Families (TANF) to encourage parents to become members of the workforce. Unlike AFDC, TANF has lifetime limits on how long families can receive support. There are now work requirements for parents, and they may only receive government assistance for five years. Parents who either fail to work or exceed the number of allowable months for relying on TANF can be "sanctioned" and may not receive any further TANF support. There has been a decline in the use of federal income support programs since the change from AFDC to TANF; the cause of this decline is not clear, however, considering that many families remain eligible.

Children born to single mothers and children being raised by single mothers or fathers are eligible to receive financial child support from their other parent. Paternity, or the identity of the father, may be established through signed documents or through DNA analysis, and then child support awards are determined. Through the Personal Responsibility and Work Opportunity Reconciliation Act of 1996, the government has begun to collect child support by garnishing wages and intercepting income tax refunds and lottery winnings from parents who have not paid their child support. The

Federal Earned Income Tax Credit provides refundable tax credits to limited income families in the United States as monthly payments or an annual lump sum (Barratt 2001). Some state governments also have an Earned Income Tax Credit program. Both the federal and state programs have been effective at pulling families out of poverty.

Developmental Assessment and Support

The United States does not have a public health system to check the health and development of each child; children who are on Medicaid, however, receive early and periodic screening, diagnosis, and treatment (EPSDT) to review “medical history, measurements, sensory screening, and developmental assessment” (Barratt 2001, 647). Increasingly states have delegated the responsibility for these assessments to Health Maintenance Organizations (HMOs) and other medical care providers. In addition, each state has developed Child Find programs, which try to locate young children with developmental delays and sensory impairments; these children can be served by the Individuals with Disabilities Education Act (IDEA). Plans for services to families with young children who are found to have a developmental disability are created on a tailored, individual basis.

Child Care and Education

As more mothers enter the workforce, child care becomes more necessary. In the United States the majority of mothers of infants work outside the home. Some children go work with a parent, some are cared for at home by one parent, and others stay with relatives. Most are cared for by paid providers in their own home, in the provider’s home, or in child-care centers. States regulate much of this care through licensing and certification processes that vary considerably. For optimal care there should be no more than three infants to each adult, children should socialize in groups of six or fewer, and child-care specialists should be trained to provide professional care. However, 20 percent of infants from ten communities across the United States are in child care that meets none of these three recommendations (National Institute of Child Health and Human Development, Early Child Care Research Network 1998). As TANF encourages parents to work, it provides money for reimbursement for child care. However, decisions are made about reimbursement rates

and procedures at the state government level. Child-care costs are also subsidized with a child-care tax credit available to limited-income parents.

Child Safety

To improve the safety of infants and young children, state departments of public and community health have executed media campaigns and information dissemination programs aimed at educating the public about unsafe equipment that is commonly used, such as child walkers, car seats, and cribs. The Center for Disease Control (CDC), a federal agency, especially focuses on prevention of sudden infant death syndrome (SIDS), and recommends that infants be placed on their backs to sleep.

A relatively high infant mortality rate (7.3 per 1000 births) places the United States below many industrialized countries, and the rates are higher in U.S. urban settings. Some possible causes for the high infant mortality rate are lack of early prenatal care, preterm birth, and extreme disadvantage. The federal goal for the infant mortality is to reduce it to 4.5 percent by the year 2010 (Department of Health and Human Services 2000).

Abuse and neglect of children is usually addressed at the state level through child welfare programs instead of at the federal level. In order to prevent recurrence of abuse of children, many states use a combination of “casework, criminal prosecution, mandatory parenting education, and foster care” (Barratt 2001).

Supporting Parents

Parent education classes, parent support groups, respite care for children in stressed families, and other programs have been available to parents at family resource centers since the 1980s. To this end, state governments, aided by funding from the Children’s Trust Fund in each state, have helped to centralize information on a wide base of topics related to children and parenting.

Since the 1990s, home visiting programs have increasingly been used to educate and support parents of infants and young children. Nurse home visitors, social workers, paraprofessionals, and volunteers have all helped to identify and address problems for high-risk infants and children. However, only the Nursing Home Visitation Program has been shown to have long-term impact (Karoly et al. 1998; Olds et al. 1999).

Early Head Start began in 1994 to serve pregnant women and families with children under 3 years old and to promote children's development. The program is tailored to the individual needs of each child, through a combination of home visits and group activities.

It is recommended that mothers receive at least six weeks of maternity leave to reduce the risk for depression. Federal law guarantees parents may take up to twelve weeks' leave to care for their newborn and return to the same or a similar job, if their employer has at least 50 employees. The leave does not have to be paid leave, however. Some states have additional parental leave requirements.

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See also: Attachment; Breast-Feeding and Lactation; Child and Family Poverty; Child Care: Issues for Infants and Children; Early Intervention and the Individuals with Disabilities Education Act (IDEA); EFNEP: The Expanded Food and Nutrition Education Program; Head Start; Participatory Action Research; Policy Education for Families and Children; Women, Infants and Children (WIC), Special Supplemental Nutrition Program

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Qualitative Research

Qualitative research is most often used in the social sciences (such as education, human ecology, and sociology) rather than the physical and biological sciences (such as agricultural science, biology, and chemistry). Qualitative research is a type of research sometimes referred to as naturalistic inquiry, in which the researcher systematically investigates a topic (such as an organization, a classroom, a program, or an individual) in a natural setting. A qualitative research study utilizes one or more methods to collect data. There are three primary methods of collecting qualitative data: (1) individual or group interviews; (2) direct observations; and (3) examination of written documents such as open-ended items on questionnaires, personal journals and diaries, autobiographies, and program records. Results from a qualitative research study are usually presented in a narrative or pictorial format, rather than involving the statistical analysis of numbers used to quantify results in quantitative research studies.

Although social scientists have different perspectives on qualitative research, leading authors in the field (Creswell 1998, 16) agree that qualitative research has six common elements:

1. The research is conducted in a *natural setting*.

In other words, the researcher needs to go to the site where, for example, the program is being conducted or where the organization meets. If study participants are removed from their natural setting it can lead to contrived findings

that are out of context.

2. The researcher is the *key instrument* of data collection.

The researcher spends a prolonged time in the field (on site) in order to have direct, personal contact with those being interviewed and observed. The researcher records what she hears or observes, and reviews and analyzes interview transcripts, observation information, and written documents to determine whether common themes or patterns emerge.

3. The focus of the research is on the *participant's perspective*.

The researcher's role is to describe the topic from the study participant's point of view, rather than speaking as an expert describing the topic based on predetermined categories and assumptions. Study participants may not only be participants in a program or organization. People such as administrators, instructors, and community stakeholders can offer a broader range of perspectives, sharing their emotions, their thoughts about what has happened and is happening, and their experiences.

4. Data are collected and results are reported in *words or pictures*.

Interviews, observations, and documents allow the researcher to describe the topic in detail. Data are organized into major themes, categories and case examples. Often audiotapes and videotapes are used during the data collection process, and they can be used

to report findings if study participants give their consent.

5. Research focuses on the *process* rather than any product.

To focus on process means to focus on understanding the internal dynamics of the topic. For example, if you were investigating the effectiveness of a youth development program, you would investigate things such as: What are the factors that come together to make this program what it is? What are the strengths and weaknesses of the program? What do participants feel they are getting from participation in the program? How do stakeholders influence the program?

6. Data are analyzed *inductively*.

An inductive approach means that the researcher attempts to make sense of the topic without imposing preexisting categories or variables at the beginning of the study. At the conclusion of the study, the researcher reviews and analyzes interview transcripts, observations, and written documents to determine any if any common themes or patterns emerge.

Susan J. Barkman

See also: Hermeneutics and Human Ecology; Methods and Criteria in the Study of Human Ecology; Outcome-Based Program Evaluation; Participatory Action Research; Philosophy of Human Ecology

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Quantitative Research

Quantitative research was initially developed in the physical and biological sciences (such as biology, chemistry, and physics), but is now also used in the social sciences (such as human ecology, psychology, and sociology). Quantitative research gives answers to the research question in the form of numbers (such as the percentage of people who

experienced a certain effect from a certain cause). Quantitative research utilizes one of two major research designs: experimental and non-experimental. In an *experimental design*, the researcher controls what conditions or treatment (these being the variables) the subjects experience and then makes comparisons. The goal is to investigate the cause-and-effect relationship between variables and measured outcomes. In the *non-experimental design* the researcher does not control the conditions or treatment, but merely describes the outcomes that have occurred. Quantitative data can be collected through a wide variety of measurement tools (questionnaires, surveys, observation checklist, product assessment tools, tests, existing data and records, logs).

Quantitative research usually involves four major elements (Gay and Airasian 2000, 9):

A *hypothesis* is stated prior to conducting the study. A hypothesis is a tentative statement of the expected relationship between two or more variables.

Independent variables, which may or may not be controlled by the researcher. The independent variable is also called the educational invention, treatment, or condition.

Large enough *sample size* to provide statistically meaningful data.

Data *analysis* that relies on statistical procedures.

Researchers in the social sciences commonly utilize the research designs outlined in Table 1.

Each of the experimental research designs varies as to the control of variables and the assignment of subjects to groups.

In a true experimental research design, subjects are randomly assigned to groups, and the researcher controls what conditions or treatment (variables) the subjects experience.

In a quasi-experimental research design, preexisting intact groups (such as a classroom or a club) are utilized, instead of groups created by a random assignment of subjects. However, the researcher does control what conditions or treatment the subjects in each intact group experience.

Table 1. Quantitative Research Designs

Experimental	Non-Experimental
True Experimental	Descriptive
Quasi-experimental	Correlation Survey

Non-experimental designs are primarily utilized to describe something that has occurred or to examine relationships between things.

With a descriptive design, the researcher does not control conditions or assign subjects to groups, but merely measures things as they are, using numbers to characterize individuals or a group. Research questions that might appropriately be answered by this approach would include the following: What is the science literacy of girls and boys in a particular school? What are students' attitudes of toward random drug testing?

The researcher who uses a correlational design is concerned with examining the relationships between two or more variables. A statistical measure is used to describe the degree of the relation, called a *correlation*. A positive correlation means high values of one variable are associated with high values of a second variable (e.g., self-esteem and school grades). A negative correlation means high values of one

variable are associated with low values of a second variable (e.g., good nutritional habits and obesity).

The researcher who uses a survey selects a sample from a larger population and administers a questionnaire or conducts interviews to collect data. The questionnaire is usually designed to determine attitudes, beliefs, opinions and other types of information.

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See also: Hermeneutics and Human Ecology; Methods and Criteria in the Study of Human Ecology; Philosophy of Human Ecology

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R

Racial and Ethnic Identity in Adolescence

See Ethnic and Racial Identity in Adolescence

Racial Identity Development among African American Adolescents

From an ecological perspective, racial identity among African American youth is linked to racial socialization through the interplay of multilevel systems. Here we briefly explore the theoretical, conceptual, and empirical linkages among these elements. Racial identification has been historically viewed as a distinct component of psychosocial development. Studies of African American children, and more recently, African American young adults, dominate this area of work. Classic studies (e.g., Clark and Clark 1940) have found that young African Americans are aware of themselves as different from the predominately non-African American social culture. Numerous researchers support this notion of self in the context of a racial or ethnic reality. Although studies have examined the role that racial awareness and coping play among African American children (e.g., Johnson 2001), it has been suggested that more attention is needed in the area of self-development among adolescents (Stevenson 1994; Phinney 1990). Erik Erikson (1968) suggested that it is during adolescence that psychosocial reciprocity (exchange between a person and other members of her environment) becomes central to appropriate identity formation. As a result, many components of self be-

come evident in relation to others. Children in early childhood may have an awareness of racial attitudes, but it is the maturity of adolescence that equips them with the development in social cognition needed to give meaning to self-identity in broader contexts such as affiliation with a racial group (Stevenson 1995).

It has been proposed that a multidimensional assessment of broader contextual influences (looking at family, peer, and sociocultural contexts) is needed in order to examine the processes through which culture becomes an influential element of adolescent self-development (Spencer 1983). Through racial socialization processes (messages and child-rearing behaviors that augment a sense of ethnic identity, increase cultural authenticity, and prepare children and adolescents for life experiences that may include racially discriminatory encounters), adolescents are exposed to contexts that may influence how they experience or perceive race. With regard to racial socialization processes, Howard Stevenson (1994) found that spiritual coping, extended family care, cultural pride, and racial awareness are key domains that must be considered in a multidimensional conceptualization of this process. This process would necessarily require a contextually informed approach that incorporates the complexity of racial socialization and studies how adolescents come to identify themselves as members of the larger African American cultural group.

Multi-Level, Multidimensional Perspectives Linking Racial Identity and Racial Socialization

Several scholars have articulated multilevel or multidimensional conceptualizations of racial identity. Some have tied those conceptualizations to socialization experiences at multiple levels or in varying contexts. In order to explore the linkages between race, identity, and the socialization process, it is important to briefly examine the concept of race. Race can be defined as “a sociopolitical designation in which individuals are assigned to a particular racial group based on presumed biological or visible characteristics such as skin color, physical features, and in some cases, language” (Carter 1995, 5). Children internalize the implications and social perceptions of belonging to their racial group. As they emerge into adolescence, their understanding of the consequences of societal evaluations of their group affiliation only deepens, and racial identity becomes more sensitive to experience and context. Over time dissonance or compliance with these largely negative evaluations (or devaluations) along with racial socialization experiences forge racial identity as well as personal identity (influencing, for example, self esteem).

One of the most widely used models examining racial identity development among African Americans is William Cross’s Nigrescence model. From a multilevel approach, Cross (1978) suggests that one has the potential to move through five stages: pre-encounter (preoccupation with dominant White culture), encounter (culture confusion), immersion-emersion (idealization of Black culture), internalization (realistic assessment of both cultures), and internalization-commitment (commitment to Black culture with respect for dominant culture). While this model does not examine multisystemic processes, it does emphasize the interaction of the individual with society and serves as a major model that recognizes race-related processes as linked to social encounters.

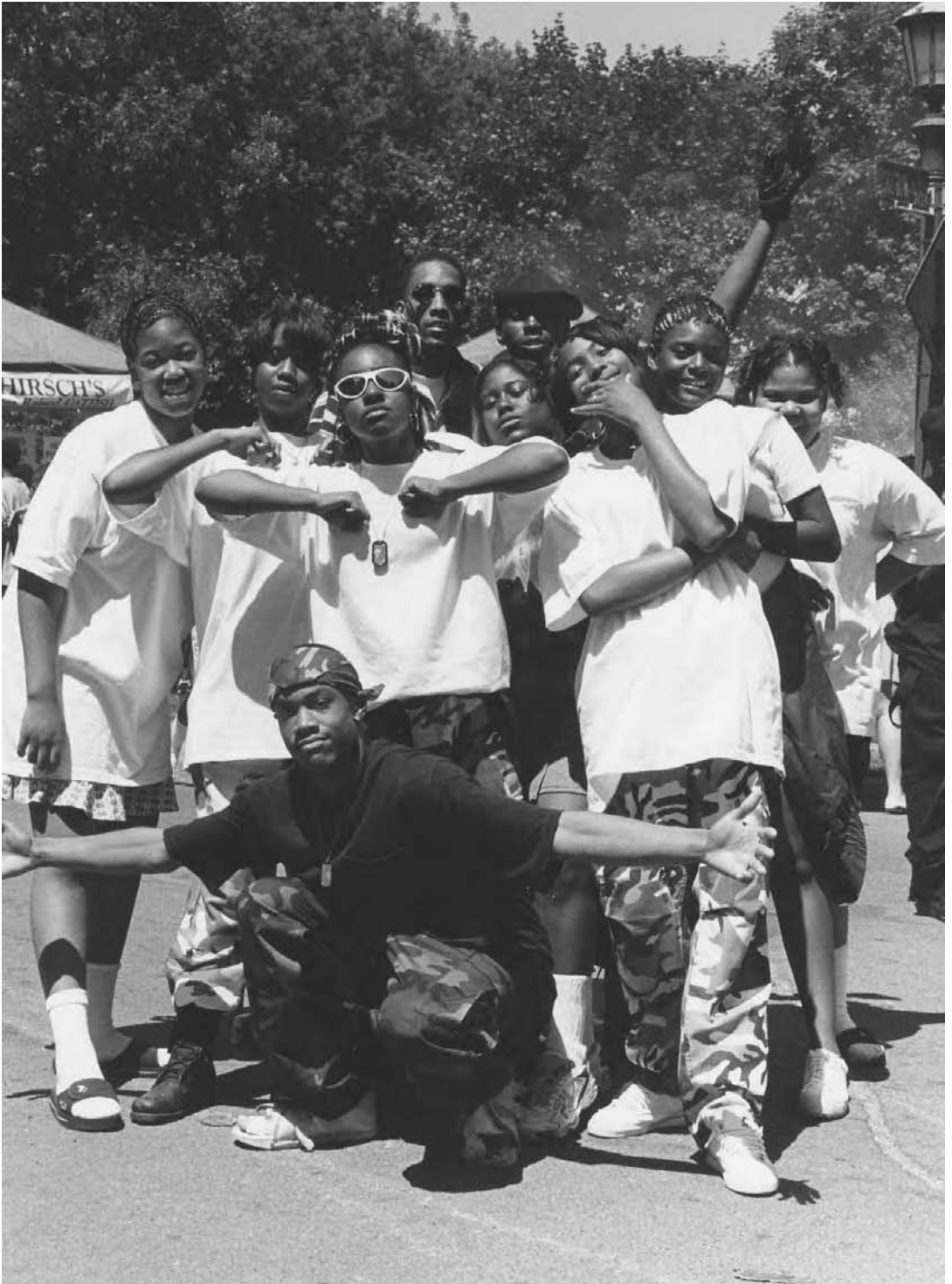
As the discussion of what constitutes racial identity has evolved, further examinations of racial identity have been conducted (e.g., Helms 1990; Phinney 1990). More recently, Robert Sellers and his colleagues (1998) introduced new perspectives on racial identity that integrate previous work in the field, perspectives meant to complement earlier studies of racial identity. They suggest

that racial identity encompasses four major dimensions: *racial salience* (how important race is to one’s self-concept in a given encounter), *racial centrality* (how one defines self racially overall), *racial regard* (positive or negative perceptions of Blackness), and *racial ideology* (convictions about how Blacks should act). This personality perspective focuses on a person’s perception of race at a single point in time. Furthermore, Sellers and colleagues examined the value placed on race during an encounter or a particular event, with the assumption that this value may change over the course of a lifetime. Although this perspective leaves open the possibility that socialization may influence identity, it does not emphasize the dynamic linkage between the two. Nonetheless, both perspectives, that of Cross and that of Sellers and colleagues, confirm the complex and multidimensional nature of racial group affiliation during adolescence. These conceptualizations underscore the potential for variations in self-knowledge and experience, and emphasize changing contexts of racial identification at any stage of progression.

In an effort to address the interpersonal experiences that influence racial identity development, Stevenson has proposed a multidimensional model that focuses on an assessment of influential socialization factors affecting adolescents. Through a study of adolescent perceptions, Stevenson confirmed that racial identity stages are moderately related to adolescents’ perceptions of interpersonal processes within various environmental contexts, which include specific socialization domains such as cultural pride, spiritual coping, extended family care, and awareness of racial discrimination (1995). These findings imply that multiple processes can influence the way adolescents connect with their racial group. Thus, it can be concluded that a broader contextual awareness of the link between racial identity and the transmission of racial messages is critical to the ecological understanding of racial identity development among African American adolescents.

Incorporating an Ecological Perspective

An ecological perspective of the kind articulated by Urie Bronfenbrenner has utility for understanding the link between racial identity and socialization in a multicontextual framework. An exploration of the connection between broader contexts and self-development from an ecological perspec-



Group of African American adolescents dressed similarly (Michael Siluk)

tive, with its understanding of multisystemic process (Bronfenbrenner 1986), can be used to show the links between the experiences of race (i.e., racial stratification in society, discrimination in the workplace, parental racial socialization, racial group affiliation) and self-identity. Beginning with intrapersonal processes (e.g., development of a sense of self-worth, of self-esteem) and interpersonal interaction within the family, Bronfenbrenner emphasizes the contexts and interactions that the developing individual encounters as he moves through various environments. Referred to as systems, the microsystem (familial and other intimate relationships), mesosystem (a system that links multiple microsystems, such as school), exosystem (system indirectly experienced by adolescent, such as the work world of the parent), macrosystem (cultural milieu), and chronosystem (time influence) are all environments that individuals encounter.

The interaction that takes place within and across these environments can be understood from a person-process-context perspective (Bronfenbrenner 1986). This perspective notes that the process, or interaction, that exists between social agents within and across various environments and the developing individual can influence her psychosocial development. Thus, interaction is key in the socialization processes of adolescents. Because of their developmental stage, adolescents are vulnerable to the messages they receive from the various contexts (or environments) in which they take part. For example, if African American adolescents are exposed to messages that communicate an indifference to race or stigmatization based on race, they may become more vulnerable to racial identity confusion (i.e., Are positive or negative experiences associated with belonging to this racial group?). Although we have made the link here, typically missing from the ecological perspective is an emphasis on race (i.e., race as exclusion, as stigma, as economic disenfranchisement, and the like) as a social construct linked to psychosocial development.

Minority scholars have been successful in expanding and strengthening the discussion of ecological perspectives as linked to self-development among young African Americans. Various scholars (e.g., Garcia-Coll et al. 1996; Spencer 1999) have incorporated both theoretical and empirically supported perspectives that address the role that so-

cioecological experiences play in the psychosocial development of African American children and adolescents. Developmentally speaking, Margaret Spencer's model provides a salient illustration of how an ecological way of looking can take into account both the affirming and stressful environmental encounters of adolescents. Through the use of the PVEST (phenomenological variant of ecological systems) model, Spencer's identity-focused cultural ecological (ICE) perspective demonstrates how certain outcomes (e.g., resilient versus vulnerable identity) are linked to developmental processes as influenced by context. This connection is illustrated through five key stages: risk factors (cognitive awareness of how others perceive one); stress engagement (experiences of stress); coping methods (whether appropriate or inappropriate); emergent identities (involving integration of self and social identity), and life stage outcome (whether the identity that results is resilient or vulnerable). As this model is applied ecologically, the ICE perspective can be conceptualized using these five stages.

In addition to Spencer's model, other racially inclusive ecological perspectives (e.g., Spencer 1999; Garcia-Coll et al. 1996) have been used to illustrate how African American adolescents experience self-development as influenced by different contextual processes. Our conceptualization adds to these discussions, as it addresses person-process-context as the key interactive conceptualization of the ecological approach, which accounts for the process through which young African American racial identity development can be understood. It incorporates the contextual reality, which considers the whole experience of race as greater than the sum of isolated contextual experiences. How an African American adolescent experiences and perceives racial messages (e.g., messages that enhance racial pride or build skill in coping with negative experiences) within her microsystem cannot be taken in isolation from other contexts (i.e., exosystem, macrosystem, etc.). For example, Stevenson (1994) found that global racial socialization (transmission of protective and proactive racial messages) was a predictor of the internalization stage of Cross's model among African American adolescents. This suggests that within an adolescent's microsystem, messages that promote racial pride (i.e., "Be proud to of your Black culture") as well as racial coping (i.e., "Some

people may not treat you fair because of your race”) may predict the ability to recognize both the pros and cons of racial affiliation. Consequently these socialization processes can be highly influenced by contextual experiences. Therefore, the type of relationship a parent has with her child’s school (a mesosystem), what a parent communicates about her experience of race on the job (an exosystem), how the neighborhood expresses family culture and how society views ethnic culture (a macrosystem), and patterned experiences of ethnic culture over time (the chronosystem) will simultaneously influence how salient the link between racial identity development and socialization will be in a particular moment or over time. Ultimately, messages and meanings encountered within a specific time frame across systemic environments can have a significant influence on racial identity development.

What are the implications of this perspective for better understanding the experiences of African American adolescents? The application of the ecological perspective to identity development and socialization has several advantages. First, we move beyond the intrapsychic and interpsychic identity processes commonly associated with personality perspectives that are individually focused. The relation between racial socialization and racial identity development occurs at multiple levels in the system. In both a promoting and inhibiting fashion, communities, parents, churches, schools, neighborhoods, and even governmental policies, contribute to the racial socialization experiences and messages that shape adolescent racial identity. Secondly, in an ecological perspective, development, experiences, and context have bidirectional implications. In other words, adolescents also make choices and have experiences that may alter the racial socialization messages they access at any level, hence shaping their own identities in a transactional process in tandem with other influences. To state it simply, adolescents are actors on their own behalf, all making their own individual attempts to make sense of their cultural experience both personally and socially.

Finally, this exploration is yet another example of the importance and utility of bringing race to the center in ecological thinking, as was done in the papers by Spencer and Cynthia Garcia Coll and her colleagues. The final stage of adult-making occurs in adolescence, and racial identity formation

is a protective factor among African American youth, aiding the new adult in successfully negotiating the world. Connections among the multiple systems suggest that interventions in the lives of African American teens require multifaceted approaches that while inclusive of individuals and their families, move beyond these entities to better articulate society’s role in promoting healthy cultural adaptation.

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See also: Adolescent Identity Formation; African American Families; Bronfenbrenner, Urie; Community Youth Development; Erikson, Erik Homburger; Ethnic and Racial Identity in Adolescence; Identity Statuses; Identity Styles; Racism and Its Impact on Health; Resiliency; Youth Development

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Racism and Its Impact on Health

For the broadest indicators of health and disease, African Americans show a disadvantage compared to White Americans. African American babies are twice as likely to die before their first birthday, and African Americans have a shorter average life expectancy by about seven years. The Black-White differential also occurs with many specific diseases: African Americans are twice as likely to develop hypertension and seven times more likely to develop HIV/AIDS (U.S. Department of Health and Human Services 2001). Race may be a powerful predictor and determinant of health and morbidity because we live in a society that is highly conscious of race and it plays a substantial role in the way many African Americans are labeled, treated, and consequently think of themselves. In this entry, we will outline the ways that the health disparity may result from racism, defined as harmful beliefs, attitudes, and practices directed at individuals based on their racial group. The focus of this entry will be on racism as it applies to African Americans, who constitute 12 percent of the United States population.

The impact of racism on health fits an ecological perspective, since it can occur on three levels: institutional, interpersonal (usually between Whites and African Americans) and intrapersonal (within individual African Americans). At the institutional level, older African Americans in the United States experienced segregated hospitals for at least two decades. During this time the better-equipped White hospitals refused to provide care to them. Although it is no longer legal to deny

African Americans access to adequate housing, segregation continues due to the cooperation of major societal institutions, such as banks and local governments (Williams and Williams-Morris 2000). In addition, African Americans encounter restricted access to well-paying occupations and quality education, which contributes to their lower socioeconomic status (comprising occupation and education), one of the strongest predictors of health (Rogers, Hummer and Nam 2000). Although these factors help to explain the health differential, even when studies control for socioeconomic status the differential in health by race persists. For example, the higher infant mortality rates among African American women exist at all educational levels (U.S. Department of Health and Human Services 2001).

On the interpersonal level, African Americans routinely encounter prejudice or the discrimination based upon it. One study found that over 50 percent of Whites hold the stereotype that African Americans are violence-prone (Williams and Williams-Morris 2000). Being the victim of either blatant racism (such as name calling) or subtle racism (such as being ignored by a waiter) has been found to predict poorer mental health outcomes, including depression and psychological stress (Krieger et al. 1993). Also, in situations where racial differences are evoked, African Americans are more likely to experience cardiovascular stress than Whites; over time this stress may adversely affect health (Blasovich et al. 2001). Compounding the problem, health care professionals are less likely to give the sixteen most commonly performed procedures to African Americans than to Whites who have the same medical insurance (McBean and Gornick 1994).

On the intrapersonal level, African Americans internalize the negative race stereotypes prevalent in our society and begin to interpret their unequal status and treatment as evidence of their deficiencies rather than as discrimination. This misinterpretation may help to explain why diseases in the African American community are generally presented for treatment at later stages and, once they are diagnosed, why the treatments are often complied with at lower rates (U. S. Department of Health and Human Services 2001). Further, studies have found that African Americans who accept negative race stereotypes are more likely to experience chronic health problems (Krieger et al. 1993).

Blacks living in countries in which they are the majority, and thus less likely to experience racism, have a lower risk of developing certain diseases. For example, Blacks living in Caribbean and African nations tend to have lower rates of hypertension and coronary heart disease than those in the United States (Rogers, Hummer, and Nam 2000). Similarly, the pattern of mortality rates of African Americans in different parts of the United States may be due in part to regional differences in racism. Several studies have also found that lighter-skinned African Americans, who are likely to experience less racism than those with darker skin, tend to have lower blood pressure and a lower mortality rate from cancer (Krieger et al. 1993).

Even after taking into account a number of behavioral and biological risk factors, including cigarette smoking, alcohol consumption, sodium intake, obesity, and genes, health disparities by race seem to still exist (Rogers, Hummer, and Nam 2000). Improving the health of African Americans may require a reduction of racism in multiple sectors of our society.

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See also: African American Families; Child and Family Poverty; Environmental Movement in the United States and People of Color; Environments of Children; Hypertension and Blood Pressure Control

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Radon

Radon is a colorless, odorless radioactive gas released from uranium in geologic formations in the earth; it is a known carcinogen and can accumulate in buildings situated above such formations. According to current epidemiological estimates, radon is responsible for some 15,400 to 21,800 lung cancer deaths annually in the United States, making it the second most important cause of lung cancer after tobacco use (National Academy 1999, 3). Most of these deaths are seen in smokers, in whom radon multiplies the risk of tobacco smoke. Occupants can easily measure radon levels in the home. Remediation of radon problems is usually straightforward and can be done for about two thousand dollars.

Uranium is one of the most widely dispersed elements in the earth's crust. As a radioactive element, uranium undergoes a series of transformations, called decay steps, in which new elements are formed, along with the release of various energized particles. The ultimate result is an atom of lead. Several intermediates involved in this decay, including radon and its progeny (polonium isotopes) also release alpha particles, believed to cause cancer.

Uranium is concentrated in various types of rock, such as sedimentary deposits (shales, for example), granites, and phosphate deposits. When buildings are situated above such deposits, the radon gas emitted from these deposits can accumulate in the building. In some regions, radon can also be found in well water. Drinking such water is not known to pose serious health risks, but waterborne radon can be released into the air in usages such as showering and laundry operations.

Radon's predominant means of entry into buildings, however, is as a soil gas. This process is especially prevalent in regions with a significant heating season. Multiple physical mechanisms in a heated building typically cause its lower portions to be depressurized relative to the outside environment. This pressure differential causes suction to be exerted on the earth below the building, which can draw radon (like other soil gases) through various openings in the basement or floor slab into the building, where they accumulate. Only very

small volumes of radon, on the order of a few cubic centimeters per twenty-four hours, need to be drawn in to create radon concentrations that pose health risks.

Some of the forces that depressurize closed buildings include exhaust fans and vented, fuel-burning appliances when there is insufficient replacement air. The filtering out of heated air can also depressurize lower regions of the building during cool weather.

External factors influencing radon movement into buildings include frozen earth and rain-saturated soils, both of which favor radon entry. For these reasons, radon levels vary over time, from season to season and even from day to day. The only known health effect of radon is an increased risk of lung cancer. This disease, although not entirely understood, requires twenty to thirty years of development before it is manifest. Exposure to two or more carcinogens may multiply the risk to an individual. However, not all exposed persons will develop lung cancer. Lung cancer risks of tobacco smokers are further multiplied by exposure to radon.

The risk from radon comes not from radon itself, but from its radioactive decay products. While radon is an uncharged gas, the decay products carry an electrostatic charge, attaching themselves to dust particles. When such particles are breathed into the deep recesses of the lung, scavenger cells, called macrophages, engulf them. These cells remain in place. Hence, as the radioactive decay proceeds, the radioactive emissions (alpha particles) that accompany this decay impinge on the same small portions of lung tissue. It is believed that this bombardment damages cellular DNA, eventually leading to lung cancer.

Measurement of radon concentrations is based on the effects of the radioactive particles released during the decay process. Measuring these effect involves either the use of a counting device that actually counts the emitted particles or the exposure of a plastic film to the air [or water] sample to detect the tracks that are left by the decay particles that impinge on it. One measurement convention expresses concentration in terms of the number of radioactive decay events in a volume of air. A curie is the unit quantity of radioactivity associated with one gram of radium. Radon measurements in air and water are expressed in terms of trillionths of a curie, or picocuries, per liter of air (pci/l). Typ-

ical outdoor radon measurements are in the order of one half pci/l. The U.S. Environmental Protection Agency (EPA) recommends taking remedial action when a level of 4 pci/l (called the action level) is seen in the lowest lived-in area of the house. Short-term measurements should be done under closed-house conditions: Normal entry and exit is allowed, but windows should be closed. The EPA has ranked areas across the United States into three categories, based on the potential of home measurements in that region exceeding the action level for radon.

Several types of devices are available for the measurement of radon concentrations. Two of these are well suited for do-it-yourself usage. One such device consists of a canister or packet filled with activated charcoal, which adsorbs radon. The canister or packet is opened and exposed to the air for a period of three to five days, followed by analysis at a laboratory. For longer-term measurements, a plastic film is exposed for a period of up to ninety days or more and then measured in a laboratory. Test kits based on these methodologies are inexpensive and readily available to consumers. More sophisticated equipment allows real-time measurements. Measurement of water-borne radon may also be needed in some localities.

Since radon levels in a building can fluctuate considerably over time, the three-day test is considered to be a screening test; the ninety-day test provides a more meaningful measure of occupants' long-term exposure. The EPA recommends that a long-term test be done as a follow-up after the short-term test. However, when initial readings are above the action level of 4 pci/l, another short-term, confirmatory test should be conducted. If initial levels are above 10 pci/l, the EPA recommends immediate confirmatory testing, followed by radon remediation if the high reading is confirmed.

Initial concerns about radon and lung cancer were based upon the increased incidence of this disease among workers in uranium mines. Numerous studies have been conducted over the last half-century, involving thousands of underground miners in all types of mines. Some individuals were tracked for more than three decades. These studies have consistently and unequivocally shown that miners exposed to radon have an increased risk of lung cancer, even when confounding factors such as mineral dusts, diesel fumes, and cigarette smoke have been accounted for (U.S.

Environmental Protection Agency 1999, 5–8). In addition, there have been several large studies that have retrospectively reviewed and analyzed those miner studies in an effort to characterize the risk of residential exposures (National Academy of Sciences 1999). Residential exposures typically tend to involve lower radon concentrations than seen in mines, but affect a broader spectrum of the population, and extend for a greater portion of the day than the eight-hour work shift. Although there are other important differences in the residential and mineworker populations, the conclusions of the Committee on the Biological Effects of Ionizing Radiation (as given in the BEIR IV and BEIR VI reports) is that residential exposures to radon can pose a significant health risk. It is estimated that radon causes 15,000–22,000 lung cancer deaths per year (National Academy of Sciences 1999, 3). Although there is some dispute regarding the extrapolations used in the BEIR studies (Park 1998), major health organizations support the EPA position on radon health risk (U.S. Environmental Protection Agency 2001, 12). Studies involving actual household exposures and the incidence of lung cancer are extremely difficult to conduct. One such study, involving 413 lung cancer cases and 614 matched controls, showed increased lung cancer risks of 50 percent and higher for a fifteen-year residential exposure at the 4pci/l action level of radon (Field 2000).

Effective remediation methods for radon in buildings involve standard measures that have been refined over the last few decades. Measures include sealing cracks and penetrations in the basement or floor slab, correcting significant depressurization mechanisms in the basement, and providing an exit pathway for radon that accumulates beneath the building. This last measure is a mainstay of radon remediation, and involves the installation of a plastic vent pipe in the basement floor (or slab). The pipe is routed to the roof and fitted with an exhaust fan. This assembly draws radon from beneath the building and exhausts it harmlessly outdoors in a process called sub-slab depressurization. New construction in high-risk areas can incorporate the piping and related systems during the building process, at considerable savings. Because radon emanations from the ground vary widely, even over the distance of a few yards, there is no known way to determine, prior to construction, if radon problems will occur at a

particular building site. Removal of radon from water involves aeration or adsorption equipment and is considerably more expensive than a sub-slab system.

Although radon poses a major public health threat, it is easily measured and relatively easy to remediate. State radon offices (in the United States) can provide detailed information in dealing with radon problems.

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See also: Healthy Indoor Air; Indoor Air Pollution
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Real World Memory

Real world memory is a type of memory that is typically examined and studied outside of the confines of the traditional psychology laboratory (Parkin 1999). Also known as applied memory, real world memory examines the same processes as studied in the psychology laboratory (recall, recognition, short-term and long-term memory, and so on), but examines them in more real-world settings and situations (e.g., courtrooms, office buildings, department stores, aircraft cockpits).

For instance, one very active area of real world memory involves eyewitness testimony (Wells et al. 1998). Witnesses to crimes (e.g., bank robbery, murder) or highly emotional events (e.g., the death of Princess Diana, an automobile accident)

often are very inaccurate when their memories of the crime or emotional event are tested or examined at some later point in time. Even memories of very happy events (e.g., birthdays, weddings) are often fraught with inaccuracies related to memory processes when such memories as tested or examined later in time. The fact that many eyewitnesses are often inaccurate as to what they saw or experienced raises some interesting ethical types of questions. In particular, there is currently a debate within the applied psychology field that is related to so-called repressed, or false, memories (Loftus 1997). Such repressed (or false) memories are usually related to highly personal and emotional events. The debate centers around how accurate people are in their own highly emotional memories. If eyewitness memory is as poor as is claimed, then the same poor memory performance may also be related to repressed memories as well.

From an ecological perspective, understanding real world memory has much to offer the individual, the family, and ultimately the community. It also has many implications for these entities as well. For instance, there has been much recent discussion and debate surrounding the child witness. Our society currently exposes our children to many negative situations (e.g., abuse, neglect) that have an immediate as well as long-lasting effect on the individuals involved. Some of these events have torn families, apart especially if a child has to lodge a complaint against a parent or stepparent. Given the nature of eyewitness accuracy in general, and given the malleability of childhood memories, children are often in an unenviable position when their memories are tested and debated publicly, often by their own family members. This is not to say that children's courtroom testimony should be avoided at all costs. Rather, having a child testify represents a potentially damaging situation that has significant implications for the individual, the family, and the community. Those involved must be cognizant of the costs as well as the benefits such a situation can potentially produce.

The study of real world memory also encompasses a number of other areas of study other than eyewitness testimony. Areas such as autobiographical memory, skill learning, spatial cognition, and expert-novice distinctions all fall involve real world memory. One reason real world memory is often considered a more appropriate topic of study than some other areas of study relates to the issue

of ecological validity. That is, if memory is studied in the "real world," that is felt to make it more reliable and more valid. For instance, if someone is interested in how people recall names of foods they wish to purchase at the grocery store, it probably makes more sense to test these people's recall ability in the store during an actual shopping excursion rather than in the laboratory.

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See also: Investigative Interviews with Children; Memory

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Religion and Sexual Orientation in America

The conflict over the legitimacy of lesbian, gay, and bisexual (LGB) identities is one of the most important cultural struggles in modern American society. Perhaps the most significant force on both sides of the debate is made up of religious organizations. Religious groups differ widely in their attitudes toward homosexuality. Nearly all Islamic groups, Orthodox and Hasidic Jewish groups, the Roman Catholic Church, and Protestant fundamentalist strongholds such as the Southern Baptist Convention support the idea that the only legitimate sexual relationships are in the context of heterosexual marriage. Meanwhile, openly LGB-affirming groups include the Metropolitan Community Church, the Quakers, Reconstructionist Jewish groups, and other groups based on personal spirituality, such as those practicing Wicca and Santeria. Finally, congregations of older and



Gay person with sign related to religion (Skjold Photographs)

established churches such as the United Methodist Church, the American Baptists, Reform and Conservative Judaism, and the Episcopal Church vary in their stances, as positions on homosexuality are debated on the national and local level. The attitudes of religious groups are based on how homosexuality fits with their beliefs about sexuality and the family.

In the context of this cultural struggle, individual LGB people adapt in several ways. These modes of adaptation include, but are not limited to, becoming uninvolved with religion, joining a liberal group, hiding their identity while remaining in a conservative group, choosing not to act on their sexual identity, redefining themselves as spiritual independently of organized religion, or calling their sexuality a disease in need of a cure. How religious sexual minorities adapt to religion-based homophobia depends on the availability of liberal religious organizations and access to gay culture, the importance of religion to the individual, the strength of attachment to a religious organization, and the attitudes of the religious organization of origin.

Conservative Religious Groups

Evangelical and fundamentalist Christian organizations, highly prescriptive non-mainstream Christian organizations such as the Church of Latter-Day Saints, the Roman Catholic Church, Baha'i, and Islam tend to have conservative attitudes regarding homosexuality. In these and other conservative groups, conservative beliefs about homosexuality are correlated with insistence on a singular, literal, and uncritical interpretation of the sacred texts that underlie the faith, particularly those passages that regard sexuality. To Protestant Christians, this means the Bible itself, which supposedly all believers can and should read and interpret for themselves. However, within Judaism, Roman Catholicism, Islam, and Latter-Day Saints Christianity, certain writings or proclamations from religious leaders (such as the Islamic Hadith or the Judaic Talmud) are considered to have an authority that is, to various degrees, comparable to scripture. Thus, it is possible within these organizations for leaders to halt debates about homosexuality (and other issues) by fiat, even if the general membership does not agree.

Conservative attitudes toward homosexuality run through the major conservative religions in

America, given that they all draw from the same Old Testament Bible and other texts containing passages that putatively reflect conservative Levitical views about ritual purity and impurity. Conservative religions teach that the condition of being attracted to someone of the same sex is a disease (“intrinsically disordered” according to the Roman Catholic Church) that like alcoholism is only a sin if acted upon, that people with same-sex attractions should work to stop having them through prayer and therapy, that gays and lesbians should not receive protected minority status for a behavior in which they have chosen to engage, that the focus of ministry to individuals attracted to those of the same sex should not be helping them toward self-acceptance as sexual minorities but rather helping them overcome their terrible disorder (“love the sinner, hate the sin” is the current Evangelical stance), and that the only way same-sex-attracted individuals can be right before God is to either force themselves into heterosexual marriage or be celibate. Further, conservative religious groups believe that discrimination based on sexual orientation is acceptable in order to protect the social institutions that are threatened by homosexuality.

Evangelical and fundamentalist Christian groups tend to ally themselves ideologically with the Moral Majority movement that began in the early 1980s, which was a marriage of conservative religion with conservative politics, forming a united, broad-based social movement that its organizers believed would have popular support from the majority of Americans. This movement made a social idol out of the intact, two-parent, heterosexual, male-breadwinner female-caretaker, nuclear family. According to the Moral Majority, the greatest threats to the American Family are abortion and homosexuality. Given the strong influence of the Evangelical movement in the United States, it is able to weigh in heavily on the conservative side of most legal and public policy debates about homosexuality on local, state, and national levels.

Liberal and Mainline Religious Groups

Liberal and affirming Christian and Jewish groups do not consider homosexuality to be a sin. Feminist and social justice-oriented progressive movements and empirical human sexuality research inform these groups' attitudes. In accordance with scientific research on homosexuality, they see sex-

ual orientation as innate and nonpathological. Further, they view sexual orientation as not amenable to change through reparative therapy, a practice that they understand to be tantamount to ritual psychological abuse. They see the Bible as unconcerned with or even affirming of homosexuality, based on original Greek and Hebrew texts read in their cultural and historical contexts. Because of the influences of liberation theology, feminist theology, and Reconstructionist Judaism, they believe that oppression based on sexual orientation is morally wrong. Many of these groups will perform same-sex commitment ceremonies and ordain sexual-minority clergy.

Mainline denominations such as the Episcopal Church, the Lutheran Church, the United Methodist Church, the American Baptist Church, the Presbyterian Church, Reformed Judaism, and Conservative Judaism provide a forum for these debates. Because of the religious restructuring of the past half-century, larger movements that encompass many denominations have been gaining influence, while the influence of the individual constituent denominations has been shrinking. Thus, denominational policy does not affect these debates as much as it is affected by these debates, as the target of activists on both conservative and liberal sides within any given denomination.

Unique Issues of Transgender Individuals

Also included under the umbrella of sexual-minority individuals are transgender people. Whether they experience same-sex or opposite-sex attractions, they have some unique issues with religion. Research finds that although LGBT-identifying individuals tend to be less schematic on gender than the general population, more comfortable about having androgynous characteristics, and in general not thinking as much about the gendered aspects of their appearance and mannerisms, transgender individuals tend to be highly schematic on gender, often thinking about ways they express themselves as being characteristic of one gender or another. They are uncomfortable passing as someone who is not a member of a sexual minority in order to fit in at a religious service or any other public place. The legitimacy of gender-transgressive dress, behavior, and identification often gets challenged on religious, moral, and legal bases. Although being transgender violates different scriptural rules than being attracted to

someone of the same sex, it raises, as noted above, similar defensive attitudes within a religious conservative belief system. Thus, in many ways, transgender individuals endure the same struggles as LGBT individuals.

Paths of Negotiating Religious and Sexual Identity

A critical factor in determining the choices that sexual-minority individuals will make with regard to religion is their own background in youth and adolescence with regard to religion and religion-based homophobia. Those who grow up uninvolved or only marginally involved with religion are still exposed to the homophobia that may be present in their family and community and that is certainly present in the larger society. For those who grow up in a religious context, their experience of religion-based homophobia depends on their congregation's individual personality and its identification with larger social movements. Although some young people grow up in religious organizations that are open and affirming toward sexual minorities, many more receive the complex and contradictory ideas of the mainline denominations, and still more are socialized with the condemning "intrinsically disordered" or "love the sinner, hate the sin" rhetoric of Roman Catholicism, Islam, Orthodox Judaism, and fundamentalist Christianity. Unfortunately, conservative groups are likely to represent unequivocal condemnation of same-sex sexual relationships, as much as the rest of their doctrines, as absolute truth.

Thus, sexual-minority individuals who are exposed to more powerful homophobic socialization messages through religion than they would otherwise experience from their families, school, workplace, and so on are at greater risk for developing internalized homophobia. Internalized homophobia is the process by which sexual-minority individuals internalize the homophobic values of society and thus begin to hate and condemn themselves. This process can lead to depression, substance use, relationship problems, and suicidal ideation. Because Americans usually have free choice over the type and extent of their religious involvement even in adolescence, sexual-minority individuals experiencing homophobia can change their religious involvement far more easily than they can change their family of origin or society as a whole. The choices that sexual mi-

norities will make with regard to their religious involvement depend on individual differences, family religious background, and the availability of religious alternatives.

Some members of sexual minorities, upon confronting their religious organization's homophobia, break with religion entirely. This break may be accompanied by a great deal of pain and anger if religion was important to the individual in the first place. At other times, this conflict easily breaks a commitment that has never been strong. Given that both coming out of the closet and forming an independent religious or spiritual identity usually happen in middle to late adolescence, a religious transition and a sexual identity transition may occur at the same time but have little to do with each other.

Other members of sexual minorities break with their religion of origin but remain actively engaged in a spiritual quest for meaning or search for the sacred. These people may cease to identify with organized religion but still define themselves as spiritual. Others search for a religious context that is more accepting of sexual minorities, either a more affirming denomination of their original faith or a group oriented to personal spirituality. In this search, they confront the difficulty of finding a religious organization that is not only tolerant of their sexual orientation but meets their needs in other ways as well, in terms of doctrine, worship style, community, and so on. Many religious organizations that are open and affirming tend to be liberal on other items of doctrine as well, leading some sexual-minority individuals with strong personal stances on doctrinal issues to join a conservative congregation, putting up with the intolerant views in order to get other things they need.

Sexual-minority individuals who choose to remain loyal to a conservative religious organization can face difficult choices with regard to integrating their sexual-minority identity with their own strong religious identity. They can remain closeted within their religious organization, either never acting on their same-sex attractions or only pursuing same-sex relationships or participating in an LGBT community discreetly. They can also follow the model of the highly publicized Evangelical Christian conversion ministries and become ex-gays and ex-lesbians, even coming out as such and pursuing heterosexual relationships.

Family and Contextual Influences

Social research has identified these common paths of reconciling religious identity with sexual-minority identity, but can say little about the prevalence of each path. Assessing prevalence would require data from a representative sample of the entire population of sexual-minorities, and it is impossible to gather such data, given that many LGBT individuals would not reveal their sexual identity even on an anonymous survey. However, it is possible to describe the circumstances under which an individual would choose one path or the other.

The importance of religion to an individual depends largely on that individual's religious upbringing and the quality of that individual's relationship to her parents. People who grew up with a positive and secure attachment to their parents tend to follow in the religious footsteps of their parents: Whether the parents have a sincere and internally motivated belief, a weak and disingenuous commitment, or no religion, this is the belief system that a young person is likely to adopt. People who grew up with a negative, insecure, and conflicted attachment to their parents tend to be less religious in general, and to follow a different path from that of their parent. A young person who perceives her parents' religious commitment to have been judgmental and authoritarian will generally either convert to a very different religion or leave religion entirely. A young person who grew up without religion may consider religion as a way to make up for the family relationship that she never enjoyed. Therefore, sexual-minority individuals with secure parental attachments who were socialized to be religious are more likely than those who are not religious to search for a way to positively integrate their religious identity with their sexual identity, and they are only limited by the religious resources available to them. However, those who experienced a difficult family life growing up may face a more difficult path.

Individuals with a high degree of conflict and disadvantage in their lives, if they are drawn to religion at all, are likely to be drawn to groups with a close-knit community and a strong doctrine of hope in things like God's saving grace, a glorious afterlife, the rapture of knowing God, and the redemption of present suffering. These people have needs that can only be met through strong, conservative religion. Only a handful of congregations provide that kind of theology along with an af-

firming attitude toward sexual minorities. Thus, sexual-minority individuals whose temperaments and life circumstances drive them toward a need for conservative, prescriptive religion may only express their sexual identity by the means that their religion sanctions: conversion therapy, a double life, or remaining closeted. Occasionally, these individuals painfully disengage from religion and continue through life without the expression of spirituality that had always been so important to them.

Therefore, religion-based homophobia threatens the spiritual health of sexual-minority individuals as well as their psychological and physical well-being. However, it is important to note that, when religion is not conflated with homophobia, or at least provides needed benefits that are worth the risks, religion can be a source of strength rather than a source of conflict. Research has consistently supported the idea that religion is a source of social and material support and that a felt connection with higher powers provides positive coping capabilities above and beyond those imparted by simply being involved in a religious community. Although religion-based homophobia presents a substantial obstacle, sexual-minority individuals grow increasingly more able to reap the benefits of religion and spirituality.

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See also: Gay and Lesbian Studies; Sexual Identity Development

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Remarriage

A remarriage is a second (or third, or fourth, etc.) marriage for either the husband or the wife (or both of them). About 46 percent of marriages in the United States each year are remarriages (U. S. Bureau of the Census 2000, Table 145). The words remarriage and stepfamily are often used as though they mean the same thing. However, there are some important differences between the two words. A remarriage simply refers to whether or not one of the spouses has been married before. A stepfamily refers to two adults who are either cohabiting or legally married, with at least one of them having children from a previous relationship. So the basic difference between a remarriage and a stepfamily is that the stepfamily always involves children, and a remarriage may or may not involve children. Other words that are often used as synonyms for remarried and stepfamilies include binuclear families, postdivorce families, and blended families.

Most people who get remarried are middle-aged, and most remarriages occur before retirement age. The average age that men remarry is 41 years, and for women it is 37 years (Clarke 1995, Table 9). Men are also more likely than women to remarry. One reason is that women often have more responsibility for children than men do. Therefore, divorced women may focus more on raising their children than on finding a new husband. A potential husband also may not want to be responsible for raising children who are not biologically related to him. Another reason that more men get remarried is that men do not live as long as women do. Therefore, older men have many more potential wives to choose from, and there may be many women competing for a small number of potential husbands. Women also tend to marry men who are slightly older than they are, which also decreases their chances of getting remarried as they get older.

It is widely believed that remarriages are less successful and less happy than first marriages. The fact is that remarriages, particularly if a stepfamily

is involved, often have a different set of challenges than first marriages do. Therefore, it is difficult and not always appropriate to compare remarriages and first marriages. There are also many negative stereotypes about people who remarry. One might think that women just want to get money from many different husbands, and that a man wants to be with as many women as he can. Although there may be a few people who might be like this, these stereotypes do not apply to most people who remarry.

Despite what is commonly thought, remarriages have been common throughout the history of Europe and the United States. However, there were different reasons for remarriage in the past than there are today. In the past, people did not live as long as they do today. In fact, it was not uncommon for a child to lose at least one parent before reaching adulthood. Mothers sometimes died during childbirth, or they died later from infections resulting from childbirth. Fathers were sometimes killed during farming accidents or other jobs. There used to be few safety regulations for dangerous jobs. When a mother died, the father would often get remarried so he would have someone to help raise his children. Because women seldom worked outside the home, it was often important for a mother whose husband died to remarry so that her family would be supported. Better safety rules and medical practices now mean that people live longer lives. Today, most remarriages happen because of the previous divorce of one or both partners.

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See also: Child Custody; Divorce, Children's Adjustment to; Divorce Mediation; Father-Child Relationships following Divorce

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Research

See Adolescents: Real-World Research Techniques; Evaluation Research; Methods and Criteria in the Study of Human Ecology; Participatory Action Research; Qualitative Research; Quantitative Research

Resiliency

Resiliency is successful adaptation in spite of adversity (Luthar 1999; Werner and Smith 1992). Thus, resilient individuals are individuals who are well adapted in spite of serious stressors in their lives (Masten 2001). Indeed, resilient individuals are those who cope effectively with the stresses that arise as a consequence of their vulnerability; a balance, congruence, or fit, among risk, stressful life events, and protective characteristics of the individual and the individual's ecology accounts for the diversity of developmental outcomes (Lerner 2002). Therefore, studying resiliency involves an examination of the link between the person and the demands of the context in variables, factors, and processes that will either promote or subvert adaptation.

An individual's ability to adapt to the changes within the environment and to alter the environment is basic to that individual's survival. Whether situations are marked by high stress or by the kind of low stress found in the challenges of daily life, adaptation is a basic function of human development. Resiliency, then, is the organism's ability to adapt well to its changing environment, an environment that includes both stressors (e.g., accidents, death of a loved one, war, and poverty) and



Dr. Emmy Werner (Courtesy of Dr. Emmy Werner, University of California, Davis)

daily hassles (e.g., negative peer pressures and grades). Thus, studies of resiliency and risk are investigations of human adaptation to life, of human competence. Competence implies at least good effectiveness in adapting (Masten 2001).

Human adaptation, or competence, is shaped by the interplay between the environment and the developing organism (Lerner 2002; Schneirla 1957). In resiliency, the processes involved in this interplay are composed of the interaction over time between the protective factors and risk factors at multiple levels of the ecology. This interaction contributes to the direction of the developmental outcomes, whether positive or negative. For example, youth adjust reasonably well to one or two risk factors, but beyond two risk factors the likelihood for damage and maladjustment increases rapidly; increasing the number of protective processes can help buffer those risk factors (Masten 2001).

The interaction is complex and requires a holistic, comprehensive perspective in order to be adequately examined and understood. Models derived from such a perspective posit that there are reciprocal influences between the organism and the en-

vironment (Schneirla 1957) and that development occurs through these mutual influences (Bronfenbrenner 1979; Lerner 2002).

As noted above, resiliency involves competence in the face of adversity, but more than that, resiliency involves an assessment of the adaptation, based on some criteria, as “good” or “OK” (Masten 2001). Specific cultural norms within the historical and social contexts for the behavior of that age and situation determine the assessment. Borrowing from Ann Masten (2001), we can define resiliency “as a class of phenomena characterized by good outcomes in spite of serious threats to adaptation or development” (p. 228).

Moreover, resiliency is multidimensional in nature. Thus, one may be resilient in one domain but not exhibit resiliency in another domain. As Suniya Luthar, Dante Cicchetti, and Bronwyn Becker (2000) stated, some high-risk children exhibit competence in some domains but show signs of problems in other areas. In a study by Joan Kaufman and her colleagues (1994), for example, approximately two-thirds of children with histories of maltreatment were academically resilient; however, when these same children were investigated for their social competence, only 21 percent exhibited resiliency.

Protective Factors

Resiliency research provides evidence that specific variables and factors are involved in safeguarding and promoting successful development. That is, research has identified particular variables that are responsible for adolescent resiliency in spite of adverse contexts, while other variables have been found to promote failure and to encourage participation in risk behaviors (Luthar 1999; Werner and Smith 1992).

Although there are variations in the definitions of protective factors, the research on resilient, or stress-resistant, children, adolescents, and young adults provides support for the existence of specific individual and contextual characteristics that promote positive development, namely protective factors (e.g., temperament and social support networks, respectively; Werner and Smith 1992). Protective factors are incorporated into adolescents’ lives and enable them to overcome adversity. On the other hand, some individual and contextual variables (e.g., difficult temperament, poverty, and lack of adult support) are risk factors that increase



Ruth S. Smith (Courtesy of Dr. Ruth S. Smith)

the probability of a youth's involvement in risk behaviors (Lerner 2002; Masten 2001; Werner and Smith 1992).

In their longitudinal study of a cohort of children from the island of Kauai, Emmy Werner and Ruth Smith (1992) described three types of protective factors that emerged from analyses of the developmental course of high-risk children from infancy to adulthood: (1) Dispositional attributes of the individual, such as activity level and sociability, at least average intelligence, competence in communication skills (language and reading), and internal locus of control; (2) affectional ties within the family that provide emotional support in times of stress, whether from a parent, sibling, spouse, or mate; and (3) external support systems, whether in school, at work, or at church, that reward the individual's competencies and determination, and provide a belief system by which to live.

Karen Bogenschneider (1998) derived similar conclusions in her review of resiliency literature. She concluded that variables operated as protective factors in adolescence at various levels of the

ecosystems of youth: (1) at the individual level, such factors as well-developed problem-solving skills and intellectual abilities; (2) at the familial level, for example, a close relationship with one parent; (3) at the peer level, for example, a close friend; (4) at the school level, any positive school experiences; (5) at the community level, for example, required helpfulness (of the kind that occurs when the adolescent is needed to bring in extra income or help manage the home), and a positive relationship with a nonparental adult (such as a neighbor or a teacher).

Models of Interactions

Three models have been described by Mark Zimmerman and Revathy Arunkumar (1994) that examine the interactions between risk and protective factors: (1) the compensatory model, (2) the inoculation model, and (3) the protective factor model. In the compensatory model, the protective factor does not interact with the risk factor; rather, it interacts with the outcome directly and neutralizes the risk factor's influence. In the inoculation model, each risk factor is treated as a potential enhancer of successful adaptation, provided that it is not excessive. This kind of inoculation occurs when there is an optimal level of stress that challenges the individual but, when overcome, strengthens the individual. Thus, the relationship between stress and competence is curvilinear: At low or moderate levels of stress, competence increases, but at higher levels of stress, competence decreases (Wang, Haertel, and Walberg 1999). In the third model, the protective factor interacts with the risk factor in reducing the probability of a negative outcome (Zimmerman and Arunkumar 1994). Although the protective factor may have a direct effect on an outcome, its effect is stronger in the presence of a risk factor. These three models of interaction describe a process that emphasizes the dynamic nature of the relationship between risk characteristics and protective characteristics. Thus the term process may provide a more adequate description of protective characteristics than the term "factor," since the latter implies a static condition.

Recently, the interaction between risk and protective factors has been described as being a part of a transactional process. The transactional process occurs between the environmental context (including risk and protective factors) and inter-

nal resiliency factors to create the resiliency process or outcome. Internal resiliency factors involve the following internal characteristics: cognitive (e.g., academic skills, intrapersonal reflective skills, planning skills, and creativity), emotional (e.g., emotional management skills, humor, ability to restore self-esteem, and happiness), spiritual (e.g., dreams, goals, and purpose in life, religious faith or affiliation, belief in oneself and one's uniqueness, and perseverance), behavioral social competencies (e.g., interpersonal social skills, problem-solving skills, communication skills, and peer resistant skills), and physical well-being and physical competencies (e.g., good physical status, good health maintenance skills, physical talent development, and physical attractiveness).

The transactional process mediates between a person and his environment. Therefore, the process involves the ways a person consciously or unconsciously modifies his environment or selectively perceives the environment. For example, Karol Kumpfer suggests (1999) that resilient youth seek out nurturing adults who facilitate and foster protective processes by positive socialization or caregiving. According to Kumpfer, these caring adults provide that positive socialization through: "1) role modeling, 2) teaching, 3) advice giving, 4) empathetic and emotionally responsive caregiving, 5) creating opportunities for meaningful involvement, 6) effective supervision and disciplining, 7) reasonable developmental expectations, and 8) other types of psychosocial facilitation or support" (1999, 192).

Given previous research, future research directions involve examining how an individual's exposure to adversity is related to other significant individuals' behaviors in her life and also how that exposure shapes an individual's developmental outcomes. Future research also will ideally address the need for longitudinal studies, interdisciplinary research teams, and robust applied research. There is first a strong need for longitudinal studies that focus on elucidating the developmental processes underlying the protective and risk factors and the dynamic interactions of those factors, as well as the developmental pathways of individuals. Second, these longitudinal studies require integrated teams of researchers that comprise multiple disciplines to examine the complex processes that occur at multiple levels of the ecology. Finally, experimental designs are required to test intervention and preven-

tion strategies and to further enhance our understanding of the dynamic interactions of risk factors, protective factors, internal resiliency factors, and the outcomes (e.g., engagement in risk behaviors or prosocial behaviors).

The resiliency research done thus far also provides a greater awareness of the complexity of understanding the concept of resilience, due to its integration within the human adaptation system. Indeed, Ann Masten states, "The great surprise of resilience research is the ordinariness of the phenomena" (2001, 227). Individuals do overcome odds, and development is robust in the face of adversity, as long as basic human coping systems are functional. In order to build the capacity for resilience in individuals, dual focus opportunities must be put in place that increase individuals' and families' coping systems and decrease risk factors.

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See also: Community Youth Development; Positive Development; Rural Environments, Adolescent Well-Being In; Self, Self-Concept, and Self-Esteem; Self-Efficacy; Stress; Youth Development; Youth Mentoring

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Resource Management, Family

See Family Resource Management

Richards, Ellen Swallow

See Philosophy of Human Ecology

Rural Environments, Adolescent Well-Being in

Rural youth, comprising 20 percent of U.S. children and adolescents, face unique and often overlooked challenges. One in four rural youth lives in poverty, creating an undeniable, if somewhat underexplored, problem. Adolescents living in rural poverty are more likely to remain in poverty for longer periods of time, be less educated, and report greater health problems than other poor youth. At the same time, rural adolescents appear to have caught up with and even surpassed their metropolitan peers in terms of substance abuse and delinquent activity, and some studies indicate that they report higher levels of depression and loneliness. Rural adolescents, although more likely than urban youth to graduate from high school, are less likely to attend college. Well-educated rural youth are also less likely to remain in rural environments. Rand Conger and Glen Elder identified three factors contributing to overall resilience among rural youth: academic achievement, high levels of community involvement for both adolescents and their parents (religious involvement being particularly important), and feelings of self-confidence. The most competent youth in their

study were also more likely to be female, have better educated parents, live in higher-income families, and report more intimate relationships with both parents and grandparents (2000, 207, 212).

Economic Hardship

Since 1967, more people living in nonmetropolitan areas have experienced poverty than have those living in metropolitan areas, and the number of rural children in poverty has increased 47 percent from the late 1970s to the early 1990s (Lichter and Eggebeen 1992, 159). Poor children in rural areas are more likely to live in intact families than are poor children in metropolitan areas, and they are also more likely to have at least one parent working. However, the increase of single-parent families accounted for about 60 percent of the increase of nonmetropolitan child poverty (Lichter and Eggebeen 1992, 162). Rural families in poverty are less likely to receive public assistance or have access to health and mental health resources. Experiencing poverty may not influence all rural adolescents equally, as parental education, school experiences, and exposure to other negative life events appear to mediate the effects of poverty (Felner et al. 1995, 787).

Substance Use and Delinquent Behavior

Compared to metropolitan areas, living in a rural environment is associated with increased alcohol, marijuana, and tobacco use. Rural eighth graders in one national sample were 104 percent more likely to use amphetamines, 80 percent more likely to use cocaine, and 70 percent more likely to get drunk than were urban eighth graders (Califano 2002, 1). About half of rural youth begin experimentation with alcohol during the fourth grade (Stevens et al. 1995, 106–109). The size of rural communities may contribute to rates of substance use, with adolescents living in towns of populations less than 2,500 less likely to use alcohol (Edwards 1997).

Patterns for delinquent behavior are remarkably similar for rural or urban adolescents, although juvenile delinquency rates are rising faster in rural areas than in urban populations (Williams 2001). Rural and urban differences were not found in teacher and parental reports of delinquent behavior in a study of school-aged children, after educational and cultural differences were controlled for (Zahner et al., 383). The relationship between

economic hardship and aggression for rural adolescent boys appears to be mediated by parents' abilities to maintain a supportive, non-hostile relationship with each other and their children (Conger and Elder 1994, 262).

Academic Achievement

Rural adolescents are less likely to pursue education past high school than urban students, even though they are more likely to complete high school. Many adolescents do not intend to remain in rural areas as adults, as Elder and Conger (2000, 64) found that half of their rural sample of high school seniors did not desire to live in local communities after graduation.

Youth living in farm families were found in one study to do better in school than youth from rural, nonfarm families, in part because these families tended to be more closely tied to the community, and their parents were more involved in school, religious, and community organizations (Elder and Conger 2000, 113). High school completion may also be associated with increased post-high school economic opportunities (Bickel and McDonough 1997, 34).

Psychological Adjustment

Many changes in rural life have been held to account for the increase in depression, such as a greater increase in two-income families and consequently latchkey children. Churches are no longer the center of community life, and since many individuals have to travel considerable miles to work, there is less time for close-knit communities. Rural youth were slightly more likely to report feeling lonely or depressed than were urban adolescents in a large-scale adolescent study (Blum and Rinehart, 1997). Suzanne Ortega and her colleagues found that rural Americans went from being the least psychologically distressed in 1981 to the most distressed in 1986 (1994, 614). This shift corresponded to farmland values peaking and plummeting during those years.

One study found over one-half of a sample of rural adolescents as highly depressed, with family financial stress strongly related to depression for rural early adolescents (Clark-Lempers, Lempers, and Netusil 1990). Economic hardship was directly related to psychological well-being among rural adolescent girls, as well as being indirectly related, mediated through harsh parenting practices (Si-

mons, Whitbeck, and Wu 1994, 228). The effects of hardship on rural youth's psychological well-being may also be mediated by marital quality. Couples who were able to maintain a positive marriage in the face of economic hardship were also more likely to have children reporting lower levels of psychological distress. Rural students do not appear to differ significantly in terms of suicidal ideation or attempts, although some studies have found rural students at slightly higher risk (Albers and Evans 1994, 384). High-achieving rural students reported higher levels of suicidal ideation than did lower-achieving students.

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See also: Resiliency

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Schneirla, T. C.

Theodore Christian (T. C.) Schneirla (July 23, 1902—August 20, 1968), comparative psychology's most significant theoretician, was one of the few psychologists of the twentieth century who understood the discipline to be mature enough to have its own theoretical base, distinct and separate from its biological and physiological roots. Accordingly, though he himself was a comparative psychologist specializing in army ant behavior, he undertook the early stages of developing a comprehensive theoretical perspective that addressed the origins of all behaviors of all species. The essence of his approach is embodied in his most important contribution, the approach/withdrawal (A/W) concept, the distillation and expression of a set of general organizing principles that attempt to explain behavior in terms of biphasic processes based on stimulative characteristics and effects. The usefulness of the concept is demonstrated by its successful application to a broad range of behaviors in many species (Greenberg and Haraway 2002). The A/W concept and Schneirla's writings and other theoretical ideas (Aronson et al. 1972) have influenced developmental psychologists in fundamental ways (e.g., Lerner 2002). That he has had a substantial impact on many areas of psychological and biological science in general is reflected in the diversity of topics dealt with in the T. C. Schneirla Conference Series (e.g., Greenberg and Tobach 1997; Hood, Greenberg, and Tobach 1995).

Theodore C. Schneirla began his graduate work at the University of Michigan in 1925 under the di-

rection of John F. Shepard, who taught a course in comparative psychology there. The illustrated notebook Schneirla kept in that course served as the outline for the book he wrote with his close friend Norman Maier, the now classic *Principles of Animal Psychology*, which was published in 1935. At Michigan, Schneirla came in contact with H. S. Jennings and Walter Pillsbury. Pillsbury came to Michigan in 1897 after graduating from Cornell. He established and later directed the psychology laboratory at Michigan. Among his students were Shepard, Schneirla, and Clark L. Hull. Schneirla stayed at Michigan among this group of people until the summer of 1927, when he went to the University of Oklahoma to begin his work with ants; he moved later that fall to New York University, where he remained until 1930, when a fellowship allowed him to move to Karl Lashley's laboratory in Chicago. He later returned to New York, where he taught comparative psychology at New York University and subsequently became associate curator of the renowned Department of Animal Behavior at the American Museum of Natural History. The influence of this intellectual climate on Schneirla is reflected in the book he wrote with Maier (e.g., Tobach 2000).

In the approach/withdrawal hypothesis, approach and withdrawal are seen as biphasic processes demonstrated by all animals at all evolutionary levels, processes that can be traced to the evolution of adaptive sensory-motor systems in every species. In lower animals, these mechanisms may be quite simple, such as the single cells in earthworms that are sensitive to light. In verte-



T. C. Schneirla (Photo by Charles Tobach. Reprinted with permission by Ethel Tobach)

brates, however, approach/withdrawal mechanisms are more complex and are mediated by the two branches of the autonomic nervous system. The parasympathetic branch, activated by low-intensity stimulation, facilitates approach and the sympathetic branch, activated by high-intensity stimulation, facilitates withdrawal. The A/W hypothesis embodies three basic statements or principles: the approach/withdrawal intensity hypothesis, the levels concept, and the maturation-experience principle.

The Approach/Withdrawal

Intensity Hypothesis: Stimulus Intensity

The first of these principles states that the stimulus intensity determines the direction of reaction, such that for all organisms in the early stages of their development, low intensities evoke approach reactions and high intensities evoke withdrawal reactions. The manner in which Schneirla interpreted the concept of stimulus intensity is quite similar to the view of perception held by James J. Gibson (1979), which forms the foundation for current work in developmental perception. At the

heart of both Gibson's notions of perception and Schneirla's ideas regarding stimulus intensity is the reliance of their definitions on the existence of mutual relations between organism and environment. Put more simply, what we perceive (such as how intense a stimulus is) is not simply a function of our internal perceptual neurology, nor a simple function of the physical attributes of the stimulus, such as how bright, how loud, or how large it is. Rather, perception results from the relationship between the organism's perceptual sensitivity and the physical properties of the stimuli. What might seem harshly bright, loud, or overwhelming to one species or individual organism might seem quite mild to another species or individual organism. Thus, these species level and individual level differences in definition of stimulus intensity will, via differences in approach/withdrawal orientations, lead to quite distinct evolutionary or life-course developmental pathways, depending upon whether we are talking about differences between species or within species.

The Levels Concept: Levels of Organization

The antireductionistic concept of integrative levels (Partridge and Greenberg 1998) leads to a psychological way of looking at behavior. Thus, though physiological events are participating factors in psychological processes, behavioral events are not reducible to physiology. As initially articulated by Tobach and Schneirla (1968), the psychological use of the levels concept provides for the hierarchical arrangement of behaving organisms in terms of their behavioral plasticity and complexity. As one ascends these levels from the lowest (called taxis) to the highest (called psychosocial), nervous system complexity and behavioral plasticity increase. However, an element of continuity exists between these qualitatively different levels because they are arranged in a hierarchy based on increasing behavioral organization.

The Maturation-Experience Principle

In defining the relationship between maturation and experience, Schneirla (1957) challenged the nativist view that maturation is predetermined by genes, as well as the prominent view that experience is nothing more than conditioning. He wrote that nativists ordinarily underestimate the subtlety, indirectness, and variety of relationships in development that pertain to the terms 'maturation'

and 'experience.' Schneirla (1957) believed that maturation and experience are not simply interrelated components of development; rather, they constitute a *fused* system of dynamic interaction.

Note that maturation here refers to tissue growth and differentiation and the concomitant influences on development; the course of maturation results in experiences, which are all stimulus influences on the organism across its life span. It is the relationship between maturation and experience that directs the course of the organism's behavioral development.

Schneirla's formulation was revolutionary. First, the relationship between structure and function was postulated to be bidirectional—not only does structure determine function, but the converse is also true, function (or experience) can also influence structural maturation. Second, maturation is attributable to more than just genetic effects because it always takes place within an environmental and experiential context. Third, experience comes from a wide variety of stimulative events, both internal and external. Finally, earlier stages (e.g., prenatal experiences) always have effects on later development. In this sense, then, the organism itself is the source of its own developmental progress (Lerner and Busch-Rossnagle 1981).

The A/W concept serves as the primary organizing aspect of the origins of behavior. It provides the set of initial conditions for the way an organism relates to its environment. This initial orientation between organism and environment then structures the organism's transactions with the environment across its entire developmental life span. Though the specific developmental end points cannot be strictly determined by this initial orientation, the developmental course is certainly sensitive to it in many unpredictable ways.

Schneirla's conception of A/W has had substantial significance for our understanding of the behavioral origins of much human behavior. Approach/withdrawal is seen to be at work, for example, in the organizing influences of early temperament on child and adult development. A prime exemplar of this can be found in the work of Jerome Kagan and his colleagues (e.g., Kagan, Reznick, and Snidman 1987) on behaviorally inhibited and behaviorally uninhibited temperament types and their sequelae. There are striking parallels between Schneirla's A/W concept and Kagan's discussion of behaviorally inhibited and

behaviorally uninhibited temperament types. Both are defined in terms of behaviors that serve to either increase or decrease the distance between the organism and sources of stimulation. In fact, they both presuppose the same biological factors associated with approach (behaviorally uninhibited temperament) and withdrawal (behaviorally inhibited temperament) behaviors, namely that approach-oriented behaviors are associated with the activation of the parasympathetic nervous system and that withdrawal-oriented behaviors are associated with the activation of the sympathetic nervous system.

Implicit in the A/W concept is the idea that species and individuals within a species differ in terms of approach/withdrawal behaviors, with important consequences for the evolutionary and life span developmental course. However, Schneirla did not suggest that the basis for these differences was to be found in the genetic code, nor was it to be found in the particular ecology that the organism lived in. Schneirla was persuasive in his articulation, both theoretically and empirically, that the intractable nature-nurture debate was baseless. From Schneirla's perspective one might as well argue over whether height, width, or depth is the true source of the volume of a box. Further, he recognized that one could not talk about the relative contributions of nature or nurture either in an additive manner or an interactional (multiplicative) manner. Schneirla's reformulation of the nature-nurture problem pointed the way to an indivisible codevelopment of both an organism's biology and its transactions with its environment; in a word, a *fusion* of the biopsychosocial contributions to behavior (Greenberg and Tobach 1984). Schneirla's proposal that maturation (the developmental sequences of physical development) and experience (all stimulative effects upon the organism) were mutually interdependent forms the cornerstone of contemporary developmental psychobiology (e.g., Michelle and Moore 1995) and broader holistic theories of behavioral development (e.g., Lerner 2002).

Schneirla's prodigious incorporation of the levels concept in his theorizing led the way for psychology to develop as a developmentally oriented science, distinct from biology and sociology or anthropology. Moreover, it also provided precedent for understanding not only organisms as complex hierarchically ordered systems, but also the ecologies in which organisms live and behave.

That Schneirla had a seminal influence on comparative psychology is clear. However, many of the leading ideas in areas of psychology, ranging from perception and psychophysics, to developmental psychobiology, to infant and child temperament and its organizing role in human development, to ecological approaches to the study of human behavior, are foreshadowed in Schneirla's writings. Even though his work is not often cited today, if one were to trace the intellectual history of the ideas that are at the cutting edge of many fields of behavioral science, the path would inevitably lead somewhere to Schneirla. In understanding the behavior of an organism as arising from the developmental transactions of a complex yet ordered biological organism and a complex yet ordered ecology, Schneirla demonstrated that highly complex organized behaviors could arise without the need to invoke purposive, anthropocentric, or intelligent "designs." Indeed, Schneirla's work with the complex social behavior of army ants foreshadowed the newly emerging, yet profoundly important science of dynamic complex systems (e.g., Bar-Yam 1997).

That his work would find relevance in such a range of areas of study would likely have pleased Schneirla a great deal. Schneirla viewed psychology as a developmental science concerned with a process-oriented understanding of behavior on both evolutionary and individual life span time scales, with comparative studies as its empirical undergirding. This perspective of a developmental and comparative psychology as a general psychology is currently undergoing a renaissance as a broad organizing set of ideas with which to unify the findings of many psychological subdisciplines (Bergman et al. 2000; Greenberg and Haraway 2002; Michel and Moore 1995). As is the case for so many important scientists, such as Jules Henri Poincaré, Ludwig Eduard Boltzmann, and Gregor Mendel, current developments in behavioral science suggest that Schneirla's ideas may have been more insightful than even his contemporary supporters may imagine.

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See also: Epigenetic Principle; Resiliency

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Schooling

See Catholic Schooling: The Achievement of Poor and Minority Students; Community Schools; Early Childhood Education; Full-Service Schools; High School; High School, Advising Students in; Maternal Education; National Association for the Education of Young Children (NAEYC); Transition from School to Work and Adult Life

Search Institute

Search Institute is an independent not-for-profit organization with headquarters in Minneapolis, Minnesota. From its beginning in 1958, the institute has been dedicated to applying the theory and research of the social sciences to promote the well-being of America's children and adolescents. It has grown to a staff of seventy full-time research scientists, writers, trainers, and consultants. Although fully independent, it often works in partnership with universities to advance knowledge about human development and with national organizations to strengthen their capacity to address the developmental needs of children and adolescents.

The Early Years

In 1958, Merton P. Strommen founded the Church Youth Research Center. It conducted pioneering national, survey-based studies of adolescents affiliated with Protestant denominations (e.g., Lutheran, Methodist, Presbyterian). These portraits of youth yoked with consulting and technical assistance services shaped educational and youth ministry programs in thousands of congregations. Through this work, many congregations were exposed for the first time to the concepts of evaluation, effectiveness factors, and vision-to-action planning. The new organization soon found interest in these applied techniques among youth-serving organizations, schools, and colleges. As the work expanded, the name was changed to Youth Research Center (1969) and then to Search Institute (1977).

From 1965 to 1990, Search Institute conducted a number of national research studies, developing

expertise in measurement, survey development, analysis of large and complex data sets, evaluation, dissemination, strategic planning, and planned change. The focus was typically on developing knowledge that directly addressed the program, training, staff development, and future directions of youth-serving organizations, associations, or agencies. This research and application expertise was shaped by a staff trained in psychology, sociology, education, statistics, evaluation, and social work. From its inception, Search Institute has always maintained a unique expertise in the scientific study of religion and religious institutions.

Among the landmark studies and projects from 1960 to 1990 were these:

Profiles of Church Youth was published in 1963.

This study of adolescents included comprehensive investigations of values, attitudes, family dynamics, and spiritual beliefs across many denominations.

In 1971, *Research on Religious Development: A Comprehensive Handbook* was published. It was the first work of its kind.

In 1972, the institute published *A Study of Generations*. *Time Magazine*, in a laudatory review, called it an "assured classic" (see www.search-institute.org/aboutsearch/history.htm).

In 1976, the institute began a major three-year study, funded by the National Institute of Mental Health, to study the role of consultants in promoting the utilization of research findings.

In 1982, Harper and Row published *Religion on Capitol Hill: Myths and Realities*. Funded by the National Endowment for the Humanities, this study explored, via comprehensive face-to-face interviews with a random sample of the United States Congress, the intersection of political and religious ideology. The paperback edition was published by Oxford University Press in 1988.

The Quicksilver Years: The Hopes and Fears of Early Adolescents, was published by Harper and Row in 1987. Funded by the Lilly Endowment, it provided a comprehensive portrait of the life experiences of 5,000 10–15-year-olds and their parents.

With funding from the Vesper Society in San

Leandro, California, Search Institute developed a video-assisted, comprehensive sexuality curriculum for public schools. By 1990, *Values & Choices* was the most widely used sexuality curriculum in U. S. middle schools. It broke new ground by including lessons on birth control. A major grant from the federal Office of Adolescent Pregnancy Prevention Programs helped fund evaluation of a series of demonstration pilots.

From 1983 to 1990, four national studies of Catholic high schools were conducted in partnership with the National Catholic Education Association, with lead funding from the Ford Foundation. A particular focus was on the impact of urban schools on low-income students.

From 1985 to 1990, the institute became a national resource for studying alcohol and other drug use and evaluating alcohol and drug programs. Studies were conducted for state agencies in Colorado, Minnesota, and Wisconsin.

A major four-year study of the mental health of adopted adolescents was planned in 1988–1989 and funded by the National Institute of Mental Health in 1990.

Moving to the Next Stage

The first thirty years set the stage—and to a certain extent built organizational capacity—to launch the line of research that has dominated Search Institute's work since 1990. In that year, the institute published *The Troubled Journey: A Profile of 6th–12th Grade Youth*. With this publication, the institute premiered the concept of developmental assets, creating a framework of thirty developmental nutrients, each of which could be connected either to the prevention of high-risk behavior (e.g., alcohol and tobacco use, violence, school failure) or to the promotion of thriving, or both. This new lens placed the focus on the nature and processes of positive development. Its intent was to provide communities with a set of positive developmental targets, which could both unite community sectors around a common vision of positive development and serve as a road map for organizational and sector planning. In 1996, the framework of developmen-

tal assets was expanded to forty building blocks of successful development.

The forty developmental assets are both a theoretical framework and a research model. Because the model is also intended to have practical significance for the mobilization of communities, the forty assets are placed in categories that have conceptual integrity and that can be described easily to the people of a community. They are grouped into twenty external assets (i.e., health-promoting features of the environment) and 20 internal assets (e.g., commitments, values, and competencies). The external assets are grouped into four categories: (a) support, (b) empowerment, (c) boundaries and expectations; and (d) constructive use of time. The internal assets are placed in four categories: (a) commitment to learning, (b) positive values, (c) social competencies, and (d) positive identity.

A survey instrument designed to assess the developmental assets was first developed in 1988, and then revised in 1996. Since 1990, more than 1,500 cities have conducted the survey, which usually entails a census of all sixth-to-twelfth-grade public school students. More than one million youth have participated, yielding perhaps the largest data sets ever created on American adolescents.

This line of inquiry is now one part of a multifaceted program of theory and research intended to understand the linkages among communities, developmental assets, and health outcomes. In this integrated stream of work, several arenas of investigation have emerged: (1) the definition and measurement of developmental assets, (2) the predictive utility of developmental assets for explaining both risk behaviors and thriving behaviors, (3) the ecological and intrapersonal sources of developmental assets, (4) the nature and dynamics of asset-building communities, and (5) the strategies and tactics that mobilize the asset-building capacity of communities. The primary intent is to develop an interdisciplinary, ecological, and applied line of inquiry that both understands and activates local capacity to reshape and energize the developmental infrastructure within communities.

In the early 1990s, the institute also embarked on a purposeful attempt to encourage cities to orchestrate community-wide initiatives to mobilize citizens, families, neighborhoods, schools, and faith communities to create innovations in asset-building. By design, we chose to invite communi-

ties to join the institute in the process of learning how to engage and transform people, places, and settings, with more focus on empowering communities to innovate than on persuading communities to implement a specific set of strategies. This community change process emphasizes high levels of grassroots engagement, cross-sector leadership, and sustained attention to public awareness and civic engagement. The model of change is grounded in the traditions of social movements, community empowerment, and capacity building. This rapidly expanding arena of institute inquiry and action involves a number of elements, including building planned-change models and a long-term focus on studying the dynamics of multiple asset-building initiatives.

By 1995, several hundred communities had begun intentional asset-building initiatives (in 2002, the number is around seven hundred). The mix includes urban, suburban, and rural communities. As the number of communities grew, it became increasingly clear there was a need for a facilitative support structure that was matched to the nature of the movement itself. Initially this structure came in the form of a series of “Link ‘n’ Learn” half-day meetings. Those involved in using the framework in their community mobilization efforts could come and network with others and share their inspirations and challenges. These meetings served to set a tone of shared learning and networking.

However, as the demand for speaking, training, and consulting grew, it quickly became clear that a more systematic operating structure was needed. In the spring of 1996, Search Institute launched the Healthy Communities–Healthy Youth Initiative, a comprehensive community change effort involving research, evaluation, national conferences, resource development, training, and consultation. It is supported by a number of community, regional, and national foundations. Thrivent Financial Services, a national fraternal benefit society with headquarters in Minneapolis, provides major corporate sponsorship as well as a network of volunteers and professionals, which assists with local mobilization efforts. The goal of this national initiative is to facilitate and encourage asset-building community movements that are more the creation of local ingenuity than the adoption of a prescriptive model.

As the asset-building initiatives continued to

spring up around the country, several regions appeared ready for more sustained support. Community initiatives in New Mexico and in New England led in 1996 to the positioning of regional consultants.

In the spring of 1996, another source of energy around asset-building was emerging in Colorado, based on a number of community efforts and the desire of those communities for a statewide support system. In early 1997, the Assets for Colorado Youth Initiative was launched with support from The Colorado Trust. The initiative was staffed by Search Institute through an office in Denver and intentionally created a combination of micro-grants, public awareness campaigns, and training, consulting, and networking activities to support efforts in dozens of communities. This initiative included three grant programs centered around mobilizing communities, building statewide partnerships, and innovative efforts at asset-building directly with youth. In 2000, Assets for Colorado Youth evolved to an independent, not-for-profit entity.

In 2002, Search Institute’s work is organized around two major themes: the scientific study of community and social change and the provision of knowledge-based resources and supports to asset-building community initiatives. Emerging partnerships with national organizations (for example, with the YMCA of the U.S.A. and the YMCA Canada) promise to provide both catalytic leadership for community change and opportunities to study the processes of personal, organizational, and community transformation.

An overview of Search Institute’s current work, profiles of its staff, and a bibliography of publications can be accessed at its Web site (www.search-institute.org).

Peter L. Benson

See also: Community Youth Development; Comprehensive Community Initiatives; Positive Development; Sexual Abstinence; Social Support; Youth Development

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Self, Self-Concept, and Self-Esteem

What is called the self is reflected in the normal, everyday life experience of an individual, and the first step to understanding the self taken in this entry is to discuss how it is reflected in everyday life experience. The focus then shifts to the theoretical and methodological problems related to analyzing the phenomenon of the self. Specific attention will be paid to the two basic aspects of the self: the cognitive component (represented by the construct of self-concept) and the affective component (represented by the construct of self-esteem).

Self in Everyday Life

“I know that I exist,” or “I know that I am.” At first glance, these are obvious and banal truths to all of us. They are, however, statements that express the unique experience that makes human beings different from other animals. This experience is self-awareness, our human ability to be aware of our own behavior and motivation.

Self-awareness manifests itself in various ways. You can look in a mirror and ask yourself: “Am I attractive? Am I sympathetic?” You may think of an answer, but then another question suddenly comes to you: “What does my mirror image say about my real self? Who am I? Do I know myself? Which other traits am I proud of, and of which am I ashamed? Do I like how I look? Which of my attributes would I like to change? What traits would I like to possess?” You might then realize that in fact you really care what people think of you and what you mean to them. Perhaps you will think: “What do my friends (e.g., partner, mother, father) think of me? Are they fond of me; do they respect me? What do people like about me? Am I important to them and if so of what value am I to them?”

For some people it is important for them to know how they are perceived in various social situations (behavioral aspects of self). They want to make a good impression (positive self-presentation). They are pleased when others praise them and think highly of them. For others it is more important to be independent, to say: “I’m proud that

I stand my ground and that I don’t let others to influence my opinions or my behavior.”

At one time or another everyone experiences a personal crisis or difficulty. For example, one may lose a job, become ill, or be left by a loved one. Suddenly, new, unexpected, and difficult questions related to oneself arise: “What value do I have as a human being? Can I respect myself? Am I mature, or immature? Am I trustworthy? When I look at my past behavior, did I make people happy or did I hurt them? What are my prospects, what does the future hold for me?” All these examples aim to show what a wide range of thoughts people have about themselves. Nevertheless, providing a satisfactory definition of the self is and always has been accompanied by certain difficulties.

Aspects of Self

William James first articulated the distinction between two fundamental aspects of self—“I” and “Me” (James 1999, 69–77). The problem can be illustrated by a simple sentence describing self-reflection. “I am aware of me (myself).” “I” represents the position of self-as-subject, that is, knower, or agent. Without “I,” no reflection of one’s self would be possible. The presence of “I” enables the unifying process through which subjective experience is synthesized and appropriated as one’s own (McAdams 1997, 56). The “I” represents a thinker, or that which knows the self as objectively seen. “Me” represents the position of self-as-object, that is, known. It is everything that one relates to one’s own person; it is all that one knows and feels about oneself, one’s self.

Although we are not generally aware of these two aspects of selfhood, they should be considered in a psychological analysis of the self-reflection process. Self-reflection takes place in the present. Its content (present self) is influenced by what our attention is directed toward, by how we feel and with whom we associate at the moment. Nevertheless, the influence of the present can at times come into conflict with our past (past self), which is interpreted differently in the light of new experiences and over time. For example, the way adults view an adolescent who “has an attitude” more often leads to the conclusion, “We couldn’t have been as awful as this,” rather than to a faithful memory of their past. As the psychiatrist George Vaillant puts it: “Maturation makes liars of us. . . . It is all too common for caterpillars to become butterflies and then



Adolescent looking at self in mirror (Elizabeth Crews)

to maintain that in their youth they had been little butterflies” (Vaillant 1977, 197).

Similarly, our image of the future, of our future self or selves, is influenced by our own past. Although the future self may theoretically be a close copy of the present self, the image is usually connected with a more or less realistic expectation of change in the self, or the achievement of certain goals. The thought of a positive and attractively formulated future self can be highly motivating.

The problem of a scientific inquiry into the self is that it is impossible to observe the self in others. By direct experience, each of us only knows her own self. Everyone, including the researchers, knows that this unique experience cannot be conveyed entirely, it can only be partially described to other people. You might think that you are honestly telling someone who you are or how you feel, but you also recognize that you cannot communicate everything.

In spite of, or maybe because of this, psychologists have created constructs that attempt to describe selfhood. The two terms that are most commonly used are “self-concept” and “self-esteem.” These concepts represent two sides of a coin and can only be separated in theory.

Cognitive Component of Self

The term “self-concept” describes the cognitive aspect of the experience of selfhood. It is everything individuals know and believe about themselves (Baumeister 1999, 5–6). It is impossible, however, to categorically specify which traits or attributes a certain person’s self-concept may include; everyone relates to those things in his own self that are important to him.

For example, an actor or model’s self-concept will most probably include important characteristics related to physical attractiveness, motor abilities, and perhaps high emotionalism. On the other hand, a senior lawyer’s self-concept will be affected by whether she can put events into their appropriate context, and whether she has good judgment and quick verbal skills. The persuasiveness of their public performance is important to both the actor and the lawyer.

Generally, self-concept is a more or less interconnected and integrated set of characteristics and attributes that a person considers important. It includes characteristics used to describe his physical appearance and attractiveness (physical

self-concept). Other important characteristics are related to performance and competency (competence of self-concept, academic or professional self-concept); traits that describe social relationships, both in a wider sense (social self-concept) and in specific social settings (e.g., family self-concept), or specific interpersonal relationships or roles (partnership self-concept, parental self-concept). Another important category includes traits (e.g., truthfulness, honesty, conscientiousness, responsibility) through which we define ourselves in the context of morality, norms, and values (moral self-concept).

From a more general point of view, the term self-concept implies that all self-knowledge is integrated into a meaningful and stable system (self-system). In order for this to be actually so, it is important to have principles that provide a sense of meaningfulness. There are two important keys to understanding the choice of stimuli we decide to admit to ourselves: One is their subjective importance to us, and two is the degree to which they fit our own experience. When we hear things people say about us, we usually remember the things that fit our own experience, or those that are said by people whose judgment we value. On the other hand we quickly forget (or suppress) the views and values of people who are unimportant to us, or information that does not fit our current framework of self (self-schema).

Thus, self-concept is usually built as a mosaic: Self-consciousness (“I,” self as active agent) selects, above all, those elements that strengthen the present structure. Sometimes an unexpected event occurs in the form of a new experience or an unexpected stimulus from an important or new person (institution, norm, rule, and the like), whose influence on our self-concept differs considerably from any of our past experiences. The existing structure and content of self becomes fractured or broken, and thus the new input may lead to a radical change in the integrity of self (e.g., identity crisis in adolescence) or to a state of constant instability or a fragmented self-concept.

The last few sentences show how important a specific social setting can be for the formation and content of one’s self-concept. Kenneth Gergen and Mary Gergen talk about four main processes that significantly influence the formation of self-concept and its changes during the course of a life (Gergen and Gergen 1986, 65–71).

First is the phenomenon of the “looking-glass self,” described by the sociologist C. H. Cooley. According to this concept, others serve as a social mirror in which we see ourselves. This idea was further developed by G. H. Mead, who stated that our self is actually a conception of how we think we are viewed by significant others. The second important process is social comparison. A person learns what is acceptable to his social surroundings by what is considered desirable or undesirable. This knowledge affects his behavior and self-esteem. Third is the process of accepting social roles. Incorporating roles that are generally considered acceptable and socially valuable increases one’s self-confidence and supports a positive relationship toward the self. However, problems arise when there is a conflict between the content of two or more roles. The fourth process is the perception of social differences. Unless it is socially unacceptable, a person tends to emphasize his own difference or uniqueness in an unfamiliar or different environment (e.g., a girl identifies herself more strongly as a girl in a group of boys, a Czech as a Czech among Americans).

Affective and Evaluative Components of Self

From our discussion up to this juncture it becomes increasingly clear that the process of getting to know one’s self (self-perception, self-knowledge, and self-concept) cannot be separated from self-assessment. We compare ourselves (the actual self) to specific people (friend, partner, parent, authority) or with the way we would like to be—our wishes, aspirations, hopes (the ideal self). Other important criteria for us may be the traits or personal characteristics we feel we ought to have in order to satisfy our sense of responsibility, duty, and obligation (the ought self). Comparisons between the actual self and the ideal self, and the actual self and the ought self can lead, according to the self-discrepancy theory, to a variety of feelings (Higgins, 1987). If we sense a conflict between what we are and what we would like to be, we may lose confidence and feel distressed because we have been unable to live up to our own expectations. These feelings may lead to depression. If there is a great discrepancy between the actual and the ought self, it can result in guilt or shame—we were not able to do what was expected of us. In extreme cases these feelings may lead to anxiety-related disorders.

A more generalized level of self-feeling and global self-evaluation may be defined as self-esteem. It represents the intrinsic feeling of the value we have as human beings, and the importance of having a reasonably high level of self-esteem results in the tendency “to put a positive spin on matters pertaining to the self” (Buss 2001, 48).

Several sources contribute to a person’s self-esteem. Individual differences in self-esteem are related to positive and negative emotions. Other people’s evaluations of the person also affect self-esteem. Another important component is our own experience of success or failure in the world.

Early self-development (including reaching a level of self-esteem) is influenced by one’s temperament (temperamental characteristics). Its specific pattern provides the basis for the intensity and stability of a person’s emotional life as well as her energy level (vitality, activity). A prevailing positive affect and high level of activity naturally provides a positive mood and an active attitude toward life, and consequently lays the groundwork for high self-esteem. Conversely, a predominantly negative affect and lower level of energy can lead to dissatisfaction and lack of performance, which may subsequently result in a negative self-evaluation, or a lack of confidence in the self.

Furthermore, our level of self-esteem will often depend on how competent and successful we consider ourselves. People who accept themselves and are aware of their own value are apt to lead a more satisfied, healthier, and successful life. On the other hand, people who see themselves negatively are more apt to experience failure, anxiety, and depression, and their view of the future will more likely be pessimistic.

From early infancy on, self-esteem is also closely related to the judgment and emotional responses of significant others. Children soon learn whether their immediate social environment is safe or unsafe. If a child feels safe in the presence of others and experiences care and love, his self-value is reinforced. If indifference or even hostility by others is present, a feeling of self-derogation and self-rejection develops in the child. If a child is unable to believe that love and care are a given, he experiences a fear of rejection. A sense of self-doubt is reinforced, which in turn leads to the belief that his importance to others has to be constantly verified or proven.

Even in later life (adolescence into adulthood),

self-esteem is influenced by the judgment of others. What is important is not only how others perceive or judge us, but how we interpret our own behavior and the behavior directed toward us. A vicious cycle may be created that, especially in the case of negative evaluation and self-evaluation, is particularly difficult to break: Low self-esteem leads to negative expectations (anxiety), which lead to negative self-presentation, which leads to failure, which leads to negative evaluations from others, which lead to the presentation of their negative expectations, which leads to the perception of negative evaluations and the confirmation of our own failure, which lead to negative self-evaluation and even lower self-esteem (Brehm and Kassin 1989, 67).

A person with a negative view of herself often experiences social pressure. Modern Western individualistic societies put great stock in “working on the self” and view it as having personal and social value. Being strong, successful, honest, positive, and optimistic are prerequisites for health, power, and recognition. Having a negative self-evaluation often lowers the worth of a person in other people’s eyes and is connected to weakness and failure.

Consequently, there is a strong need to have a positive sense of one’s self. It is reflected in our efforts to think positively of ourselves and to view ourselves as being effective and competent. The possession of such a self-concept is often the goal to which our perception and interpretation of our own activities conform; for example, if others evaluate the results of our work positively we usually attribute it to our own ability. When we are evaluated negatively, we are more inclined to blame it on our surroundings or on the behavior of others.

Besides self-esteem we must also mention the concept of self-worth. The two have a lot in common, but the sense of our own worth is more complex. From a life span perspective, self-worth is one of the final products of self-development. It is not only the result of our overall self-evaluation, but it also includes our attitude to life, our relationship to other people and to the world as a whole. Self-worth is closely connected to moral norms, to an overall value system, and to a search for the meaning of life. Ultimately, there is a desire and a need to bring self-integration to a new level, to a higher and more evolved state of self (e.g., transcendental or religious context and state of self).

From the point of view of human ecology, the

self represents not only the unique experience and specificity of each individual, but also the conditions, events, and actual situations of his everyday life. Undoubtedly, the self is primarily a subjective mental phenomenon; its quality and meaning, however, are based on interpersonal interactions and on the social life of the individual. Conversely, the way a person perceives and experiences himself is reflected in his specific behavior and life orientation, which in turn affects his environment.

Moreover, various issues of self are also common topics of communication among people. In this context, the concept of self has its own social representation and develops its own social value and its unique social attractiveness. In modern society, adult men and women are ultimately responsible for the selves they create. The self is viewed as a reflexive project that individuals work on during their whole life and for which they assume authorship and self-responsibility (McAdams 1997, 61).

Petr Macek

See also: Adolescent Identity Formation; Ego Development; Identity Styles; Positive Development; Self-Efficacy; Sexual Identity Development; Social Cognitive Theory

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Self-Efficacy

The Roman poet Virgil observed that “they are able who think they are able.” The French novelist

Alexander Dumas wrote that, when people doubt themselves, they make their own failure certain by themselves being the first to be convinced of it. There is now ample evidence to suggest that Virgil and Dumas were absolutely correct.

When he put forth a social cognitive theory of human functioning, Stanford University psychologist Albert Bandura painted a portrait of human behavior and motivation in which self-beliefs are critical elements. Central among these self-beliefs are perceptions of *self-efficacy*, which Bandura defined as “beliefs in one’s capabilities to organize and execute the sources of action required to produce given attainments” (1997, 3).

One of Bandura’s key contentions as regards the role of self-efficacy beliefs in human functioning is that “people’s level of motivation, affective states, and actions are based more on what they believe than on what is objectively true” (1997, 2). For this reason, how people behave can often be better predicted by the beliefs they hold about their capabilities than by what they are actually capable of accomplishing, for these self-efficacy perceptions help determine what individuals do with the knowledge and skills they have. This helps explain why people’s behaviors may differ when they have similar knowledge and skills. At the same time, self-efficacy beliefs are themselves critical determinants of how well knowledge and skill are acquired in the first place.

People’s self-efficacy beliefs should not be confused with their judgments of the consequences that their behavior will produce. In fact, efficacy and outcome judgments are sometimes inconsistent. A young man may realize that pleasing social graces and physical attractiveness will be essential for wooing the young lass who has caught his eye, which, in turn, may lead to a romantic interlude and even a lasting relationship. If, however, he has low confidence in his social capabilities and doubts his physical appearance, he will likely shy away from making contact and hence miss a potentially promising opportunity. High self-efficacy and negative outcome expectations are similarly possible. A student highly self-efficacious, with great confidence in her academic capabilities, may elect not to apply to a particular university whose entrance requirements are such as to discourage all but the hardiest souls.

Typically, however, self-efficacy beliefs help determine the outcomes one expects. Confident indi-

viduals anticipate successful outcomes. Students confident in their social skills anticipate successful social encounters. Those confident in their academic skills expect high marks on exams and expect the quality of their work to reap personal and professional benefits. The opposite is true of those who lack confidence. Students who doubt their social skills often envision rejection or ridicule even before they establish social contact. Those who lack confidence in their academic skills envision a low grade before they begin an examination or enroll in a course. The expected results of these imagined performances will be differently envisioned: social success or greater career options for the former, social isolation or curtailed academic possibilities for the latter.

Because individuals operate collectively as well as individually, self-efficacy is both a personal and a social construct. Collective systems develop a sense of collective efficacy—a group’s shared belief in its capability to attain goals and accomplish desired tasks. For example, schools develop collective beliefs about the capability of their students to learn, of their teachers to teach and otherwise enhance the lives of their students, and of their administrators and policy makers to create environments conducive to these tasks. Organizations with a strong sense of collective efficacy exercise empowering and vitalizing influences on their constituents, and these effects are palpable and evident.

How Self-Efficacy Beliefs Influence Human Functioning

Self-efficacy beliefs can enhance human accomplishment and well-being in countless ways. They influence the choices people make and the courses of action they pursue. Individuals tend to select tasks and activities in which they feel competent and confident and avoid those in which they do not. Unless people believe that their actions will have the desired consequences, they have little incentive to engage in those actions. How far will an interest in architecture take a student who feels hopeless in geometry? Whatever factors operate to influence behavior, they are rooted in the core belief that one has the capability to accomplish that behavior.

Self-efficacy beliefs also help determine how much effort people will expend on an activity, how long they will persevere when confronting obsta-

cles, and how resilient they will be in the face of adverse situations. The higher the sense of efficacy, the greater the effort, persistence, and resilience. People with a strong sense of personal competence approach difficult tasks as challenges to be mastered rather than as threats to be avoided. They have greater intrinsic interest and deeper engrossment in activities, set themselves challenging goals and maintain strong commitment to them, and heighten and sustain their efforts in the face of failure. Moreover, they more quickly recover their sense of efficacy after failures or setbacks, and attribute failure to insufficient effort or to a lack of knowledge and skills that are acquirable. High self-efficacy helps create feelings of serenity in approaching difficult tasks and activities. Conversely, people with low self-efficacy may believe that things are tougher than they really are, a belief that fosters anxiety, stress, depression, and a narrow vision of how best to solve a problem. As a consequence, self-efficacy beliefs can powerfully influence the level of accomplishment that one ultimately achieves. This function of self-beliefs can also create the type of self-fulfilling prophecy in which one accomplishes what one believes one can accomplish. That is, the perseverance associated with high self-efficacy is likely to lead to increased performance, which, in turn, raises one's sense of efficacy and spirit, whereas the giving in associated with low self-efficacy helps ensure the very failure that further lowers confidence and morale.

Of course, human functioning is influenced by many factors. The success or failure that people experience as they engage the myriad tasks that make up their life naturally influences the many decisions they must make. Also, the knowledge and skills they possess will certainly play a role in what they choose to do and not do. However, because past attainments, knowledge, and skills are always interpreted by the individual, it is the interpretations that form the foundation for the beliefs that are developed about subsequent capabilities. Many talented people suffer frequent (and sometimes debilitating) bouts of self-doubt about capabilities they clearly possess, just as many individuals are confident about what they can accomplish despite possessing a modest repertoire of skills. Belief and reality are seldom perfectly matched, and individuals are typically guided by their beliefs when they engage the world. As a consequence, people's accomplishments are generally

better predicted by their self-efficacy beliefs than by their previous attainments, knowledge, or skills. Of course, no amount of confidence or self-appreciation can produce success when requisite skills and knowledge are absent.

How Self-Efficacy Beliefs Are Created

Individuals form their self-efficacy beliefs by interpreting information primarily from four sources. The most influential source is the interpreted result of one's previous performance, or *mastery experience*. The process of forming self-efficacy beliefs from mastery experiences is simple and intuitive: Individuals engage in tasks and activities, interpret the results of their actions, use the interpretations to develop beliefs about their capability to engage in subsequent tasks or activities, and act in concert with the beliefs created. Outcomes interpreted as successful raise self-efficacy; those interpreted as failures lower it.

In addition to interpreting the results of their actions, people form their self-efficacy beliefs through the *vicarious experience* of observing others perform tasks. This form of efficacy information is particularly powerful when people observe models whom they believe possess the same level of capability as they do themselves. Observing the successes of such models contributes to the observers' beliefs about their own capabilities ("If they can do it, so can I!"). Conversely, watching models with perceived similar capability fail can undermine the observers' beliefs about their own capability to succeed. When people perceive the model's capability as highly divergent from their own, the influence of vicarious experience is greatly minimized. It bears noting that people seek out models who possess qualities they admire and capabilities to which they aspire. A significant model in one's life can help instill self-beliefs that will influence the course and direction that life will take.

Individuals also create and develop self-efficacy beliefs as a result of the *social persuasions* they receive from others. These persuasions can involve exposure to the verbal judgments that others provide. Persuaders play an important part in the development of an individual's self-beliefs. But social persuasions should not be confused with knee-jerk praise or empty inspirational homilies. Effective persuaders must cultivate people's beliefs in their capabilities while at the same time ensur-

ing that the envisioned success is attainable. And, just as positive persuasions may work to encourage and empower, negative persuasions can work to defeat and weaken self-efficacy beliefs. In fact, it is usually easier to weaken self-efficacy beliefs through negative appraisals than to strengthen such beliefs through positive encouragement.

Physiological and emotional states such as anxiety, stress, arousal, and various mood states also provide information about efficacy beliefs. People can gauge their degree of confidence by the emotional state they experience as they contemplate an action. Strong emotional reactions to a task provide cues about the anticipated success or failure of the outcome. When they experience negative thoughts and fears about their capabilities, those affective reactions can themselves lower self-efficacy perceptions and trigger additional stress and agitation that help ensure the inadequate performance they fear. One way to raise self-efficacy beliefs is to improve physical and emotional well-being and reduce negative emotional states. Because individuals have the capability to alter their own thinking and feeling, enhanced self-efficacy beliefs can, in turn, powerfully influence the physiological states themselves. As Bandura (1997) has observed, people live in psychic environments that are primarily of their own making.

The sources of self-efficacy information are not directly translated into judgments of competence. Individuals interpret the results of events, and these interpretations provide the information on which judgments are based. The types of information people attend to and use to make efficacy judgments, and the rules they employ for weighting and integrating them, form the basis for such interpretations. Thus, the selection, integration, interpretation, and recollection of information influence judgments of self-efficacy.

Self-Efficacy and Attainment

Since Bandura first introduced the construct of self-efficacy in 1977, researchers have been very successful in demonstrating that individuals' self-efficacy beliefs powerfully influence their attainments in diverse fields (see Bandura, 1997, and Stajkovic and Luthans, 1998, for meta-analysis of research on the relationship between self-efficacy beliefs and achievement outcomes). Self-efficacy has generated research in areas as diverse as medicine, athletics, media studies, psychology, psychi-

atry, and education. In psychology, it has been the focus of studies on clinical problems such as phobias, depression, social skills, assertiveness, smoking behavior, and moral development. Self-efficacy has been especially prominent in studies of educational constructs such as academic achievement, attributions of success and failure, goal setting, social comparisons, memory, problem solving, career development, and teaching and teacher education. In general, researchers have established that self-efficacy beliefs and behavior changes and outcomes are highly correlated and that self-efficacy is an excellent predictor of behavior. The depth of this support prompted Graham and Weiner (1996) to conclude that, particularly in psychology and education, self-efficacy has proven to be a more consistent predictor of behavioral outcomes than have any other motivational constructs. Clearly, it is not simply a matter of how capable one is, but of how capable one believes oneself to be.

Frank Pajares

See also: Bandura, Albert; Moral Development; Self, Self-Concept, and Self-Esteem; Social Cognitive Theory

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Sensitive Periods

Sensitive (or critical) periods are predetermined times in maturation during which development is especially vulnerable to exogenous influences or specific types of experiences that alter or modify

structures or functions (Bailey and Bruer 2001; Bornstein 1987, 1989). The effects of these experiences during sensitive periods are often, although not always, irreversible. These programmed organism-environment sensitivities typically occur between the time a structure or function emerges and the time it reaches its mature state; they occur most often when the organism is undergoing rapid growth. For example, the eyes develop most rapidly in the second month of gestation, and the visual system is especially vulnerable during this period.

Sensitive periods have been recognized in many areas of development. Studies of embryology have shown that toxins or teratogens that might have no impact at one point have devastating impact when administered at another. Ethologists refer to a sensitive period for imprinting and for various other behavioral tendencies; Konrad Lorenz (1970) described what seemed to be an innate predisposition for ducklings to imprint on an object—to become attached to and attempt to remain close to whatever salient moving object is present during a sensitive period occurring shortly after hatching. Sigmund Freud (1966) spoke of an oral phase in human development during which feeding experiences have the greatest impact on the developing human personality.

The sensitive period concept assigns great importance to early experiences; the theory is that experiences that occur during that period are likely to have long-lasting effects and that once a particular period has passed, it is no longer possible for specific experiences to exert formative influences on the developing organism (e.g., Dawson, Ashman, and Carver 2000; Murray et al. 1999). With respect to many teratogens, for example, older fetuses are at less risk than younger ones. Even if they are present for only a short time, toxins may alter normal structure or function, or prevent it from emerging at all, whereas those structures or functions that differentiate earlier or later remain largely unaffected. Consequently, the effects of a toxin depend as much or more on timing of the exposure to it than on the nature of the toxin itself: Two different toxins may have very similar effects at the same phase of prenatal life, yet neither may affect development at other stages.

Two kinds of plasticity are common in sensitive periods: modifiability and compensation. Modifiability means that, although structures are predestined for specific functions, those functions may

be attuned. Presumptive visual system cells, for example, can function competently in new roles with other cells when transplanted to other organ systems. To be successful, however, transplantation must occur early; after a certain sensitive period, cells die when transplanted. Compensation involves the ability of some cells to substitute for others, permitting recovery of function after neuronal loss or damage. Studies in the neurosciences show that, up to a certain point in development, local cellular defects may be compensated for by neighboring cells; after their sensitive period, however, the defect will be permanent (Chugani 1994).

Marc H. Bornstein

See also: Freud, Sigmund

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Sex Role Stereotypes

A sex role stereotype is a set of beliefs held by a person or group about the typical behaviors associated with being male, or masculine, and female, or feminine. Scholars generally agree that even

young children understand and use sex-role stereotypes, and that we learn about sex role stereotypes in most areas of life (e.g., our families, schools, and workplaces). Sex role stereotypes, like stereotypes in general, are often based on some facts about the group to which they are applied. However, a stereotype often exaggerates the truth and may last long after the facts are no longer true (Leyens, Yzerbyt, and Schandron 1994, 15). For example, women are often stereotyped as being much less intelligent than men. Although men may in the past have appeared to be smarter because they were more likely to go to college, today women outnumber men in college (U.S. Bureau of the Census 2001, Table 263). There is no evidence that men are smarter than women.

Stereotypes of sex roles are beliefs held by groups of people about how males and females typically behave. They are based on a culture's notion of behaviors that are appropriate for males and females (Turner 1970, 283). In industrialized Western societies such as the United States, traditional sex roles for men include working to support a family and performing household maintenance and repairs. Women historically made sure their families were happy, and they were in charge of caregiving tasks such as cooking and child care. Large parts of men's roles happened outside the family home, and women's roles occurred within it.

Sex-role stereotypes are often based on the idea that masculinity and femininity are opposites (Bem 1993, 81). Some examples include beliefs that men go to work and women stay at home, and that fathers are detached, while mothers are over-involved with their children. Sex role stereotypes are often used to emphasize or exaggerate the differences between males and females. Some popular writers even claim that men and women are so different that they might as well be from different planets (Gray 1992). Women are frequently stereotyped as sex objects, nurturers, immature, and incompetent. Stereotypes of men include being strong, in control, self-sufficient, aggressive, and breadwinning. Although stereotypes can be either positive or negative, it is usually the way the stereotype is used that reflects the values attached to it. For example, being nurturing may also be viewed as being dependent on others. Similarly, being in control and self-sufficient may also be viewed as being inflexible and aloof. There is no research that supports the underlying stereotype

that men and women are opposites.

People often use sex role stereotypes to compare or to judge others, such as comparing a woman to the female stereotype to see whether she is "womanly," or using the male stereotype to determine whether a man is "manly." Men who stay home and take care of their children while their wives work outside the home are often viewed very negatively, as are their wives. These men do not fit the male stereotype of breadwinner, and the wives don't fit the female stereotype of caregiver and nurturer. Sex role stereotypes can also affect workplace relationships. For example, a supervisor reprimands an employee for not completing a project on time. If the supervisor is male, he is likely to be viewed with more respect than if the supervisor is female because men are supposed to be in charge. A strict female supervisor might be viewed as a power-hungry bitch because she is not acting like a meek, dependent woman. Similarly, children usually do not make fun of girls because they love kittens. However, a boy who loves kittens might be called a wimp or a sissy. It is common to call girls "tomboys" or to call boys "momma's boys" when their behaviors are similar to the stereotypes for the opposite sex.

Unfortunately, stereotypes are so common in our society that we sometimes do not notice behavior that does not fit the stereotypes. For example, our stereotypes about the male sex role may prevent us from noticing times when men are very tender and loving. Another possibility is that we may give tender and loving men more credit than they deserve because the stereotype is that they do not nurture. Similarly, it may be more difficult for women to be recognized as successful athletes or businesspeople because these are typically thought of as masculine jobs.

Sex role stereotypes are especially important when people meet each other for the first time. When you know little about another person, a stereotype may seem to be a useful starting point for you to figure out what the other person is like. For example, someone meeting a 12-year-old boy might think that he likes to play video games and street hockey. An 11-year-old girl might be expected to like playing with dolls and dressing up.

Sex role stereotypes can be very harmful in some situations. The stereotype that women are emotional, unassertive, dependent, and followers rather than leaders kept women from public office

for many decades. In fact, sex role stereotypes kept women from being allowed to vote until 1920. Sex role stereotypes are extremely destructive when they cause discrimination against men or women, or when they limit the choices or the rights of men or women. They are probably the most destructive when the person being stereotyped actually believes the stereotype. It is sad to think that many women once believed they were not smart enough to vote—and that all men were!

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See also: Contemporary Men's Movement; Gender Roles and Society

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Sexual Abstinence

Sexual abstinence may be defined as not engaging in sexual activity that could put a youth at risk of contracting a sexually transmitted disease or

cause pregnancy. As well, it may be influenced by internal differences such as personal values and the many external environmental factors that influence them. Sexuality is a natural part of being human, yet sexual activity can lead to many negative consequences. Every year three million teenagers contract a sexually transmitted disease (Alan Guttmacher Institute 1994, 19–20). In addition, "nearly one million teenagers become pregnant annually . . ." (National Campaign to Prevent Teen Pregnancy 2001, 1). Youth who choose to abstain from sexual activity can eliminate the risk of contracting one of many sexually transmitted diseases while avoiding pregnancy and possible emotional consequences. Since many environmental factors influence adolescent's decisions on sexual abstinence, it is important to take an ecological perspective.

The various concepts of sexual abstinence can be thought of as falling on a continuum. On one end of the spectrum would be the conservative view that sexual abstinence means abstaining from any physical contact, including holding hands and kissing, that could lead to sexual intimacy. At the other end of the continuum would be sexual abstinence as refraining only from vaginal intercourse, possibly not even including oral or anal sex. Since kissing is generally not a means of transmission for sexually transmitted diseases, a middle approach would be to define sexual abstinence as refraining from any sexual activity leading up to and including intercourse where there is contact with body fluids that could result in disease transmission.

Another issue when addressing adolescent sexual abstinence for adolescents is the matter of how long a youth should abstain from sexual activity. For example, is it appropriate to simply teach abstinence and hope the youth will abstain a little longer than without any education? If adolescents wait even a few months before engaging in sexual activity, has that helped reduce their chances of negative consequences a little? Is the goal for them to finish high school, so that sex is all right for teenagers who have graduated and could, possibly, support themselves? Or is the goal abstinence until they are in a loving monogamous relationship, so that the risk of disease is cut down and it would not be such a big problem to have a baby in those circumstances? Lastly, is sexual abstinence until marriage, as taught by most religions, the ultimate



Billboard promoting sexual abstinence (Michael Siluk)

goal? Different groups often take different approaches. Though sexual abstinence is ideal for teenagers, it is also important to remember that the term can be interpreted and defined in different ways. Environmental and societal factors influence adolescents' views on what they believe sexual abstinence means.

Although few would disagree that sexual abstinence is a significant strategy for avoiding thoughtless and careless sexual experimentation by young adolescents, the high percentage of sexually active teenagers indicates that many youth are not abstaining from sex. "In 1999, nationwide, 49.9 percent of high school students had ever had sexual intercourse; 16.2 percent of these youth have had four or more sexual partners" (Kann, Kinchen, and Williams 2000, 2). Ideologies on sex education vary: At one extreme are those who believe that youth will have sex anyway, so we had better try to convince them to take precautions to decrease their risk; at the other end of the spectrum are those who advocate giving little real information and push a rather uninformed "Just say no!" approach. Regardless of opinions on what should be taught, the fact remains that the only 100 percent

effective way to prevent pregnancy and sexually transmitted diseases is sexual abstinence.

"Abstinence should be strongly stressed as the best choice for teenagers because of its effectiveness and its consistency with the beliefs of adults *and* teenagers" (National Campaign to Prevent Teen Pregnancy 2001, 1). Nevertheless, there are different approaches to encouraging abstinence. Some abstinence-based sex education programs encourage abstinence while still providing basic information on sexual reproduction, sexually transmitted diseases, pregnancy, and contraceptive options. This approach encourages abstinence but still gives information in case youth choose not to abstain. Other abstinence-only programs do not cover contraceptives for fear of sending a mixed message. These programs may emphasize the negative consequences of sexual activity to try and deter youth.

Another method uses a faith-based or moral approach. This type of program often incorporates the idea of making a promise or commitment to wait until marriage for sexual activity, sometimes even using a promise card the youth can sign as a concrete reminder. The faith-based method often

gives in-depth information about the negative consequences of sexual activity, including sexually transmitted diseases and pregnancy, but also emphasizes the moral consequences. This approach rarely includes information on contraception, since a commitment to remain chaste is the goal. Although results of these different types of programs seem to be mixed, more positive results have been seen with the virginity pledge. "Adolescents who pledge, controlling for all of the usual characteristics of adolescents and their social contexts that are associated with the transition to sex, are much less likely than adolescents who do not pledge to have intercourse" (Diggs et al. 2001, 2). The type of information provided, along with many other environmental factors, influences adolescents' decisions.

Adolescents who have already engaged in sexual activity may have a harder time with sexual abstinence. For this reason, it makes sense to present sex education before teenagers are already involved in the activity. A strong abstinence message may be better received by younger teenagers. Once a youth has engaged in sexual activity, however, it does not mean that he must continue. Although it may be harder for sexually active youth to abstain from further sexual activity, it is still a good goal. The faith-based programs may refer to a new commitment to abstain from sex as a "secondary virginity."

It is also important to remember that sex education alone is only one factor that affects an adolescent's choice to have sex or to abstain from sex. Individual differences, as well as many environmental factors including family and friends, influence a youth's decision. Other societal factors such as school, media in particular, and even governmental policy also impact this choice.

The Search Institute has identified a framework of developmental assets, including external and internal assets. Under the internal assets category is a grouping of positive values, of which restraint is one. "Restraint focuses on young people's believing it is important not to do some things because they are against their values. One of the areas addressed in this item is a commitment to postponing sexual intercourse" (Benson 1997, 49). The amount of restraint a youth has can be influenced by their personal values and faith. Individual hormone levels may affect a teen's desire for sex, but teenagers with strong values may exhibit more restraint. So, while many factors contribute to the

teen's choice regarding sexual activity, the difference between individuals also plays a role.

Looking at environmental influences, those at the microsystem level are very important. The microsystem is a "pattern of activities, roles, and interpersonal relations" (Bronfenbrenner 1989, 227). At this level the adolescent's family and the values the family holds can influence whether youth will abstain from sexual activity. Although a strong religious faith is no guarantee that the adolescent will choose abstinence, it is an additional factor that can influence the decision. The positive effect of religion is evident for youth who value religion. They are consistently less likely to engage in sexual intercourse (Scales and Leffert 1999). Another family factor is communication. If the parents value abstinence and share their views with the youth, this too can influence the adolescent choice. "Teenagers cited parents more than any other source as having the most influence over their sexual decision-making" (National Campaign to Prevent Teen Pregnancy 2001, 2). Factors such as amount of adult supervision for youth can affect sexual abstinence too. Youth who are home alone for five or more hours per day are more likely to be sexually active (Perkins et al. 1998).

Also at the microsystem level are friends and peers. Even though abstinent youth may have sexually active friends, those who do may feel abnormal or somewhat pressured to have sex. Similarly, youth whose friends are abstinent may feel that sex can wait. In addition to the group of friends an adolescent spends time with, whether or not these friends are dating may play a part. "Peers become central sources of support and influence during early adolescence" (Huston and Alvarez 1990, 166). "Pressures for dating and sexual attractiveness are intensified" (Huston and Alvarez 1990, 166). If friends tend to drink and attend parties or participate in other high-risk behaviors, there may also be greater risk.

Another microsystem consists of the larger peer group, including those the adolescent wouldn't consider close friends, but rather acquaintances. This group can also have an impact. If youth in this larger peer group are sexually active, it may well be that "peer group pressure is such that they are forced to accept and condone the suggestive language and behavior of their sexually active peers, even if it makes them uncomfortable" (Elkind 1994, 157). While the teen may not have

total control over this type of exposure, youth tend to spend time around other youth with similar values, lessening the exposure to this kind of pressure for abstinent teens.

Another environmental factor influencing adolescent choice about sexual activity that most acknowledge but may underestimate consists of the media. Youth are exposed to an incredible amount of sexual content in many different media. Generations have listened to music about love, but music now is much more explicit than ever before. The current cultural milieu has music in visual forms, with MTV and music videos that leave little to the imagination. It is hard to watch prime-time television without running across sexual content or to find a movie in the theatre without sexual scenes. Even talk shows often have topics associated with sex, and soap operas are filled with sexual themes.

Not only is sexual content common, this content rarely portrays sex in a marriage setting but instead shows infidelity or casual sex between two people who are not committed to marriage. Teenagers viewing these programs may think that sexual activity is the norm and may feel they are abnormal if they choose to abstain from sex and wait until marriage. Although there has been some hesitation at implying a causal relationship between viewing sexual content and increased teen sexual activity, there does seem to be “a relationship between exposure to typical television programming and beliefs and expectations concerning sexual behavior within the larger society” (Roberts 1993, 179). The media may have an even stronger influence on adolescent beliefs about sexual norms for the many adolescents who do not receive information from parents on issues such as kissing and making out all the way up to intercourse. “Apparently such topics are too embarrassing, too difficult to address” (Roberts 1993, 180). Fortunately the media constitute only one of the factors influencing youth. If adolescents are not overexposed to the media and if they have parents or other adults who are willing to talk to them about what they are seeing and help them realize the sensationalism of much of it, they may not be as adversely affected.

Youth sexual behavior and attitudes are subject to influence at many levels. At a macrosystem level, governmental policies can also influence youth. What programs are being funded with government grants? Are the programs abstinence-only,

abstinence-based, or safe-sex programs? Safe-sex programs tend to present more information on the use of birth control to prevent pregnancy and condoms to help protect the youth from sexually transmitted diseases than the abstinence based programs, whereas abstinence-only programs generally don't address them at all. A safe-sex program may mention abstinence as an option, but it tends to be a much smaller part of the curriculum. On a more local level does the school have a health clinic? Does the clinic provide contraception and distribute condoms without parental consent or is it geared to work with families? Do the policies strive to keep parents involved with their teenagers or to provide services to them without parental involvement?

Societal factors and the cultural milieu can also play a part in promoting sexual abstinence. Since values at the individual and family level can affect an adolescent's choice regarding sexual abstinence, societal factors that promote those values can also have an impact. How much our society values sexual abstinence in teenagers has an impact on the success of efforts to promote sexual abstinence in adolescents.

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See also: Adolescent Pregnancy and Prevention; Prenatal Decision Making by Adolescents; Search Institute; Adolescent Mothers

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Sexual Abuse

Sexual abuse is any form of activity in which one person uses another to satisfy his or her sexual needs. Sexual abuse includes child sexual abuse, rape by a stranger, acquaintance rape, and sexual harassment. Rape is an act in which a person attempts to commit sexual intercourse with another person by force or threat of force, or even without force, when a victim is under the influence of drugs or alcohol (Schwartz and DeKeseredy 1997). Sexual harassment is an act of sexual threat or bribery that makes sexual contact a condition of an individual's employment or is used as the basis for employment decision of a victim. Sexual harassment also includes creating an intimidating and hostile working environment by inappropriate verbal and physical behavior, such as persistent and offensive sexual jokes and comments, unwanted touching, and persistent and unwanted requests for dates (Welsh 1999).

Statistics from the FBI Uniform Crime Reporting Program (2001) indicate that in the year 2000 there were 90,186 reports of attempted and committed rapes across the United States. During 2000 the incidence of rape was 32 per 100,000 people.

However, reports of rape underestimate the actual number of rapes, because many women assaulted by acquaintances or their husbands do not report the crime to the police. In addition, standard definitions of rape do not include the fact that males are also victims of sexual assault by other males.

Unfortunately, there are still not adequate studies about sexual harassment. Most studies focus on sexual harassment of women in the workplace. Sandy Welsh (1999) reports that studies indicate that, depending on the sample, between 16 percent and 90 percent of working women experience sexual harassment in their lifetime.

To properly understand the reasons for the existence and the effects of different forms of sexual abuse, we must include all levels of human ecology. Even though much research has focused on societal and cultural forces that influence the onset and existence of sexual abusive behavior, other research is focusing on combining sociocultural and psychological levels. Sociocultural forces shape the environment in which children are raised, and this environment contributes to the creation of internal characteristics, such as attitudes, dispositions, and behaviors leading to sexual aggression (Schwartz and DeKeseredy 1997).

There are several sociocultural factors that scholars note as possible explanations of the existence of sexual abuse. One is drug or alcohol use, which represents one of the major influences on acquaintance rape. Both men and women are not necessarily aware that when a man has sexual intercourse with a woman who is too drunk to resist or to give her consent, such behavior represents the act of rape (Schwartz and DeKeseredy 1997). Other sociocultural factors that may create a climate promoting sexual violence toward females are specific types of male groups, such as fraternities or sports groups. These groups often may emphasize male dominant/female submissive attitudes, group loyalty, and group secrecy, all of which may give men an idea that women are appropriate objects for sexual attack (Schwartz and DeKeseredy 1997).

Culturally supported beliefs and attitudes, such as male dominance, gender segregation, and inappropriately justified sexual violence and harassment may promote sexually aggressive behaviors. These kinds of beliefs, called rape myths (Burt 1998), may encourage women to blame themselves for their own assaults, and may lead women and

men who hold them to be less sympathetic to rape victims than is the case among women and men who do not hold these kind of beliefs. Exposure to sexually violent images facilitates men's sexual aggression against women, lessens sensitivity to rape, and increases the acceptance of rape myths (Donnerstein and Linz 1998).

The effects of sexual abuse can vary. Among the most common effects are the victim's sense of a lack of control over her life, depression, suicidal ideation, and feeling abandoned (Schwartz and DeKeseredy 1997). Because of rape myths, victims blame themselves for their own victimization; they may have no support from friends, family, and colleagues, who may also believe that the victimization is the victim's own fault. Victims who do have support from their friends and who experience intervention have more favorable likely outcomes (Schwartz and DeKeseredy 1997).

Women's responses to harassment may include sexual avoidance, negotiation, or confrontation. However, women are more likely to ignore the harassment, to deflect the harassment by joking or going along with it, or to make an effort to avoid the harasser (Welsh 1999). Women do not report harassment for a variety of reasons, such as a fear of retaliation or disbelief, or a fear of losing one's job or making the situation worse.

Many researchers believe that sexual abuse will not be eliminated until there is a fundamental change in the structure of a society as a whole. Rape awareness educational campaigns, alcohol policies, and disciplinary procedures may have some positive effect in preventing some people from becoming sexual coercive (Schwartz and DeKeseredy 1997). Education about different forms of sexual abuse, rape crisis centers, and sexual abuse law reform and legal practices have been effective in preventing sexual abuse (Schwartz and DeKeseredy 1997). Broad cultural and structural changes are needed for fundamental transformation in the dominant conception of masculinity in society and culture.

Helena Jellic

See also: Child Abuse; Domestic Violence; Violence in Teen Dating

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Sexual Identity Development

A sexual identity is an organized set of perceptions that an individual has about the meaning of her sexual attractions and desires, directed toward forming a sense of self given existing social categories. Sexual identity is historically and culturally specific, is selected from those currently available, is changeable over the life course, and may or may not be consistent with one's sexual orientation or behavior. Current sexual identity categories are heterosexual, homosexual (or gay), and bisexual. Other terms used to describe sexual identity include *questioning*, a state of uncertainty about one's sexual identity; *unlabeled*, a refusal to accept a sexual identity; *queer*, a political and social ideology that can include all types of sexual identities; and *transgender*, not a sexual identity per se, but a gender role that is inconsistent with one's biological sex.

Sexual identity is sometimes mistaken for sexual orientation, a deeply rooted, enduring predisposition toward erotic or sexual fantasies, thoughts, affiliations, affection, or bonding with members of one's own sex (homosexual), the other sex (heterosexual), both sexes (bisexual), or, perhaps, neither sex (asexual). Sexual orientation is not subject to conscious control, is stable, and is probably immutable. Sexual orientation is related to, but is occasionally independent of, sexual identity and sexual behavior. Thus, an individual might be homosexual by sexual orientation, identify as heterosexual, and have sex with both males and females (bisexual behavior). Another youth might have a bisexual sexual orientation, identify as gay, and have sex only with females.

James Marcia's theories of general identity formation (1980) provide a clear framework to understand sexual identity development. Marcia proposes different identity statuses that depend on

whether an adolescent is actively exploring an identity or actively committed to an identity. Marcia's four statuses are:

Identity diffusion: The individual has little or no sense of commitment and is not actively seeking commitment to any identity.

Identity foreclosure: The individual has accepted an identity prescribed by another person or by societal expectations, without exploring options or experiencing an identity crisis.

Identity moratorium: The individual is in a period of crisis, in which he explores a number of alternatives in an effort to develop a coherent identity.

Identity achievement: The individual has completed moratorium and has emerged with a conscious and relatively clear commitment to an identity. Achievement is the ideal form of identity status.

From Marcia's descriptions, it is clear that sexual identity refers to more than sexual orientation. For example, an identity moratorium might revolve around a crisis over one's sexual orientation, but would include identity issues such as what it means to be a sexual being—issues that are salient to adolescents and early adults.

Given the increased visibility of same-sex attractions during the last decade in North American culture and given the gains of the feminist movement, it is likely that far more adolescents have become consciously aware of how their sexuality is integrated into their personal identity. However, in a heterocentric society (one that assumes all members are heterosexual) where male sexuality is still privileged, heterosexual males may be the least aware of how their personal identity might include a sexual component. If that is true, does a heterosexual sexual identity formation follow the process Marcia theorized? More specifically, do many heterosexuals achieve a personal identity; have they passed a period of crisis and emerged with a conscious commitment to being heterosexual? Do they even go through a moratorium period during which they struggle with what it means to be heterosexual?

Contemporary research on gay, lesbian, and bisexual sexual identities reveals diverse developmental trajectories, but unfortunately little or no

similar research has been conducted on sexual identity development among heterosexuals. This lack may be in large part because many adolescents, parents, peers, educators, health care providers, and social science researchers assume that heterosexuality develops "naturally," and conclude that a sexual identity is therefore something for people of "alternative" orientations. Given this lack of research, it is difficult to determine whether a heterosexual identity exists.

An argument could be made that a sexual identity exists in people of all sexual orientations, including heterosexuals. Given the variety of sexual experiences of adolescents and the sexual changes of puberty, people of all sexual orientations have ample opportunity to consider what it means to be a sexual being. Even though a heterosexual identity is assumed, is uninvestigated, and may not develop through an entirely conscious process, it may nevertheless exist. Having a heterosexual identity could be a form of what theorists call unmarked identity, whereas having a nonheterosexual identity is a marked identity. Heterosexual identity rarely involves a coming-out process, but the ubiquity of heterosexuality in contemporary culture could be taken as a manifestation of identity.

A possibly stronger argument could be made that heterosexual identity only exists as a *consciousness*, or something that one is generally aware of, especially when its assumptions are violated, but not something that is a part of one's identity. The process of sexual identity formation, as conceptualized in Marcia's developmental theories, does not appear to apply to heterosexuals. The scant research conducted on heterosexual identity development confirms the generalization that the vast majority of heterosexuals are in one of Marcia's first two stages of identity development: *diffusion*, where the individual has little or no sense of commitment and is not actively seeking commitment to an identity, or, at best, *foreclosure*, where the individual has accepted an identity prescribed by societal expectations, without exploring options or experiencing an identity crisis. Generally, sexual identity appears not to be as salient to heterosexuals, especially to heterosexual males, as it is to youths who are gay, lesbian, bisexual, unlabeled, or questioning.

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See also: Adolescent Identity Formation; Contemporary Men's Movement; Gay and Lesbian Studies; Gender Roles and Society; Identity Statuses; Identity Styles; Religion and Sexual Orientation in America

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Smoking and Tobacco Use

Tobacco is a plant-based product that has been used as a drug in numerous forms by humans for thousands of years. In today's world it is most commonly used in cigarettes, but other forms of tobacco include cigars, pipes, and bidis (hand-rolled, flavored cigarettes produced primarily in India), which like cigarettes are smoked, and moist snuff and leaf tobacco, which are held in the mouth or chewed. In 2000, median smoking levels in the United States, based on state-level statistics, were 24.5 percent among men and 21.2 percent among women. Tobacco is one of the world's most significant health hazards and leads to about 3.5 million deaths each year, including over 400,000 deaths in the United States, from cancer and other diseases (Centers for Disease Control 2001). Tobacco use almost always begins during childhood or adolescence due to social influences such as family use, peer use, and media portrayals of smoking. However, people who continue to use it in their adult years, despite the health dangers, do so primarily because tobacco contains a highly addictive chemical called nicotine.

Nicotine and Addiction

Nicotine can reach the brain within several seconds of inhaling tobacco smoke into the lungs, or several minutes of holding snuff in the mouth, so that the nicotine is absorbed into the bloodstream

(Kozlowski, Henningfield, and Brigham 2001). In the brain, nicotine binds to receptors for the neurotransmitter acetylcholine, and a number of changes take place in the body as a result. Nicotine can be highly toxic, especially for people who are not regular users of tobacco. When a person uses tobacco for the first time, the effect is usually unpleasant and includes nausea, light-headedness, and intoxication. Upon further exposures the body begins to defend itself and adjusts to the nicotine in several ways. This adjustment reduces the extreme reactions to nicotine, and if the person continues to use tobacco, greater amounts will be needed to produce the same effect; this physical process is described as developing tolerance. For regular users, nicotine is a mild stimulant and increases attentiveness, heart rate, and blood pressure, among numerous other effects (Benowitz 2001).

Because of the ways that the body is forced to adjust to continued nicotine exposure, it will begin to require nicotine in order to function normally. If the person then stops using tobacco, she will experience withdrawal, a combination of unpleasant sensations including irritability, anxiety, and difficulty concentrating. A new dose of nicotine will relieve these symptoms, and therefore the body becomes dependent on continued use of tobacco. At that point, the person is addicted. Studies have found that tobacco users regulate their daily intake in such a way as to maintain a stable level of nicotine in the blood throughout the day. When they awake in the morning after having been deprived of tobacco while they slept, tobacco users typically are already experiencing mild withdrawal and are physically uncomfortable until they have their first cigarette or dose of snuff. Based on evidence such as the cravings produced by tobacco deprivation and the difficulty that long-time users have in quitting even when they are highly motivated, some researchers have concluded that nicotine is probably as strongly addictive as other well-known addictive drugs such as heroin, cocaine, and alcohol (Benowitz 2001).

Health Effects

The specific health risks of using tobacco vary according to the type of tobacco product that is used. Cigarette smoking is the most lethal form of tobacco use, and cigarette smoke contains many toxic substances besides nicotine, such as carbon monoxide, ammonia, hydrogen cyanide, formalde-



Adult smoking in presence of child (Laura Dwight)

hyde, and cadmium (National Cancer Institute 1999). For cigarette smokers, the most critical health dangers are the increased risks for cancer, especially of the lungs, and disorders of the heart and circulatory system such as heart attack, stroke, and hypertension. Smokers are also at much higher risk for respiratory diseases such as emphysema, pneumonia, and bronchitis. Emphysema is a particularly debilitating, irreversible condition in which the lungs lose their capacity to handle oxygen, leading to a great deal of difficulty in breathing for the rest of one's life. A woman who smokes during pregnancy exposes her developing baby to the risk of birth defects, spontaneous abortion, and low birth weight. Snuff users are not at risk for the respiratory diseases that smokers face, but in addition to nicotine addiction they face increased probability for oral cancer and other mouth problems, including lesions, gum recession, loss of tooth structure, and discolored teeth (National Cancer Institute 1992).

There are also health risks associated with being around smoke from other people's cigarettes—called secondhand smoke—on a regular basis, even for people who don't smoke themselves. Such "passive smoking" is associated with a 20 to 30 percent increase in risk for lung cancer, other respiratory diseases, and cardiovascular diseases. Children are especially sensitive to the health dangers of secondhand smoke, and exposed children are at greater risk for asthma and other chronic lung problems, ear infections, and, in the case of infants, sudden infant death syndrome (National Cancer Institute 1999).

Tobacco Use by Youth

The great majority of tobacco experimentation occurs during early and middle adolescence. For example, the peak ages for trying a first cigarette are 11–15 (U.S. Department of Health and Human Services 1994), and about 80 percent of smokers report that they began smoking before age 18 (Centers for Disease Control 2001). One of the critical influences on tobacco experimentation is the young person's parents: An adolescent is more likely to begin using tobacco if one or both parents use it or if the adolescent believes that they would not strongly disapprove. The adolescent's friends and peer group are also highly influential, and adolescents are much more likely to smoke if they report that their friends also smoke. Within the

broader social environment, portrayals of tobacco use in movies and other media have also been found to be powerful influences on early use. Finally, personal factors such as the adolescent's various beliefs about tobacco use are important as well. For example, young people who mistakenly believe that tobacco is used by most people in society will be more likely to try it themselves (U.S. Department of Health and Human Services 1994).

For many years the most common strategy for preventing young people's tobacco use was school-based educational programs. The early school-based programs, which often aimed only to increase students' knowledge about tobacco's dangers, were generally not effective in reducing the percentage of students who tried tobacco or who became regular users. Over time, however, educational programs became more sophisticated and began to focus on helping students to counteract the social influences to use tobacco, as well as on teaching useful life skills such as coping with stress. Programs also began to reach beyond the classroom to include community organizations, parents, and mass media. Several of these later programs have been found to be effective in preventing tobacco use by many adolescents, with effects sometimes extending through the high school years (U.S. Department of Health and Human Services 2000).

In addition, in the 1990s public health officials turned their attention to controlling tobacco-related features of young people's environments. These community-wide approaches include raising the price of tobacco through government tax policies; reducing young people's access to tobacco, by such means as strictly enforcing age restrictions on tobacco sales; broadcasting antitobacco media campaigns; and restricting tobacco advertising that would appeal to children and adolescents. In sum, current approaches to tobacco prevention reflect the need to address all of the social contexts in which young people live and grow. Perhaps due to this combination of activities, tobacco use by youth began to decline in the late 1990s. The Monitoring the Future project, which surveys a national sample of American high school youth each year, reported that daily cigarette smoking among twelfth-graders in the United States dropped from a high point of 24.6 percent in 1997 to 19.0 percent in 2001 (University of Michigan 2001).

Helping People to Quit

Once a person has become addicted to nicotine, quitting tobacco is extremely difficult, but it is not impossible. The process of quitting usually involves several failed attempts before an individual is finally successful. A valuable recent development is nicotine replacement therapy, which is administered under a doctor's care. With this approach, the person stops using tobacco immediately but continues to receive nicotine in steadily decreasing amounts from gum, a nasal spray, or a patch that is placed on the skin and slowly releases nicotine into the bloodstream. This therapy does not completely eliminate the discomfort of withdrawal, but it makes the process easier to manage until the body's addiction is overcome (Kozlowski, Henningfield, and Brigham 2001). Many people trying to quit also benefit from individual counseling or working together with a support group of similarly motivated tobacco users.

The Politics of Tobacco Control

The 1990s were a time of turbulent change for the status of tobacco in American society. Many communities passed laws that protected nonsmokers from the dangers of secondhand smoke. Several states increased tobacco taxes, established statewide tobacco control programs, and launched large-scale media campaigns. Information about the tobacco industry was revealed that showed that for many years, tobacco companies had manipulated their products to be as addictive as possible, while also trying to hide information about tobacco's dangers (Hurt and Robertson 1998). These revelations helped to turn public opinion significantly against the tobacco industry. In addition, over forty states joined together to sue the major tobacco companies, seeking payment for their health care costs in treating tobacco-related illnesses. This legal action led to a settlement in November 1998 between the largest tobacco companies and 46 states, under which the companies agreed to pay about \$10 billion per year to the states and also accepted restrictions relating to tobacco advertising and other business practices. Although the settlement represents a historic event, there is considerable debate about how valuable it will eventually be for the goal of reducing tobacco use in the United States (Daynard et al. 2001). Despite the developments of recent years, tobacco re-

mains one of the most significant challenges for our society's health.

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See also: Cancer: Prevention and Screening; Cardiovascular Disease; Healthy Indoor Air; Indoor Air Pollution; Low Birth Weight Infants; Tobacco Prevention and Youth

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Social Capital

Social capital refers to the social relationships an individual has and the benefits derived from social relationships. Social capital provides an important conceptual link between the individual and the social context. Individuals have access to social capi-

tal through membership in social networks or other social structures (Portes 1998). By being involved with different groups, whether informal or formal, people have access to benefits—whether information, opportunities, or other forms of support. In contrast to economic capital, which refers to money or other financial or physical resources, social capital is often intangible. Nonetheless, it is a specific positive outcome or advantage that stems from a relationship or membership in a social network. For example, a lead on a summer job accessed through an adult who works at that store or company could be considered social capital.

French sociologist Pierre Bourdieu (1985) originally described social capital as the actual and potential resources an individual has access to through a formal or informal network of people. Such a network could be an organization at school or an ethnic group. Social capital in such a case would be the profits derived from membership in that group. For example, if a person shares an ethnic identity with another, she might be awarded a higher sense of trust or inclusion than if she did not. Additionally, being part of a union might give one advantages in her job.

In America, James Coleman (1990) popularized the idea of social capital by using it to explain educational outcomes in children. He defined the term as the set of resources present in family relationships and community social organizations that are useful in the cognitive or social development of young people. In his research he found that social factors contributed strongly to children's educational outcomes. Specifically he discovered that parents' relationships with their children and their children's schoolwork were significant factors in predicting academic success. He also found that children with a tighter social network between their parents, friends, and teachers did better academically than those students with less of a social network.

Since Coleman's application of the term, it has grown in popularity, and some confusion has arisen over its meaning. For some, social capital refers only to the benefits gained through relationships (Portes 1998), and for others it refers to the benefits and the social ties themselves (Coleman 1990). A point of ambiguity in the literature is the nature of the beneficiary. Depending on the author, either the individual or the society may be the focus of study, with the individual gaining re-

sources through relationships (Bourdieu 1985; Coleman 1990; Portes 1998) or society as the beneficiary of social capital (Fukuyama 1995; Putman 2000). Specifically, Putman refers to social capital as benefits created for society through civic involvement. He argues that a society flourishes when people are engaged in public life (e.g., volunteer service, voting). Within the existing literature, the failure to make clear whether the focus is on benefits to the individual or benefits to society is a major source of confusion.

Within the developmental sciences, social capital generally refers to the benefits reaped by the individual. Scholars have been interested in understanding the nature of the benefits of social capital and the interpersonal processes through which they arise. Studies suggest that youth with more social capital report higher levels of academic achievement, greater college enrollment, stable employment, self-competence, psychological adjustment, prosocial involvement, religiousness, moral behaviors, health, and decreased rates of problem behavior (Furstenberg et al. 1999).

Although it is clear that youth can benefit through social resources and relationships, the nature of the relationships involved is less understood. Existing research suggests that relationships promoting social capital are characterized by social interaction, trust, and shared beliefs, values, and goals (Tsai and Ghoshal 1998). Frequency of interaction with family members, friends, or other adults is an important element in promoting social capital. In addition to the presence of individuals in children's lives, the degree of perceived trust greatly impacts the ability of a relationship to produce social capital. Finally, relationships that share a common understanding also provide more opportunities for social capital to arise. Current research demonstrates that youth who have access to dense social networks of relationships that are interactive, trustworthy, and have a shared sense of understanding have access to more social capital than youth who do not.

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See also: Community Youth Development; Search Institute; Social Support; Youth Mentoring

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Social Cognitive Theory

In the early 1940s, and at the height of the behaviorist movement in psychology, American psychologists put forth theories of social learning and imitation that rejected behaviorist notions of associationism in favor of drive reduction principles. These theories, however, failed to explain how individuals initiate novel behaviors or why they imitate the actions of others even when they are not directly reinforced for doing so. Soon after taking a position at Stanford University in 1953, psychologist Albert Bandura began a program of research in which he focused on these unexplained mechanisms that underlie human learning. In 1963, with his doctoral student Richard Walters, Bandura published *Social Learning and Personality Development*, broadening the frontiers of traditional social learning theories with the now familiar principles of social modeling, observational learning, and vicarious reinforcement.

Bandura's research underscored the paramount role of social modeling and of the proximal social ecology of human development, in motivation, thought, and action (Lerner 1990). Until that time, American psychologists focused on the consequences of one's actions as the only influence on human learning. Bandura showed that learning consisted of much more than trial and error, conditioning, and reinforcement, and he provided evidence demonstrating that individuals can gain knowledge and competence by observing the actions of models in their social ecology (e.g., parents, teachers, peers, or mentors). Moreover, he showed that observers did not simply mimic these

actions. Rather, observers are able to extract the rules underlying the actions of models and thus generate novel behaviors in a similar style while at the same time go beyond what they have directly seen or heard.

With the publication of *Social Foundations of Thought and Action: A Social Cognitive Theory*, Bandura (1986) advanced a cognitive interactional model of human functioning that accords a central role to cognitive, vicarious, self-regulatory, and self-reflective processes in human adaptation and change. According to this social cognitive theory, people are self-organizing, proactive, self-reflecting, and self-regulating, rather than reactive organisms shaped and shepherded by environmental forces or driven by concealed inner impulses.

From this theoretical perspective, human functioning is viewed as the product of a dynamic interplay of personal, behavioral, and environmental influences. For example, how people interpret the results of their own behavior informs and alters their environments and the personal factors they possess, which, in turn, inform and alter subsequent behavior. This theory is the foundation of Bandura's conception of reciprocal determinism (1986), the view that (a) personal factors in the form of cognition, affect, and biological events, (b) behavior, and (c) environmental influences create interactions that result in a triadic reciprocity. Bandura altered the label of his theory from "social learning" to "social cognitive," both to distance it from prevalent social learning theories of the day and to emphasize that cognition plays a critical role in people's ability to construct reality, self-regulate, encode information, and perform behaviors.

The reciprocal nature of the determinants of human functioning in social cognitive theory makes it possible for therapeutic and counseling efforts to be directed at personal, environmental, or behavioral factors. Strategies for increasing well-being can be aimed at improving emotional, cognitive, or motivational processes, increasing behavioral competencies, or altering the social conditions under which people live and work. In school, for example, teachers have the challenge of improving the academic learning and confidence of the students in their charge. Using social cognitive theory as a framework, teachers can work to improve their students' emotional states and to correct their faulty self-beliefs and habits of thinking (personal factors), improve their academic

skills and self-regulatory practices (behavior), and alter aspects of the school and classroom structures that may work to undermine student success (environmental factors).

Bandura's social cognitive theory stands in clear contrast to theories of human functioning that overemphasize the role that environmental factors play in the development of human behavior and learning. Behaviorist theories, for example, show scant interest in self-processes; theorists assume that human functioning is caused by external stimuli. Because inner processes are viewed as transmitting rather than causing behavior, they are dismissed as a redundant factor in the cause-and-effect process of behavior and unworthy of psychological inquiry. For Bandura, a psychology without introspection cannot aspire to explain the complexities of human functioning. It is by looking into their own conscious minds that people make sense of their own psychological processes. To predict how human behavior is influenced by environmental outcomes, it is critical to understand how the individual cognitively processes and interprets those outcomes. More than a century ago, William James argued that "introspective observation is what we have to rely on first and foremost and always" (1981, 185). For Bandura, "a theory that denies that thoughts can regulate actions does not lend itself readily to the explanation of complex human behavior" (1986, 15).

Similarly, social cognitive theory differs from theories of human functioning that overemphasize the influence of biological factors in human development and adaptation. Although it acknowledges the influence of evolutionary factors in human adaptation and change, it rejects the type of evolutionism that views social behavior as the product of evolved biology, but fails to account for the influence that social and technological innovations that create new environmental selection pressures for adaptation have on biological evolution (Bussey and Bandura 1999). Instead, the theory espouses a bidirectional influence, in which evolutionary pressures alter human development, such that individuals are able to create increasingly complex environmental innovations. These innovations themselves create selection pressures for the evolution of specialized biological systems for functional consciousness, thought, language, and symbolic communication. This bidirectional influence results in the remarkable

intercultural and intracultural diversity evident on our planet.

Social cognitive theory is rooted in a view of human agency in which individuals are agents proactively engaged in their own development and can make things happen by their actions. Key to this sense of agency is the fact that, among other personal factors, individuals possess self-beliefs that enable them to exercise a measure of control over their thoughts, feelings, and actions, that "what people think, believe, and feel affects how they behave" (Bandura 1986, 25). Bandura provided a view of human behavior in which the beliefs that people have about themselves are critical elements in the exercise of control and personal agency. Thus, individuals are viewed both as products and as producers of their own environments and of their social systems. Because human lives are not lived in isolation, Bandura expanded the conception of human agency to include collective agency. People work together on shared beliefs about their capabilities and common aspirations to better their lives. For example, in family, community, and work settings, success depends on the collective, interactive effect of group members. This conceptual extension makes the theory applicable to human adaptation and change in collectively oriented societies as well as individually oriented ones.

Environments and social systems influence human behavior through psychological mechanisms of the self-system. Hence, social cognitive theory posits that factors such as economic conditions, socioeconomic status, and educational and familial structures do not affect human behavior directly. Instead, they affect it to the degree that they influence people's aspirations, self-efficacy beliefs, personal standards, emotional states, and other self-regulatory influences. In all, this social cognitive view of human and collective functioning, which marked a departure from the prevalent behaviorist and learning theories of the day, had a profound influence on psychological thinking and theorizing during the last two decades of the twentieth century and into the new millennium.

Fundamental Human Capabilities

Rooted within Bandura's social cognitive perspective is the understanding that individuals are imbued with certain capabilities that define what it is to be human. Primary among these are the capa-

bilities to symbolize, plan alternative strategies (forethought), learn through vicarious experience, self-regulate, and self-reflect. These capabilities provide human beings with the cognitive means by which they are influential in determining their own destiny.

Humans possess an extraordinary capacity to symbolize. By drawing on their symbolic capabilities, they can extract meaning from their environment, construct guides for action, solve problems cognitively, support thoughtful courses of action, gain new knowledge by reflective thought, and communicate with others at any distance in time and space. For Bandura, symbols are the vehicle of thought, and it is by symbolizing their experiences that human beings can provide their lives with structure, meaning, and continuity. Symbolizing also enables people to store the information required to guide future behaviors. It is through this process that they are able to model observed behavior.

Through the use of symbols, individuals solve cognitive problems and engage in self-directedness and forethought. People plan courses of action, anticipate the likely consequences of these actions, and set goals and challenges for themselves to motivate, guide, and regulate their activities. It is because of the capability to plan alternative strategies and think through the results they will have that one can anticipate the consequences of an action without actually engaging in it.

People learn not only from their own experience but also by observing the behaviors of others. This vicarious learning permits individuals to learn a novel behavior without undergoing the trial-and-error process of performing it. In many situations, it keeps them from risking costly and potentially fatal mistakes. The observation is symbolically coded and used as a guide for future action. Observational learning is governed by the processes of attention, retention, production, and motivation. Attention refers to one's ability to selectively observe the actions of a model. For their part, observed behaviors can be reproduced only if they are retained in memory, a process made possible by the human capability to symbolize. Production refers to the process of engaging in the observed behavior. Finally, if engaging in the observed behavior produces valued results and expectation, the individual is motivated to adopt the behavior and repeat it in the future.

Individuals have self-regulatory mechanisms that provide the potential for self-directed changes in their behavior. The manner and degree to which people self-regulate their own actions and behavior depend on the accuracy and consistency of their self-observation and self-monitoring, the judgments they make regarding their actions, choices, and attributions, and, finally, the evaluative and tangible reactions they make to their own behavior through the self-regulatory process. This last subfunction includes evaluations of one's own self (one's self-concept, self-esteem, values) and tangible self-motivators that act as personal incentives to behave in self-directed ways.

For Bandura, the capability that is most "distinctly human" (1986, 21) is that of self-reflection; hence it is a prominent feature of social cognitive theory. Through self-reflection, people make sense of their experiences, explore their own cognitions and self-beliefs, engage in self-evaluation, and alter their thinking and behavior accordingly.

Of all the thoughts that affect human functioning, and standing at the very core of social cognitive theory, are self-efficacy beliefs, "people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances" (Bandura 1986, 391). Self-efficacy beliefs provide the foundation for human motivation, well-being, and personal accomplishment; unless people believe that their actions can produce the outcomes they desire, they have little incentive to act or to persevere in the face of difficulties. Much empirical evidence now supports Bandura's contention that self-efficacy beliefs touch virtually every aspect of people's lives—whether they think productively or in a self-debilitating way, pessimistically or optimistically; how well they motivate themselves and persevere in the face of adversities; their vulnerability to stress and depression; and the life choices they make.

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See also: Bandura, Albert; Self, Self-Concept, and Self-Esteem; Self-Efficacy; Vygotsky, Lev

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Social Justice and Human Science Programs

Social justice is a value that recognizes the importance of distributing societal benefits and burdens in a manner that is fair for everyone. Inherent in the value of social justice is the notion that all of society's members should equitably share both the resources and opportunities that society has to offer, as well as the difficulties or burdens that it presents.

Social justice is typically understood as characterizing an ideal type of relationship between society and individuals in which all individuals have a share in the common good. In its simplest definition, it involves the equitable distribution of society's burdens and benefits (Meara, Schmidt, and Day 1996). It is commonly assumed that there are two basic elements in a socially just world: (1) individuals must be active and productive participants in society, and (2) society must enable individuals to participate in this way. At its most concrete level, social justice implies the preservation of the dignity of every human person, the right of all people to have access to the resources they need, and the right of people to be involved in the decisions that affect their lives and the community in which they live.

However, as we look at society, it is evident that

some people experience more than their fair share of society's burdens while others experience an abundant supply of benefits. For example, the income gap between wealthy and poor families is currently at the widest point it has reached in the past fifty years. As another example, research shows that low-income and minority children are more likely to be in lower-quality child-care programs than other children (Children's Defense Fund 1999, 2000). In short the issues confronting our nation's children and families, including poverty, racism, interpersonal and community violence, abuse, drug addiction, and homelessness, point up the injustices that exist for large numbers of individuals and groups.

These injustices challenge the human sciences (e.g., psychology, sociology, anthropology, education) to embrace a public commitment to work toward solutions. Scientific knowledge is increasingly being viewed not only as an end in itself but as a means to improve the human community. As the social sciences seek to renew their vision for the new century, they are embracing within their agenda an explicit focus on the promotion of social justice.

As an ideal, social justice is not new to the human sciences. Various disciplines and professions have long been challenged from within their own ranks to make the human sciences useful in the solution of human problems. For example, many decades ago, the president of the American Psychological Association, George Miller, urged the profession to "give psychology away." Since that time, professionals for the most part appear to have avoided any explicit discussion of social justice under the assumption that science must be value-free. However, more recently, there is growing recognition that staying neutral in the face of human suffering represents a value in itself and, further, is ethically indefensible.

Recently many professionals have begun to address explicitly the issues of social justice in a number of areas. For example, psychologist Edward Zigler, who is the architect of the widely lauded Head Start Program for preschoolers, has been an outspoken advocate for responding to the needs of young children and their families who live in poverty (Zigler and Styfco 2001). Seymour Sarason (2001) has been a strong voice in pressing schools to broaden their approach to education so that it includes meeting the psychosocial as well as

the academic needs of children. Richard Lerner has called for social scientists to conduct research that engages public policy and to promote in their universities a commitment to collaborative research and service in their communities (Lerner, Fisher, and Weinberg 2000).

Seeking social justice often implies working for structural changes in economic and social institutions that will make it easier for everyone to care for themselves and to contribute to society. Recently, a number of social scientists have embraced structural changes to service delivery that can lead to a more socially just society. For example, in their "Communities That Care" model of systemic intervention in poor neighborhoods, David Hawkins and his colleagues have promoted systemic change in communities by identifying the needs of all of the members of a community and then mobilizing community resources to comprehensively address those needs (Pollard, Hawkins, and Arthur 1999). Many others in the fields of sociology, psychology, anthropology, and education have worked actively as researchers and practitioners to transform oppressive institutions and ultimately to change the basic premises of unjust systems.

It is becoming very clear that advocating for issues of social justice is important if professions are to continue to have the respect of the communities in which they work. As Naomi Meara, Lyle Schmidt, and Jeanne Day have pointed out that communities grant professional autonomy to professions that perform needed services and take seriously (above their own self-interest) the welfare of the individuals with whom they work and the good of the community at large (1996).

Developmental psychologists now recognize that context impacts development. Too often interventions in the social sciences have focused on what is wrong with the individual without taking into account the context in which the person is living. Consequently individuals were often blamed for factors that may have been outside of their control. The recognition that context impacts development and the understanding of how context affects a person's development can result in more socially just interventions that support changes in the environment rather than in the person.

Whether interventions focus on the individual or systems, multiple levels of development (e.g., biological, psychological, social) should be taken into account so that the whole person is consid-

ered. For example, effective violence prevention programs require simultaneous attention to community, familial, and emotional issues.

Socially just interventions are also informed by our growing understanding of development over the life span. It is becoming increasingly accepted that early childhood interventions are necessary to help prevent problems later in life. These interventions require society to allot more resources to work with very young children. This recognition of the importance of serving young children who cannot advocate for themselves exemplifies the principles of social justice.

Service providers have also tended to focus on the deficits or weakness of clients, rather than on strengths. The work of Milbrey McLaughlin (2000) shows that inner-city youth who participate in community groups designed to foster their strengths have a greater sense of self-worth and agency than their peers. Thus focusing on promoting strengths is as important as targeting weaknesses.

In summary, the values of social justice are critical to inform research and practice in applied developmental science if it is to be a science that serves all of the members of society. With social justice as a value, social scientists and service providers will recognize that the context in which people develop includes their access to resources as well as their access to power and privilege in society. Thus, many social scientists believe that it is their responsibility to not only work to understand human development, but also to help ensure that everyone can have equal access to both the privilege and pain that are inherent in our society.

Mary E. Walsh
James G. Barrett

See also: Community Youth Development; Comprehensive Community Initiatives; Participatory Action Research; Philosophy of Human Ecology

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Social Support

Social support is the construct studied by sociologists, psychologists, and health scientists that serves to identify and explain the nature, significance, and outcomes of social relationships. Most social support theorists concur that social support refers to social transactions that are "perceived by the recipient or intended by the provider to facilitate coping in everyday life, and especially in response to stressful situations" (Pierce, Sarason, and Sarason 1990). The study of social support derived from the need to understand the relationship of social interactions to health and well-being.

Several theories provided a precedent for the study of social relationships and their significance for health and well-being. For example, the foundational relationship between mother and child is said to be the key to the ability to establish all later social relationships (Ainsworth 1979). A few studies have also demonstrated that the absence of attachment has resulted in serious consequences for development. Harry Harlow (1965) showed that monkeys raised in isolation without a caring mother had later difficulties in all of their relationships. Spitz (1946) found that children institutionalized in infancy without a loving primary caregiver had difficulty thriving and forming attachments later in life.

Three scholars, John Cassel, Gerald Caplan, and Sidney Cobb, could be declared the Fathers of So-

cial Support. They laid much of the groundwork for the metaconstruct of social support. John Cassel (1976) was an epidemiologist and physician. He claimed that psychosocial processes play a role in the etiology of disease and that social support can have a profound impact in stress-related disorders. Gerald Caplan (1974) worked in the area of preventive psychiatry and community mental health. He also realized the influence that social interactions had on the result of life changes and crises. He viewed support systems not only as including family and friends, but also groups and neighborhood settings that provided informal services.

Sidney Cobb (1976) shared the view of Cassel and Caplan regarding the importance of social support and its relationship to stress and well-being. He more clearly defined social support as "information" that would lead a person to believe that they are loved and cared for, valued and belonging to a group with shared communication and obligation. Cobb further explained that this "information" served to fulfill needs and to protect individuals from adverse consequences of crises and stressors (Vaux 1988).

Conceptual Triad of Social Support

The field of social support grew out of a desire and need to understand how social interactions improve or inhibit health and how to improve health through social interactions. Early research on social support demonstrated that social support had many positive effects on physical and mental health (Cohen and Syme 1985; Cohen and Wills 1985). The research focused on how social support prevented stress, how it buffered stress, and how it might have a direct positive effect on health unrelated to stress (Tilden and Weinert 1987).

Although research in these areas has contributed much to our knowledge of social support, the inconsistencies in the terms used to address concepts of social support became confusing. These inconsistencies had to do with the range of relationships that contribute to social support, the importance of the objective aspects of social relationships, and the role of the actual supportive behavior versus the recipient's perception of that support behavior, in addition to the various forms support may take (Vaux 1988). In his study of social support, Alan Vaux (1988) helped to conceptualize the distinction in concepts and articulated the now accepted triad of social support theory:



Scouts collecting food for Meals on Wheels-type program (Skjold Photographs)

support network resources, support behaviors, and support appraisals.

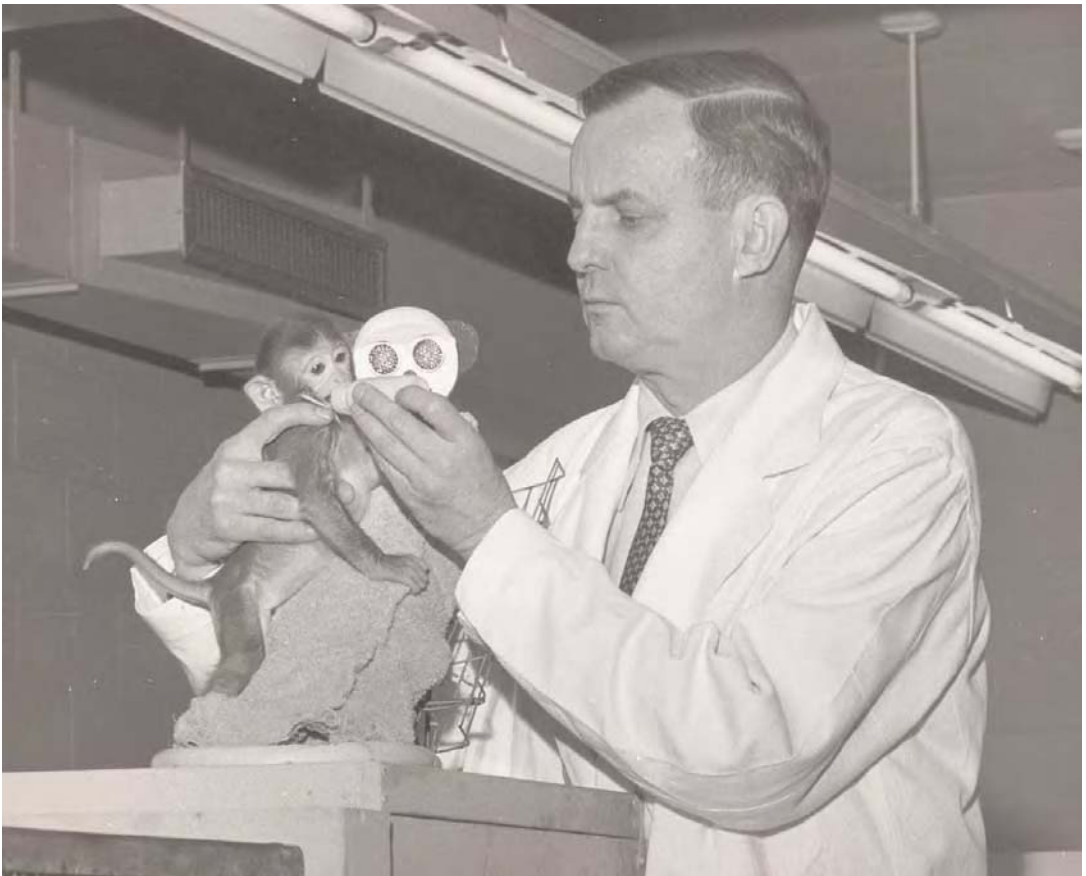
The term “support network resources” refers to the number of persons that a person turns to for assistance (family, friends, peers, coworkers, and so forth) or comes in contact with on a daily basis. The term “support behaviors” refers to the behaviors that are generally recognized as intentional efforts to help a person. These could be emotional, such as listening and offering love, comfort, affection, or advice; or practical, such as giving financial or material help. Supportive behaviors may not always be considered helpful. The term “support appraisal” refers to the subjective evaluative assessment of the supportive network relationships or supportive acts (Vaux 1988).

The social support network may influence health status directly through information sharing or by motivating healthy behavior. Or it may affect health indirectly through encouragement to comply with regimes or to maintain health-promoting behavior such as exercise (Stewart 1994). Network members may provide advice and models of behavior or give support provisions that augment immunity (e.g., Bloom 1990).

Social Networks and Health

Epidemiological studies also have assessed the relationship between social networks and health habits of adults. Men and women who had more extensive social networks were shown to have better health practices (Berkman and Breslow 1990). Rick Zimmerman and Catherine Connor (1989) found that the greatest influences on health behavior in descending order were family, friends, and coworkers. They also found the most helpful supportive behaviors were supportiveness, encouraging maintenance, and modeling health change.

The social network may also contribute to health by linking informal and formal support. It is not unusual that seeking lay support may be the first step to seeking professional help (Wills 1983). Some scholars have concluded that the greater the density of support network, the less the need for professional help (e.g., Sarason, Pierce, and Sarason 1990). Individuals with weaker ties are more likely to need more formal services (Auslander and Litwin 1990). People who wait for support to be offered may receive less support, whereas individuals who can seek help and communicate needs influence receipt of support (Eckenrode 1983).



Dr. Harry Harlow (Courtesy of Harlow Primate Laboratory, University of Wisconsin)

People experiencing stressful life events tend to seek help first from their network of family and friends, before seeking help from professionals skilled in dealing with a particular problem (DePaulo 1982). This approach works well when the support network is large and the need is small. As the need grows, as the stressors grow, people may tend to less frequently turn to the same support network. One reason for this tendency has to do with reciprocity. The fact that an individual may not be able to reciprocate a supportive act may contribute to a sense of their own weakness or threaten their self-esteem (DePaulo 1982). It is sometimes easier to turn to professional help; the feeling of indebtedness is diminished, since professionals receive compensation. Also, studies have indicated that emotional support offered by health care professionals is beneficial to health (Whichter and Fisher 1979).

One of the greatest problems in understanding how support relates to promoting health is that the supportive behavior is often a function of not only

who is available to be supportive, but also how the support-givers perceive the individual's need for support and perhaps more importantly the individual's perception of the received support. There needs to be a match between support given, support needed, and support perceived.

The importance of perception in social support is evidenced in the consistent findings that it is the perception of social support that is most closely related to health outcomes (Rohrle and Sommer 1994). The emphasis on perceived support fits well with the early conceptualizations of social support by Cobb and Cassel (Sarason, Pierce, and Sarason 1990).

Social support is of particular interest to health care professionals because of its impact on health, health behavior, and health-services utilization. Research has shown that social support has direct, indirect, and interactive effects on physical and mental health (Cohen and Syme 1985; Cohen and Wills 1985).

Compared to families with healthy children, families with chronically ill children tend to have smaller networks. Rather than network size, perceived availability of social support has been associated with positive psychological functioning in parents of sick children (Kupst and Schulman 1988). Because of the amount of time spent in hospitals, families usually have a need to talk with people who are informed about their family member's disease. Consequently, professionals often become a significant part of a family's support network, and the family comes to depend highly on them (Eiser 1994). Alexandra Quittner (1992) has suggested that individuals become satisfied with smaller networks in these circumstances, especially as the support is usually readily available and can provide practical and emotional help.

In a study by Jan Wallander and James Varni (1989), the relationship between social support and adjustment was investigated in a relatively large sample of children being treated for a range of chronic conditions. They found that children reported by their mothers to have a high degree of social support from family and friends were rated as better adjusted than children who had a lot of support in just one of those areas.

The body of research on social support and children's health is beginning to grow. Family support is crucial for both healthy and ill children and adolescents. Families play a significant role in the development of health behaviors (e.g., Scales and Leffert 1999). Children and adolescents need to know there is an available adult they can count on, one who loves them unconditionally.

In addition to the family and positive family communication, the support network for children and adolescents also includes other adult relationships, caring neighborhood, caring school climate, and parent involvement in schooling. Although each of these types of support is strongly related to a youth's feeling of being connected and cared about, the Search Institute found that the influence of (perceived) support from parents is substantially greater than support from school or neighborhoods (Scales and Leffert 1999).

The "most critical variable" predicting health and resiliency throughout childhood and adolescence is the caring and supportive relationship with an adult (Garmezy 1993). This finding was supported by another national study on over twelve hundred seventh–twelfth graders. Family

support was one of the fundamental forces that most positively influenced adolescent's health and risk behavior (Resnick et al. 1997).

The Search Institute documents the positive outcomes associated with parental support. In one particular study, parental support has been positively associated with lower occurrences of substance abuse, higher self-esteem, self-concept, academic self-concept, self-worth, less delinquency, and higher school achievement and involvement (Scales and Leffert 1999).

For children and adolescents, positive development requires a constant exposure to positive family support. Family support contributes to a feeling of safety, and is essential for promoting healthy development. It is support in its fullest sense—the positive relationships with parents, other adults, teachers, and peers that are essential to a child's health and well-being (Benson 1997). Youth who feel supported (who experience perceived support) achieve more, get into trouble less, enjoy better health and are more giving to others. This perception of support is foundational for a healthy and successful life.

Conclusion

Social support is a complex and transactional process between the individual and social relationships, one that occurs throughout the life span. Furthermore, these transactions take place within a changing ecological context. A network of supportive relationships must be developed and maintained (Vaux 1988, 68).

Susan Mlynarczyk

See also: Friendship across the Life Span; Old Age, Social Relationships in Positive Development; Resiliency; Search Institute; Social Capital; Stress; Suicide; Treatment Adherence

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Southeast Asian Families

See Families, Southeast Asian

Spanier, Graham B.

Contributors to the scholarly and professional dimensions of human ecology may distinguish themselves as prolific researchers conducting important and rigorous studies of human-context relations; as gifted professionals applying knowledge of the sciences contributing to human ecology to programs or therapeutic interventions aimed at enhancing human life; as visionary academic and professional leaders guiding a nation's institutions, both to deliver higher-quality educational experiences to diverse citizens and to become engaged with communities in order to make value-added contributions to people's lives and contexts; or as compassionate and compelling advocates for marshaling the financial, human, and spiritual resources of our communities to create policies and



Graham Spanier (Courtesy of The Pennsylvania State University)

programs that make effective, scaled, and sustained contributions to positive and healthy development. Excellence in any one of these domains of scholarly and professional life would bring deserved professional admiration and public acclaim. Graham B. Spanier has made extraordinary, and typically singularly creative and influential, contributions to all four domains.

Graham Basil Spanier was born in 1948 in Capetown, South Africa. His father had fled the terrors of Nazi Germany. And soon both parents, fearful of the racial practices associated with apartheid, immigrated to the United States and settled in Chicago, where Graham spent his childhood and adolescence. This period presaged some of the extraordinary achievements that Graham Spanier later make as an adult. For instance, he and his boyhood friend, Brian Ross (who himself eventually became a nationally renowned television journalist), had as teenagers their own radio show in Chicago. Their work was so well respected that they were granted inter-

views with many of the prominent performers of the 1960s.

Spanier received his B. S. degree in 1969 from Iowa State University, majoring in sociology and minoring in psychology and mathematics. He received as well an M. S. degree from Iowa State, where he again majored in sociology and minored in psychology. In 1973 he completed his Ph.D. in sociology at Northwestern University, where his mentor was the distinguished family scholar, Robert F. Winch. During his doctoral training, Spanier was both a National Institute of Mental Health (NIMH) Doctoral Fellow (1971–1972) and a Woodrow Wilson Fellow (1972–1973).

Graham Spanier's first academic position undertaken after the completion of his Ph.D. was at Pennsylvania State University, the institution at which at this writing he serves as president, as he has since 1995. Spanier joined the then Division of Individual and Family Studies (now the Department of Human Development and Family Studies) in 1973, where he was appointed assistant professor of Human Development and Sociology. Spanier achieved the rank of full professor by the time he was 32 years old. In addition, in recognition of his burgeoning vision for programmatic and institutional advancement and of the reliance colleagues placed on his wisdom and leadership, Spanier was called on to undertake increasing administrative responsibilities at both departmental and collegewide levels. He served as Divisional Professor in Charge before becoming Associate Dean for Resident Instruction in the College of Human Development from 1979 to 1982.

Spanier's initial period of service at Penn State was not only a time of growth in his administrative experiences and accomplishments. It was as well a period wherein Graham Spanier established himself in the United States and internationally as one of the premier scholars of human development and more specifically of family development. In his more than a hundred scholarly publications, including ten books, Spanier did conceptually creative, methodologically rigorous, and substantively significant research on marital quality and stability across the life course, the interrelations between child development and marital and family relations, separation and divorce, adolescence, and human sexuality. His work was foundational in the integration of demographic and life course perspectives about the family with the life span de-

velopmental view of the dynamic relations between individual and family development.

This scholarship contributed centrally to understanding the historical and ecological bases of family continuity and change across the course of ontogenetic and family time, and brought to the fore of scientific interest the links between research about the family and the role of societal actions (for example, policies, programs, or therapeutic interventions) in improving the lives of families, of spouses, and of children. Spanier's research reflected key interests he has championed throughout his career, in his roles as researcher, practitioner, administrator, and advocate. These interests involved the integration of research and application, and served as a centerpiece for the then burgeoning area of applied developmental science, with its focus on the integration of the researcher and his institution—the university—with the interests of families and children, and its concern with using the knowledge and resources of higher education more generally to collaborate with communities in building, bringing to scale, and sustaining effective efforts to improve the lives of children, adolescents, and families.

Spanier's scholarship also made enduring methodological and measurement contributions to the study of marital and family relations. The measure of dyadic adjustment that he developed in 1976 has remained one of the most respected and widely used indices of relationship quality in the study of human development and family relations. Across his career, Spanier's research has been supported by grants from numerous private foundations and state and local funders, including the Woodrow Wilson Foundation, the Institute for Life Insurance, the New York State Education Department, the National Institute of Mental Health, and the National Science Foundation.

Believing in the critical linkage between scholarship and application and outreach that later became a signature emphasis in his leadership of American higher education, Spanier's scholarship on marital and family relations was combined with his training in and practice of family therapy. In addition to his productive research career and his increasing administrative duties, Spanier maintained an active practice in marriage and family therapy. Indeed, he holds professional certification in this field and, since 1973, has been a Clinical Member and Fellow of

the American Association for Marriage and Family Therapy.

The importance of Spanier's scientific contributions has justifiably earned him the accolades of his colleagues in the scholarly community and resulted in his being asked to undertake positions of intellectual and professional leadership in his field. For instance, from 1979 to 1984 Spanier was the founding editor of the *Journal of Family Issues*. In addition, he served as an associate editor (1977–1981) of the *Journal of Marriage and the Family*, and a member of the editorial advisory board or an editorial reviewer for a score of other scholarly journals. In addition to numerous leadership positions in the American Sociological Association and the American Association for Marriage and Family Therapy, Spanier served from 1987 to 1988 as the president of the National Council of Family Relations. In 1998, he was made a Fellow of that organization. He is also a Fellow of the George H. Gallup International Institute and of the American Association for Marriage and Family Therapy. In 1987, he received from the American Home Economics Association the James D. Moran Award for Outstanding Contribution to Research.

In 1982, Spanier left Penn State and embarked on a career path involving increasing institutional administrative duties and greater and greater national leadership of higher education. In 1982, Spanier joined the State University of New York at Stony Brook, where, through 1986, he served as the Vice Provost for Undergraduate Studies and as professor of sociology and professor of psychiatry. From 1986 through 1991, Graham Spanier served as the Provost and Vice President for Academic Affairs, and as professor of human development and family studies and professor of sociology at Oregon State University. From 1991 to 1995, Spanier served as the chancellor of the University of Nebraska-Lincoln and as professor of sociology, professor of family and consumer sciences, and professor of family medicine.

In 1995, Graham Spanier returned to Penn State as its sixteenth President. He was also appointed as professor of human development and family studies, sociology, demography, and family and community medicine. Spanier has overseen a period of enormous growth in the high-quality productivity of Penn State in regard to its instructional, research, and outreach missions. For instance, through his vision and leadership Penn

State created the Schreyer Honors College, the Penn State World Campus, and the School of Information Sciences and Technology, and merged with the Dickinson School of Law. He also reoriented Penn State's numerous branch campuses in order to enhance their service to their communities and, to underscore his commitment to making higher education a force for equity, social justice, and civil society, he encouraged Penn State Cooperative Extension to expand its outreach to the diverse youth, families, and communities of Pennsylvania.

In fact, as an expansion of this leadership at Penn State, Graham Spanier has become at the beginning of the twenty-first century arguably the university president providing the single most significant leadership within the nation for engaging universities collaboratively with their communities. His vision is to promote positive youth and family development through the integration of the scholarship of knowledge generation, transmission, preservation, and application. Spanier chaired the Kellogg Commission on the Future of State and Land-Grant Universities and was the intellectual and administrative force behind the publication in 1999 of what is generally seen as a watershed document in the development of community-university partnerships serving youth and families, *Returning to Our Roots: The Engaged Institution*. Underscoring his commitment to the young people of the United States and to fostering enhanced futures for them, Spanier served also on the Board of Trustees of the National 4-H Council and was a founding member of the board of directors of the University Corporation for Advanced Internet Development (Internet 2). Spanier also served as chair of the National Collegiate Athletic Association (NCAA) Division 1 Board of Directors and, as well, as a member of the Association's executive committee. At this writing, Graham Spanier serves as the chair of the board of the National Association of State Universities and Land-Grant Colleges—a certain indication of the esteem and respect accorded him by his fellow leaders of American higher education.

Spanier's leadership of Penn State and the nation's system of higher education is predicated on integrating the best of scholarship with the vision and values of the diverse communities served by colleges and universities. His vision is one of a democratic, socially just and civil society, where all people and all communities are enriched by and

contribute to the enrichment of the students, faculty, staff, and administrators of institutions of higher education. It is also a vision of and for the enhancement of the lives of all people of the nation. Writing in 1999, Spanier explained his goals for Penn State:

Enhancing the quality of life for children, youth, and families in the context of their communities is a long-term program that we believe will make a real difference on major problems of our time. Integration and outreach of this magnitude, which combines not only the missions of research, teaching, and service but also expertise, resources, delivery systems, networks, and partnerships, is the essence of our model for Penn State in the 21st century. This model is built on restructuring for a new level of engagement with society, yet it cannot move forward on restructuring alone. It is propelled by a vision that sees the value of an entirely new relationship for the university with the society that upholds it. Only when the university does a better job of sustaining that same society can it expect to reap the reciprocal benefits of increased public confidence and support. Our university is eager to move to the next level in promoting human, economic, and cultural development. (1999, 204)

Human ecology is an integrated conceptual perspective that sees all levels of the ecology of human development as synthesized systemically over the course of life. Graham Spanier's career and his life have advanced and indeed embody the human ecological perspective. He has seamlessly synthesized his careers as a scholar of family development, a practitioner of interventions to enhance marriage and family life, a visionary and productive national leader of higher education, and a passionate and effective advocate for promoting positive lives among the diverse children, adolescents, families, and communities of America and the world.

However, if there is one facet of his life that attracts greater passion than his work to foster the human capital of a civil society, it is the passion Graham Spanier has for his wife Sandra, an acclaimed professor of twentieth-century American literature, and the love and devotion they share for

their two children, their son Brian and their daughter Hadley. Graham Spanier adds in his life resumé his love of his own family to the unflagging devotion he has to all the families of his nation and world.

Richard M. Lerner

See also: Cooperative Extension System (CES); 4-H Youth Development; Philosophy of Human Ecology

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Stepfamilies

See Divorce, Children's Adjustment to; Remarriage

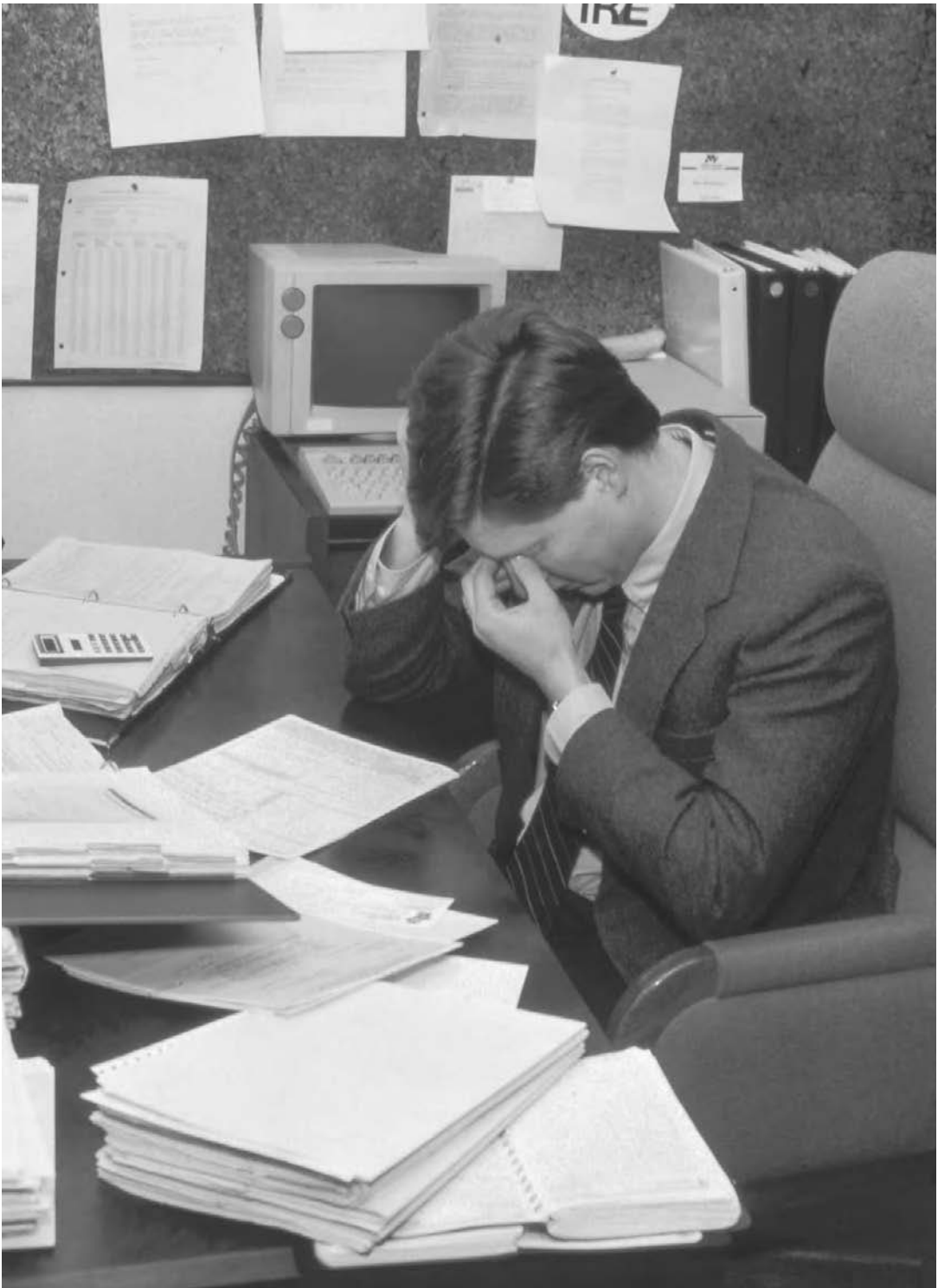
Stress and Health in Adolescence

Generally, stressful experiences are frequent in everyday life and causes people to draw upon adaptive resources. Adolescence is a period that is considered as particularly stressful, because the transition from childhood to adolescence has changed in qualitative and quantitative aspects. First, the time span allowed for this transition

varies depending on specific tasks. The age at which adolescents complete their education and enter the workforce is later than in the past. Physical maturation is accelerated, and due to more liberal norms and values, adolescents begin heterosexual relations earlier than in the past decades. In America, as in other modern democratic societies, there is a noticeable trend toward value pluralism, calling, on the one hand, for positive, tolerance-promoting values, and, on the other hand, leading to the disintegration of existing value systems. Adolescents are left with a vaguely defined behavior code to guide them in their age-specific developmental tasks. These changes are further complicated by changes in living conditions and social environments, which are reflected by the increasing numbers of single-parent families or stepfamilies, increasing rates of unemployment and economic hardship, and the continuous migration of foreign families, partly from poorer backgrounds, into American society with high Western standards. These conditions constitute the developmental context in which adolescent development in the biological, cognitive, and social domain unfolds.

In recent years, there has been widespread interest in identifying the properties that make events stressful. In research on adolescents, two different types of stressful events have been analyzed, which differ in their frequency, predictability, control, and negative impact on adolescent health.

The first type of stressors refers to normative demands. The adolescent years are characterized by numerous biological, cognitive, and social changes. In American society, increased responsibilities, accessibility to adult rights, and school changes mark the transition to adulthood. In particular, early adolescence (approximately ages 11 to 13 years) is considered to be a difficult yet challenging phase due to pubertal developments, relational changes, and school transition. Most early adolescents enter a new school, and the strain associated with adjusting to new academic and social environments may be potentiated by the biological developments occurring in puberty, such as changes in physical size and body concept or the emergence of sexual desires and anxieties about sexuality. Feelings of being different, not meeting the norm, or having matured too quickly or not quickly enough represent additional stressors that arise in the pubertal phase of development. In ad-



Overworked office worker at his desk, surrounded by a huge pile of papers and files (Michael Siluk)

dition, parent-child relationships change, and the adolescent's interactions with and acceptance by friends become increasingly important.

In midadolescence, the adolescent's needs for peer acceptance are especially great, and the adolescent begins to spend more time with peers outside of the home. Stressors emerge in relation to these changes, as there are more disputes with parents about curfews, clothing, driving, and personal freedom. Increased rates of parent-adolescent conflict have been consistently found in research for decades, particularly in early and midadolescent samples. Dating and the initiation of intimate heterosexual relationships also occur in this phase and may be accompanied by stressors such as fear of rejection or feelings of incompetence. In late adolescence, the increasing independence from parents may result in the adolescent's establishing an independent household. Graduation from high school is considered to be a significant juncture in the transition to adulthood. All of these events are normative in that they occur at about the same time for the majority of individuals in this age group and are associated with specific developmental tasks and corresponding expectations of family, friends, and society. These stressors are highly predictable, comparably frequent, and perceived as mildly stressful and controllable.

In addition to these changes, other, non-normative stressors or critical life events can increase the likelihood of maladaptation. Non-normative family stressors have been studied intensively. Adolescents are more at risk for developing psychopathology when the family situation is unstable or when there is serious marital discord. In extreme cases, marital discord may lead to divorce, a phenomenon that has increased in the United States over the years and currently results in every second marriage being dissolved. The influence of parental divorce on a child's well-being has been frequently studied. The chronicity of the stressors is also relevant. Often high levels of stress precede the event and persist long after it has occurred. Many of the non-normative stressors experienced by adolescents are controlled or influenced by family situations and are chronic in nature. Ongoing, stressful family situations can produce more discrete life events, such as separation or divorce. Psychiatric illness in one or both parents is another chronic stressful life situation. Most studies on this kind of stressor have focused on maternal

dysfunction and its impact on adolescent health; little attention has been devoted to paternal disorders. Additional sources of familial stress occur following the death of a relative, instances of child molestation or abuse, parental drug abuse or criminal activities, or chronic illness in the family.

To summarize, these stressors are critical life events that are relatively infrequent, hardly predictable, and extremely burdensome. Because most of these events are hardly foreseeable and can seldom be controlled or influenced by the adolescents, anticipatory preparation for or coping with the stressor is extremely difficult. Consequently, the emergence of non-normative stressor may have more dramatic health consequences for adolescents than normative stressors. However, due to the unusual timing and the high stressfulness of non-normative events, social support may be greater and thus buffer the potentially damaging effects on health.

In evaluating the effects of normative and non-normative stressors, number, timing, and synchronicity of changes has to be considered. By definition, non-normative stressors occur quite seldom; however, should they occur simultaneously or in rapid sequence with normative or developmentally related stressors, serious health damage may result. The risk for an unfavorable outcome increases exponentially with increased number of critical life events experienced by adolescents. In the studies that have been done, adolescents did not show an increased risk for psychopathology as long as only one non-normative stressor was involved. When two major stressors occurred simultaneously, the risk became four times as great. Thus, non-normative stressors potentiate one another, so that the combination of stressors is more than the sum of effects of individual stressors. Furthermore, additional non-normative stressors may appear in their wake. The different types of stressors that occur within a developmental phase interact with one another in a yet unknown way to produce health-damaging effects.

Although normative stressors such as school change, physical maturation, and the onset of romantic relationships are expected, age-appropriate, and moderately stressful, the accumulation of diverse normative stressors may also have deleterious effects. School changes are particularly stressful for girls. Due to their more rapid maturational development in puberty, physical changes

are more likely to occur around the time they enter a new school. Owing to their slower development, boys are less likely to be confronted with both normative stressors simultaneously.

In addition, the timing of events has been found to influence health outcomes, particularly in normative stressors. This correlation has been extensively researched with respect to pubertal timing. A large body of work has indicated that, when the timing of pubertal development deviates from normative expectations, problematic outcomes may be the result. Again, girls are more affected. Early maturing girls are more likely to develop a more negative body image and are also more likely to develop eating disorders or behavioral and emotional symptoms. Unusual timing of a normative event such as physical maturity may touch off changes in relationships with parents and peers.

In summary, early adolescence is a period of rapid cognitive, social, emotional, and physical changes. Although these changes per se have few harmful effects on most adolescents, there are certain vulnerable subgroups. Unusual timing of normative stressors, an accumulation of non-normative stressors, or an interaction between non-normative and normative stressors can be considered as risk factors. There are fewer changes in late adolescence than in early or midadolescence, which probably accounts for the finding that the transition to adulthood does not present major adaptation problems. From midadolescence to late adolescence, parent-adolescent conflict decreases. The power relation between parents and adolescents has changed, and a new balance between closeness and separateness has been established. Further, relationships with close friends have matured and romantic relations developed. In addition, although the average youth shows a decline in school achievement in early and midadolescence, achievement is improved as adolescents enter college or take up full-time jobs.

Because stressful experiences are ubiquitous for the adolescent years, the adolescent's ability to cope with different types of stressors is critically important. Adaptive coping responses are thought to moderate the effects of different types of stressors on adolescent health. Overall, a positive and adaptive way of dealing with stressors during adolescence has been substantiated by research. Coping strategies such as taking action, seeking social support, or seeking information were the most fre-

quently reported strategies found in adolescent samples. Taken together, adolescents can be considered as competent copers, able to deal well with stressors arising in different fields such as school, parents, peers, and romantic relations. Despite this overall active and adaptive approach, there is evidence that coping strategies vary according to age and gender. The differences are outstanding in using social support and help-seeking behavior. Girls are more likely to seek social support than boys. In addition, females more frequently discuss a problem or stressful event with others and try to approach the person concerned. Female adolescents rely more heavily on social networks; for example, they discuss problems more freely with the person concerned and in general talk their problems over and ask for help and assistance. These trends have been seen continuing into adulthood, indicating a general tendency among females to rely more heavily on social networks than males or to seek help in extrafamilial settings. Male adolescents, on the other hand, worry less about problems, expect fewer negative consequences, and use distraction more frequently than females.

These gender differences in coping styles have been frequently linked to gender differences in stress perception. Female adolescents experience changes in their environment and in themselves as being very stressful and threatening. When a number of minor events were compared, it became obvious that females perceived the same events as more stressful and more permanent than males did. In addition, they reported more relationship stressors than males and felt four times more threatened by these same stressors than males. This suggests that females are more affected by conflicts in close relationships and perceive most stressors, particularly relationship stressors, as having a chronic nature. There is also evidence that males are less affected by normative stressors, whereas non-normative stressors have greater health consequences for them, compared to females.

Empirical studies provided mixed evidence for the explanatory power of stress in the etiology of various psychological and somatic disorders. Frequent, sustained daily stressors, due to their chronic nature, might play a greater role in the development of psychopathology than the occurrence of isolated major life events. This finding is probably due to the higher amount of social support when experiencing non-normative stressors,

which protects the adolescent from more severe health damage.

It is not fully clear how gender differences in stress perception are linked with the emergence of gender-specific psychopathology and differences in help-seeking behavior. Several authors argue for higher levels of minor stressors in females as compared to males. However, there are also studies speaking against a typically higher level of stress in females and arguing that, generally, males are more vulnerable to the effect of major losses, that is, events such as marital discord and parental divorce, than females. Currently, research neither provides a clear support for the links between gender differences in stress perception and subsequent symptomatology, nor does it consistently support the hypothesis of an increase in stressors across the adolescent years only in females. There is some evidence that females experiencing both biological and psychosocial changes are more vulnerable for depression or depressive symptoms; but research focusing on this issue in males is still missing.

The research findings reviewed so far suggest that females are more sensitive to relationship stressors, but the health consequences of these perceived elevated levels of stress are not clear. Most symptoms were experienced on a subclinical level. Whether the long-term outcome may lead to more severe health damage is a question that should be examined in future research. This is a challenging task, because the factors contributing to adolescents' maladaptation are complex and closely intertwined with normative developmental changes.

Inge Seiffge-Krenke

See also: Resiliency; Social Support

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Suicide

Suicide is the intentional act of killing oneself, in contradistinction to homicide, which involves the killing of others. Suicide may be completed, resulting in death, or attempted, resulting in varying degrees of injury. The latter is sometimes referred to as parasuicide, pseudocide, or a suicide gesture.

Suicide is typically considered to be an active process in which death is sought through firearms, ingestion of poisons or medications, hanging, and other immediate means of ending one's life. However, less obvious expressions of a wish to die reflect hidden or unconscious motives. David Lester (1993) argues that some alcoholics, drug addicts, heavy smokers, obese individuals, and those who refuse to comply with medical protocols—such as diabetics who consume dangerous foods or medical patients who do not take their medication—may be passively determined to destroy themselves. If these forms of self-destruction are included in suicide statistics, the true prevalence of suicide is far greater than that reported by most experts.

Reasons for suicide are complex, and it may represent the enactment of numerous wishes: to die (in order to end pain or escape unbearable circumstances), to triumph over death (in order to assert control and mastery), to kill self and others (in order to hurt others toward whom one is angry), to be killed (in order to relieve guilt and sadness from perceived wrongdoing), to punish (in order to retaliate, induce guilt and hurt in others, or abandon them), to be punished (in order to express self-hatred or compensate for perceived transgression), to be rescued, experience reunion with a deceased person, or be reborn (in order to achieve a fresh start, cleansing, or restoration).

Reactions to suicide also vary by culture. In North America, suicide is generally regarded as morally, socially, and religiously unacceptable. Thus it remains stigmatized and shrouded in secrecy, permitting the flourishing of myths and shame, and preventing widespread dissemination of effective methods of intervention. For other cultures, suicide is an honorable alternative to shame, as for example among Japanese samurai warriors, who commit hara-kiri after experiencing profound loss of face.

Demographics

Suicide is a democratic phenomenon; it affects all cultures, races, ethnicities, ages, and genders. In

the United States, suicide is the eighth leading cause of death, resulting in almost 31,000 annual deaths, or 85 each day. In addition, an estimated ten to twenty times more people make a suicide attempt (Centers for Disease Control and Prevention 2001, 1; U.S. Public Health Service 1999, 1, 3).

Whereas females attempt suicide approximately three times more often than males (Flanders 1991, 23), males complete suicide four times more often (Centers for Disease Control and Prevention 2001, 1; U.S. Public Health Service 1999, 3). This discrepancy is observed in most countries, populations, and historical times and is partly due to the methods employed. Females often overdose on poisons, including medications, a slow process that allows time for rescue. Males usually utilize more lethal methods, such as firearms and hanging, which preclude subsequent intervention. Regardless of gender, 59 percent of all suicide fatalities involve handguns (U.S. Public Health Service 1999, 3). Contrary to popular media portrayals, only 35 percent of those who commit suicide leave a suicide note (Lester 1993, 76).

Whites commit suicide at twice the rate of Asian Americans, Latinos, and African Americans, although rates among the latter have been rising. Whites accounted for 90 percent of all suicides in 1998, with White males constituting the largest group overall, 73 percent (Centers for Disease Control and Prevention 2001, 1; Eberhardt et al. 2001, 217–219). Native American Indians (especially males) and Alaska Natives are also overly represented among completed suicides. Among Native American Indians, however, this varies by tribe, degree of social integration, importance of religion, and adherence to traditional cultural values. Certain subgroups of Asian Americans/Pacific Islanders (AAPIs) have suicide rates that surpass the national average. For example, among women 65 years and over, Asian Americans have the highest suicide rate and AAPIs living in Hawaii die of self-inflicted injuries more than the rest of the population (Centers for Disease Control and Prevention 2002, 2–3; Eberhardt et al. 2001, 219). Suicide is also higher among U.S. immigrants, perhaps due to increased stress and isolation and reduced social support.

Suicide is considerably higher among widowed and divorced than married adults. Marital status differences were most apparent among the elderly. In 1992, widowed and divorced men suicided 2.7

times more often than married men. Similarly, widowed and divorced women suicided 1.8 times more often than their married counterparts (Centers for Disease Control and Prevention 2001, 2). Thus, marriage is a greater protective factor for men than women. Motherhood also offers protection; childless women commit suicide more often than women with children.

Increased suicide is also observed among certain professionals, such as psychiatrists, psychologists, dentists, physicians, and police officers, as well as among unemployed men. Students attending elite universities have higher suicide rates, although students in general are not at greater risk than the general population of youths. Social class differences are not consistently observed, but regions with the highest quality of life have the highest suicide and lowest homicide rates. It is possible that a higher quality of life makes it difficult to blame unhappiness on external sources, such as poverty or the economy. Precluded from directing anger externally, people turn their feelings inward and experience them as depression.

Over the past forty-five years, suicide has escalated almost 300 percent among teenagers and young adults. Indeed, among 15- to 24-year-olds, suicide is now the third leading cause of death, surpassed only by accidents and homicide (U.S. Public Health Service 1999, 3). If the true number of suicides that are disguised as accidents were known, suicide would likely become the leading cause of death among this age group. In 1998, youths experienced more deaths from suicide than from AIDS, cancer, pneumonia, heart disease, stroke, birth defects, chronic lung disease, and influenza collectively (Centers for Disease Control and Prevention 2001, 2). Although African American teenagers suicide less often than White youths, between 1980 and 1996 the suicide rate doubled among 15- to 19-year-old African American males (U.S. Public Health Service 1999, 3).

There has also been an increase in the prevalence of suicide among children 10 to 14 years of age, for whom it is the fourth leading cause of death (U.S. Public Health Service 1999, 3). Apparent suicides among young children are usually attributed to other causes, such as accidents, because it is commonly believed that an understanding of the permanency of death must first be achieved before one is capable of intentionally killing oneself. In early childhood, chil-

dren usually believe that death, like sleep, is transitory and reversible.

The age cohort at greatest risk is the elderly. With age, suicide rates increase, and they are highest among those 65 years and older, especially among White males, who constituted 83 percent of elderly suicides in 1998. Perhaps because people are living longer, the incidence of suicide has increased significantly among 80- to 84-year-olds during the past two decades (Centers for Disease Control 2001, 1).

There is some evidence that suicide varies over time and season. For example, suicides peak during spring and autumn and are more prevalent on Mondays. Suicides are consistently down during times of war, probably due to increased feelings of interpersonal connectedness when everyone is perceived as partaking in a shared cultural event.

Risk Factors

Numerous biological, psychological, and social variables contribute to the development of suicidal thoughts and actions. No single event is likely to produce suicidality; rather, the desire to die is the consequence of several stressors that coalesce over a relatively brief period of time. These stressors are experienced as overwhelming, particularly among those who are vulnerable due to previous life adversities, have low tolerance for adversity, and suffer current support network deficits. The following factors are associated with increased suicide risk.

Genetics

Although suicide tends to run in families, it is difficult to know whether that tendency is the consequence of genetics or socialization and learning. Having one or more family members commit suicide increases the risk of suicide among other family members. It may be that suicide comes to be expected or considered a viable means for coping with intolerable psychological pain. However, adopted children who suicide have more suicides in their biological families than their adopted families, suggesting that a propensity for suicide is inherited. Furthermore, there is a strong genetic component to depression, bipolar disorder (manic depression), schizophrenia, and alcoholism, the psychiatric disorders most commonly associated with suicide.

Biology

People with low levels of serotonin, a brain chemi-

cal responsible for regulating mood and impulse control, particularly in the frontal cortex, are more likely to attempt and commit suicide. The lower the level, the more frequent and violent are the attempts. Other biological markers that are associated with increased suicide risk include elevated levels of the stress hormone cortisol and atypical brain electrical impulses that possibly suggest minimal brain dysfunction. Women make more suicide attempts during the premenstrual and bleeding stage of their menstrual cycle, suggesting an association between suicide and hormone levels and mood.

Early Childhood Experiences

A history of parental loss, childhood abuse and neglect, family aggression, or academic pressure is more apt to be present among suicidal individuals. Parental loss, whether due to death, separation, or divorce, is associated with later depression and suicide, especially during subsequent episodes of real or threatened loss. Completed suicides are most related to multiple losses, at an early age, and often for tragic reasons. Abused children also exhibit higher incidence of suicide and other self-injurious behavior, especially when abuse is paired with neglect. Aggressive families, in which brutality dominates and children develop a low threshold for frustration and poor impulse control, also contribute to heightened suicidality. Finally, excessive parental demands for academic excellence contribute to suicide in youths, who may come to view themselves as inherently worthless and unlovable unless they are both perfect and accomplished.

Psychiatric Disorders

Almost all suicidal individuals suffer from a diagnosable and treatable mental illness, most notably clinical depression. In fact, the lifetime mortality rates from suicide are 15 percent among sufferers of recurrent depression, 20 percent for bipolar disorder, 18 percent for alcoholism, and 10 percent for schizophrenia (American Foundation for Suicide Prevention 2001).

Drug and Alcohol Use and Abuse

Alcohol is a central nervous system depressant that can result in increased sadness, even days following ingestion. Consumption can exacerbate an existing depression and, especially for sensitive in-

dividuals, induce depression when as few as five to six drinks are consumed per week. Furthermore, mixing alcohol and drugs is often highly lethal, and either alone can lead to confusion, diminished impulse control, and increased courage to die, all of which enhance the likelihood of self-destructive behavior and death.

Health Problems

Illness may result in diminished abilities; loss of identity, dreams, and financial resources; and feelings of alienation and isolation. Among adolescents, simply feeling different from peers (e.g., because of a severe case of acne) can precipitate a crisis. Among the elderly, pain, growing disability, isolation, loss of function and independence, and death of elderly friends and family can be particularly heartrending and contribute to the desire to surrender their life. For the terminally ill and some elderly persons, the decision to die may seem rational, especially if they feel that they have lived a contented life and wish to avoid further sorrow, loss, and certain death.

Loss and Rejection

Loss or rejection often precipitates a suicide crisis. Loss may be real, perceived, or threatened, tangible or intangible. Concrete events include lost relationships (through death, divorce, or separation), employment, housing, and changed geography. Many suicides follow the breakup of a relationship, a recent disappointment, and disciplinary action. Less tangible may be lost self-concept, self-worth, status, security, expectations, and hope.

Others

Additional factors that are associated with elevated suicide risk include impulsivity, aggression, easy access to guns, isolation, difficulty accessing mental health services, refusal to get help because of shame or embarrassment, religious or cultural belief that suicide is an acceptable or noble way to cope with problems, media presentations of the suicide of famous celebrities, and local suicide clusters or epidemics.

Danger Signs

Most suicides are preceded by danger signs that suggest death is being considered. The presence of several danger signs indicates high risk for suicide.

Suicide Threat

Any direct allusion to suicide should be taken seriously. Intent, however, can be conveyed indirectly, through humor for example, in order to test or protect the person being told. Examples of indirect statements include, "You'd be better off without me," "I want to go to sleep and never wake up," "Have you ever thought about suicide?" and "I'm going away on a long, long trip." Suicide intent may also be conveyed through poetry, songs, and essays.

Previous Attempt

A previous suicide attempt is the greatest risk factor for a subsequent attempt. Individuals who attempted once are three times more likely to attempt again, and repeat attempters are 600 times more likely than the general population to die from self-inflicted injuries (Flanders 1991, 33). Suicide attempts are sometimes regarded as a call for attention. Although there is some truth to this, all desperate cries for help should be taken seriously; if not, some people will make repeated attempts until they eventually kill themselves. Indeed, 10 percent of attempters ultimately die by their own hands, and as many as two-thirds of suicide victims had made previous attempts (Flanders 1991, 33).

Depression

The risk of suicide increases significantly with the presence of depression. Depression is manifest through sadness, irritability, emotional outbursts, crying, insomnia or increased sleeping, lack of appetite or increased hunger, low energy, poor concentration and memory, difficulty taking pleasure in things previously enjoyed, feelings of guilt or worthlessness, and thoughts of death. A severely depressed person may experience many of these symptoms, as well as feeling hopeless, helpless, unmotivated, indecisive, highly anxious, and uninterested in socializing and maintaining proper hygiene. It is likely that severity of depression is less important than feelings of hopelessness in predicting suicidal risk.

Behavior and Personality Changes

Sudden, drastic changes in a person's behavior may suggest that something important is occurring, including giving up on life or preparing for death. For example, a normally outgoing, friendly, energetic person who becomes morose and with-

drawn may be depressed or resigned to die. Likewise, a highly motivated and accomplished student who loses interest in academics, whose grades fall, or who shows up to class late or drunk or stoned may be experiencing serious emotional problems. Finally, someone who has been suicidally depressed for an extended time and suddenly snaps out of it may be experiencing relief because she is no longer conflicted about whether to live or die: The person has decided on dying and thus has achieved inner peace.

Setting Affairs in Order

People who are planning to die may write a will or give away prized personal possessions to friends and family. Arrangements may be made for the care of pets.

Suicide Imitation and Contagion

Knowledge of people who have killed themselves increases the risk of suicide shortly thereafter. Suicides, especially of celebrities, that are published on the front page of newspapers result in increased suicides over the following months, particularly among youths and within the districts supplied by the newspaper. The greater the publicity, the more subsequent suicides and single-car crashes (which may well be masked suicides) are observed. Other media presentations of self-inflicted deaths also influence suicide incidence. For instance, a 1985 television movie broadcast in New York State resulted in elevated suicide rates, though only for that state. Some studies find that mass media representations affect only youths and last seven to ten days following exposure.

Suicide clusters also suggest the importance of imitation. For example, turn-of-the-century Russia experienced seventy child suicides within a single school district over a two-year period. The University of California at Berkeley experienced the suicide deaths of five males by jumping from buildings within one month. Finally, for a dozen years following the hanging of a prominent man who was conflicted about his love for two women, it was common for others in a similar situation to seek a similar outcome (Davidson 1989).

Treatment

Psychotherapy is helpful when the pain of living becomes unbearable. Whether delivered by a psychologist, social worker, or other mental health

professional, psychotherapy affords an environment in which feelings are shared and explored and coping techniques are learned. When extreme or protracted distress is experienced, especially when accompanied by suicidal thoughts, medications that affect a person's feelings, thoughts, and behaviors are sometimes used to restore stability and contentment. Psychotropic medications are usually prescribed by a psychiatrist, a medical doctor whose specialty is mental health and whose primary focus is symptom reduction and management of medication side effects. Antidepressants, especially selective serotonin reuptake inhibitors, effectively reduce depression and suicidal ideations. Because anxiety and insomnia increase suicide risk, anxiolytic drugs, particularly benzodiazepines, which specifically target anxiety, may also be considered. Mood stabilizers effectively treat bipolar disorder (manic depression) by reducing mood swings from extreme highs to extreme lows. Medications are most effective when combined with psychotherapy.

If depression appears annually in late autumn when daylight hours are short and resolves by spring as daylight hours increase, seasonal affective disorder (SAD) may be the cause. It is treated with phototherapy, or light therapy, in which time is spent sitting in front of a special lamp that mimics natural daylight.

In cases of severe depression that do not sufficiently respond to medications and psychotherapy, electroconvulsive therapy (ECT) may be prescribed. ECT involves electrically stimulating the brain by placing electrodes on the head while a patient is anesthetized, in order to induce a seizure. Remission of the depression and suicidal ideation is usually achieved after six to twelve treatments. Unlike in the past, current methods are painless, with minimal, usually short-term, side effects. During periods of extreme suicidality, hospitalization may be required to reduce symptoms, strengthen coping abilities, return the person to previous levels of functioning, and avert further emotional deterioration or breakdown.

Kenneth M. Cohen

See also: Social Support; Suicide in Older Adults **References and Further Reading**

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Suicide in Older Adults

The word suicide has been used for centuries to mean the willful taking of one's life. The phrase "commit suicide" has its origins in the legal and religious prohibitions of suicide and therefore has criminal and moral connotations. With the advent of biomedical understanding, there is a growing consensus that one does not commit suicide as one might commit a crime or sin. Thus the phrase "commit suicide" may be anachronistic. Suicide is not synonymous with attempted suicide. Most people who attempt suicide will never die by their own hand; only a minority of suicides have previously made a suicide attempt. The phrase "older adult" is used in contrast to "younger adult," but no firm age cut-off exists at which one becomes older, and the age at which one is considered older in a given society is mediated by societal attitudes. An accepted but arbitrary convention is to use 65 years of age as a cutoff, but this group is heterogeneous. Risk factors for suicide in a 65-year-old and an 85-year-old probably differ, but data are unavailable. As a multidetermined product of intersecting forces at multiple levels of analysis ranging

from the molecular to the macro, suicide in older adults is an exemplary object of inquiry in human ecology.

Facts and Figures

Suicide is more common than homicide, particularly among older adults. White males 85 years and older have a suicide rate that is almost six times the age-adjusted rate in the United States. In most countries men have higher suicide rates than women. In the United States, rates for males increase with age, but rates for women peak in midlife and remain stable or decline thereafter. In many other countries, however, later life is the time of highest risk for both men and women. Suicide rates for people who are single or widowed are higher than those for married people. There is no consensus on the question of socioeconomic status and suicide, but our research suggests that a plurality of older suicides did not graduate from high school, and that lower levels of education confer risk (Conwell and Duberstein 2001). Worldwide suicide rates vary substantially across geopolitical region. The term "geopolitical" is used instead of geographic to emphasize that suicide risk may be amplified or ameliorated both by bioclimatics (temperature, exposure to sunlight), and by legal instruments, economic arrangements, religion, and other aspects of human ecology. Periodicity is a term that has been used to refer to differences in rates as a function of time, defined as day of the week, day of the month, month of the year, or season. Suicide rates in the northern hemisphere, for example, tend to be higher during the warmer months than the colder months. Birth cohort effects are also important. Due to shared exposure to life-shaping events such as economic depressions, wars, political upheaval, or child-rearing practices, suicide risk may vary with birth cohort. For example, the large post-World War II birth cohort has had higher suicide rates than immediately preceding cohorts.

Role of Psychiatric Disorders

Once the province primarily of religion and the law, suicide has been recast largely as a biomedical public health problem. Research conducted over the past half century has shown that close to 90 percent of adults who take their lives have a diagnosable psychiatric disorder at the time of death, most frequently major depression, alcohol abuse

or dependence, or schizophrenia. Among older suicides, the most common diagnosis is a first episode (rather than a recurrence) of mild to moderate major depression (Conwell and Duberstein 2001). Ironically, this disorder may be malignant in part because it is relatively mild, making it more difficult to detect, diagnose, and treat. Underdiagnosis represents a major obstacle to prevention. Mild symptoms in people with histories of adequate adjustment may be difficult to detect and treat, because health care providers, friends, relatives, and others are not cued into the possibility of suicide risk (Duberstein 2001).

Role of Physical Illness

Just when pioneering psychiatric research has led to calls for public health solutions to the problem of suicide, fears of the prospect of growing ill and infirm in a body that steals one's independence has sparked debate about the legal right to die with dignity. The legal system had been relatively peripheral to debates about suicide for more than a century, but it has begun to intervene, most visibly in the Netherlands and in Oregon (United States). These activist courts are the exceptions that prove the rule. Given the prevailing legal climate, it is not surprising that there is a lack of good epidemiological data on the prevalence of what is called rational suicide or physician-assisted suicide. Although assumptions about a causal link between physical illness and late-life suicide have rarely been tested, our data suggest that suicide in the absence of potentially treatable psychological distress or frank psychiatric disorder is rare (Conwell and Duberstein 2001). In their review of suicide risk in more than sixty diseases among adults of all ages, Clare Harris and Brian Barraclough (1994) marshaled good evidence that HIV/AIDS, head and neck cancers, Huntington's disease, multiple sclerosis, peptic ulcer, renal disease, spinal cord injury, and systemic lupus conferred increased suicide risk.

At least two interpretative frames may be applied to these findings. Biological frameworks assume that particular disorders have pathophysiological effects on brain function and thereby increase risk for depression and suicide. Examples include tumors that affect the central nervous system, endocrine disorders, or certain medications used in the treatment of serious systemic illness. Social-constructionist frameworks emphasize the

symbolic meaning of the disease to the individual, as derived from societal norms as well as personal experiences. A cancer diagnosis could be interpreted as a death sentence, particularly among those who have witnessed a relative succumb to the illness.

Contemporary Questions and Directions

The emerging, controversial discipline of molecular psychiatry seeks to identify genetic predispositions to depression and suicide that could potentially be targeted pharmacologically using genomics. At a macro level, societal attitudes toward mental illness, aging, and suicide could discourage early recognition and treatment of symptoms that confer risk for suicide. Advertising and public education campaigns designed to eradicate stigma could prove useful. Rigorous research and debate on the detection, definition, diagnosis, and treatment of mental disorders is needed to optimize the effectiveness of new biological treatments and public health campaigns.

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Yeates Conwell

See also: Mental Illness in Old Age; Suicide

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Sustainable Development

The concern for sustainability, or as it is more commonly called, sustainable development, is based on recognition of "the need to ensure a better quality of life for all, now and into the future, in a just and equitable manner, whilst living within the limits of supporting ecosystems" (Agyeman,



Cleaning up an oil spill (Michael Siluk)

Bullard, and Evans in press). The concern for sustainability represents an attempt to look holistically at the human condition, at human ecology, and to foster holistic solutions, rather than our current piecemeal policy solutions to humanity's greatest problems. Achieving sustainable development requires focusing on quality of life, on present and future generations, on justice and equity in resource allocation, and on living within ecological limits. Sustainable development is therefore a policy framework for improving the way we do things on this planet of finite resources.

Since the 1980s, there has been a massive increase in published and online material dealing with sustainability and sustainable development. This increase has led to competing and conflicting views over what the terms mean, and what is the most desirable means of achieving the new policy goal. To some, the concepts are too all-encompassing to be of any use. To others, the concepts offer a holism that is lacking in our current reductionist policy making. According to Redclift (1987), sustainability as an idea can be traced back to two developments. These were the neo-Malthusian "limits to growth" debates of the 1970s, led by Professor Jay Forrester at MIT and Britain's *Ecologist* maga-

zine, and the 1972 UN Stockholm Conference on the Human Environment.

The single most frequently quoted definition of sustainable development comes from the World Commission on Environment and Development (1987): "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (World Commission on Environment and Development 1987, 43). This definition implies an important shift away from the traditional, conservation-based usage of the concept as developed by the International Union for the Conservation of Nature (IUCN) in its 1980 World Conservation Strategy, to a framework that emphasizes the social, economic, and political context of development. By 1991, the IUCN had modified its definition: "to improve the quality of life while living within the carrying capacity of ecosystems" (International Union for the Conservation of Nature 1991). However, unlike the first definition in this entry, neither the World Commission on Environment and Development (WCED) definition nor the IUCN definition specifically mentions justice and equity, which most commentators now hold to be of fundamen-

tal importance in developing sustainable communities and futures.

It was the 1992 United Nations Conference on Environment and Development in Rio de Janeiro, more popularly known as the Earth Summit, which boosted sustainability and sustainable development to their current high-priority status in policy-making circles among all levels of governments around the world. The major policy outcome of the Earth Summit was Agenda 21, a global agenda for sustainable development in the twenty-first century that was adopted by more than 178 Governments. The Commission on Sustainable Development (CSD) was created in December 1992 to ensure effective follow-up of the Earth Summit and to monitor and report on the implementation of Agenda 21 at the local, national, regional, and international levels. The successor to the Earth Summit was the 2002 World Summit on Sustainable Development in Johannesburg.

Recent thinking, according to Philip McNaghten and John Urry (1998, 215), reflects the “growing impetus within the policy making community to move away from questions of principle and definition. Rather they have developed tools and approaches which can translate the goals of sustainability into specific actions, and assess whether real progress is in fact being made towards achieving them.” Prominent among these tools, they argue, are sustainability indicators. Sustainability indicators help policy makers and communities understand what current conditions are (e.g., what the levels of sulfur dioxide pollution are); which way the indicator is going (whether there is less sulfur dioxide pollution or more); and how far we are from where we want to be (how far sulfur dioxide levels are from the target values set by the community?).

Economics has been influenced by sustainability. The economics of sustainability says that we must not diminish our “natural capital,” that is, our stocks of natural assets that yield a flow of goods for the future, assets such as a forest, a fish stock, or an aquifer. These stocks provide important ecological services, such as a harvest or flow that is potentially sustainable year after year. If the forest, fish stock, or aquifer is our natural capital, the harvest or flow is our “natural income.”

There are three types of natural capital:

Renewable, such as living species and ecosystems

Replenishable, such as surface water and groundwater

Nonrenewable, such as fossil fuels and minerals

Natural capital is more than just an inventory of our resources. It comprises the components and structures of the ecosphere, the totality of global ecosystems. Since renewable and replenishable resources are essential for life support, these forms of natural capital are fundamental and are called critical natural capital. They cannot be traded or allowed to depreciate.

The “strong” model of sustainability says that we should conserve and enhance our natural capital stocks and live on the income generated by them. The “weak” model says that it is acceptable to lose natural capital if we substitute the equivalent “human capital”; for example, human-made microwave transmission and optical fibers have greatly reduced the need for natural copper. The problem with weak sustainability is that substitution doesn’t work in many cases; for example, natural capital such as a forest is often a prerequisite for human capital such as a sawmill. In other cases, human capital simply cannot substitute for critical natural capital.

Another economic issue that sustainability focuses on is how we measure progress. The traditional measure is GNP (Gross National Product). This measure was developed in the 1940s to see how well different countries were doing in terms of wealth generation. It is a measure of human activity that is rewarded by a payment. GNP measures the value of goods and services produced by U.S. nationals anywhere in the world; since 1991, the preferred measure has been GDP (Gross Domestic Product); a measure of the value of goods and services produced within the boundaries of the United States. GDP doesn’t, however, account for human activities such as domestic and family tasks, taking care of kids or the elderly, volunteer or community work, and leisure time activities. GDP is therefore only a measure of wealth, that is, standard of living, not unpaid human activities that contribute to quality of life, which is increasingly important in civil society. Unpaid human activities create social capital, the cement that keeps societies functioning normally. Neither GNP nor GDP provide information on wealth distribution, on social development, or on environmental exter-

nalities, such as oil spills. If a country is generating massive wealth that is, has a high GDP, but is polluting massively, or is near social breakdown through crime, stress, and ill health, can we say that this it is developing sustainably?

Many countries are now seeking alternative ways of looking at development that take into account the environmental externalities (such as the costs of pollution, depreciation of natural assets, loss of ecosystems) and the social development issues of wealth distribution, equity, and the like. One example is the Index of Sustainable Economic Welfare (ISEW). The problem is, while GNP measures standard of living, that is, the amount of money in our pockets, which for many is rising, ISEW measures quality of life (are you afraid to walk the street?), which is falling for most people. The message? More money doesn't mean more happiness.

Some policies for sustainable development that are being implemented in different parts of the world include the following:

Eco taxes, which shift the tax burden from good things like employment, to bad things, like pollution and resource use.

Elimination of agricultural and energy subsidies, which are environmentally damaging through their encouragement to overuse energy, fertilizer, pesticides, and irrigation water. Sustainable agriculture relies on recycling of nutrients, natural pest control, labor intensity, and less use of artificial products.

Recycling and renewables would be given greater prominence. The study of industrial ecology is showing how industrial systems can be made to mimic the closed cycle

patterns of natural systems with *materials reuse* and minimal or *zero waste*.

Efficient transportation systems, which replace energy intensive automobile transport with high-speed trains, public transit, greater use of bikes and walking, redesign of cities and suburbs through smart growth and New Urbanism projects to minimize transportation needs through mixed-use developments.

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See also: Consumption, Ethical; Environmental Movement in the United States and People of Color; Environments of Children; Social Capital; UNICEF

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Teaching Older Adults to Use New Technologies

In today's society, the segment of the population aged 60 and older is growing at an unprecedented rate. Gerontechnology, a new area in the study of human aging, has focused on developing technology to promote independence and reduce disabilities associated with old age. Although the promise of new technologies is great, this potential is highly dependent on the ability of older adults to learn to use such technologies. For this reason, it is important that effective training programs be developed to teach older adults how to use new technology. The discipline known as human factors provides an effective means of accomplishing this goal. Human factors is a science focused on optimizing interactions between humans and the machines that they use, thereby resulting in improved safety and quality of life. When methods to teach older adults to use new technologies are being developed, a systems approach to human factors research is effective because the characteristics of the person, the environment, and the technology itself are considered through a series of sequential steps: needs assessment, task and person analysis, selection and design of training programs, and evaluation.

The initial step of needs assessment determines the content of training materials by exploring whether training is necessary, what goals older people wish to accomplish, what skills need to be taught, and the characteristics of those who will benefit most from training. This step is crucial, given evidence that older adult users and nonusers

of new technologies such as the Internet share common goals and express positive attitudes about learning to use new technology.

Task and person analyses follow needs assessment and are conducted to determine the characteristics of device function and of people who will use the device. Specifically, task analysis defines the step-by-step procedure for operating a device and results in a list of requirements and abilities that are essential to effectively operate that device. For example, correct use of a blood glucose monitor requires the completion of a procedure composed of fifty-one substeps (Rogers et al. 2001, 6). Of equal importance is the person analysis, which defines the capabilities and limitations of those who will learn to use a new technology. Because the human body and mind change with age, person analysis is especially important when designing training programs for older adults. Due to well-documented age-related changes in memory, attention, vision, and audition, older adults have special needs that should be considered when developing any training program.

From the results of the task and person analyses, the most appropriate design and selection of training options can be used to facilitate learning. For instance, older adults' decline in memory may decrease the likelihood that they will remember the fifty-one-step procedure used to operate a blood glucose monitor. Training techniques such as the provision of well-organized written instructions may assist in reconciling the differences between task requirements and personal limitations.

Once a training program is in place, evaluation

of that program is necessary to ensure that training is effective. To evaluate a program, measures of successful learning such as retention of information and ease of device usage should be examined. If a training program is deemed ineffective, the adoption of new training techniques and needs assessment information should be considered.

Following the systems approach to human factors and continually revising training programs to meet the special needs of trainees, institutions, and individuals may build programs to effectively teach older adults to use new technology. Through increased access to new technologies and reduced frustrations associated with effective training programs, older adults' daily activities will be enhanced and their ability to maintain an independent lifestyle will be extended. For instance, older adults may choose to take an active role in their health care maintenance by learning to use home medical devices such as blood glucose monitors, or they may increase accessibility to their personal finances by learning to use automatic teller machines (ATMs).

The benefits of teaching older adults to use new technology extend far beyond the empowerment and continued autonomy of the older individual to the economic and emotional stability of families and society. New technologies provide a means for older adults to age in place at home, thereby prolonging an independent lifestyle and avoiding nursing home care. Given the emotional and financial costs of institutionalized care, family members and society benefit from older adults' effective use of new technology. As new technologies emerge in the future, the systems approach described here can be adopted to optimize interactions between humans and machines, thus resulting in effective training programs that benefit people of all ages across a variety of educational contexts.

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See also: Aging and Technology; Housing and Older Adults; Intergenerational Programs in Communities; Older Adults: Preparation for Future Care; Outdoor Mobility in Old Age

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Technology

See Aging and Technology; Information Technology Impacts on Children, Youth, and Families; Intergenerational Programs in Communities; The Internet; Virtual Organizations; Teaching Older Adults to Use New Technologies

Temperament

Temperament can generally be defined as a behavioral or emotional trait that differs across individuals, appears early in life, is relatively stable over the life span, and is, at least to some degree, influenced by biology. This broad definition of temperament is generally agreed upon by most psychologists, but there is a devil in the details. The majority of the many questions about temperament can be summarized into two broad themes: what the structure of temperament is and how biology is related to this structure. As noted above, one of the things that temperament researchers agree upon is that temperament reflects individual differences in the way individuals interact with the environment. Accordingly, temperament has become an important factor in predicting other behavioral outcomes.

Temperament, broadly defined, is among the oldest concepts in psychology. Indeed, the general manner in which temperament is defined by behavioral scientists today differs very little from the way the ancient Greeks talked about the essential nature of a person. Galen, a Greek physician of the second century A.D. whose works were considered authoritative for many centuries, used the four humors to identify nine basic temperament types,



Dr. Alexander Thomas and Dr. Stella Chess (Courtesy of Dr. Stella Chess and Dr. Alexander Thomas)

five of which were the result of balanced relationships among the four humors and four of which were derived from the dominance of one humor over the others (Kagan 1994). If one replaces the humors with genes and neurochemicals, the approach to temperament taken by Galen seems little different from that of contemporary temperament researchers.

One of the primary questions facing temperament researchers is how to identify a temperament trait; what exactly are the dimensions of temperament? One of the issues that make answering this question so challenging is that temperament is not a kind of behavior, like aggression, prosocial behavior, risk-taking, or other categories of behaviors. Rather temperament is a quality of behaving. Alexander Thomas and Stella Chess suggested that temperament is understood to be the “how of behavior” (1977). Similarly, Strelau (1987) defines temperament as the stylistic aspects of behavior rather than the content of behavior. Thus, typically

temperament is not so much observed as it is inferred from abstract descriptions of the qualitative aspects of an individual’s behavior. As a result, the identification of a temperament trait is sensitive to the qualitative descriptions used to describe it. Perhaps the importance of this kind of description accounts for Strelau’s (1997) identification of nearly eighty different terms used to refer to temperament characteristics. A primary emphasis in temperament research has then been to seek a convergence of descriptive terms. For example, how different are arousal and sensory threshold, approach/withdrawal and behavioral inhibition, and emotionality and quality of mood?

Another common defining characteristic of temperament is that it appears quite early in development and is relatively stable over the life span. It is for this reason that the study of temperament has often focused on infancy and early childhood. The assumption has been that temperament is not an acquired characteristic; one

doesn't learn ones temperament, rather one is simply born with a given temperament profile. Further, these in-born traits persist throughout the life span, though they may change form. For example, an infant may have a withdrawal-oriented temperament, but lacking the physical capacity to move independently may cry when presented with novel situations or toys or people. This response has the fortunate, for the infant, effect of prompting a caregiver to either remove the infant from the stimulus or the stimulus from the infant. In either case it effectively increases the distance between the infant and that which makes him uncomfortable.

As such children grow through early childhood, middle childhood, adolescence, and so on, they no longer need to rely exclusively on others to control their environment. They can themselves retreat from situations that make them uncomfortable, and they may actively seek out environments that are of low stimulus intensity. In adolescence they may begin to use depressant drugs such as alcohol, narcotics, or nicotine to effectively withdraw from situations that make them uncomfortable, but which there is strong social pressure to be part of (parties, school functions, and the like). These behaviors are quite different in form, but they yield the same functional effect.

The assumption that temperament traits are not acquired and are persistent across situation and developmental period segues nicely into the assumption that temperament is a behavioral trait that has its origins in biology. Indeed, some have argued that a behavioral characteristic cannot be considered a temperament trait unless it has strong biological underpinnings (e.g., Strelau 1998). The title of an influential edited book on temperament sums this assumption up nicely: *Temperament: Individual Differences at the Interface of Biology and Behavior* (Bates and Wachs 1994). Strelau has identified six assumptions of temperament research that reflect the strong assertion that temperament is biological in origin:

Any psychological function depends on the brain.

Genetic influences seem to be important in determining individual differences in temperament traits.

If genetic factors play an essential role in determining individual differences in temperament, then there must exist

intervening variables of a biological nature that are transferred genetically through generations.

The universality of temperament traits across cultures implies that there must be species-specific carriers of these traits that have a biological background.

The presence of temperament traits and clear-cut individual differences in this domain since early childhood cannot be explained by environmental factors.

The existence of temperament traits not only in humans but also in other mammalian species serves as the basis for two important assumptions: (a) In the process of biological evolution, temperament traits must have played an important adaptive function; (b) There must be some biological mechanisms in common for both humans and other mammals that mediate temperament traits. (1994, 120)

A substantial issue in understanding the nature of temperament is the relationship between temperament and personality. In many ways, especially to the general public's understanding, they seem to be the same thing. Often in our common discourse, we use temperament and personality interchangeably. One of the more notable personality researchers of the twentieth century, the late Hans Eysenck, took this view. According to Eysenck (1991), semantically the concepts of temperament and personality are indistinguishable.

Arnold Buss and Robert Plomin (1984) suggest that temperament is a precursor to personality. According to their view, temperament is the core set of behavioral dimensions that provide the foundation for personality. This view of temperament as a precursor to personality, or as the biological foundation of personality, has recently become more widely accepted (Halverson, Kohnstamm, and Martin 1994). However, there are several difficulties in relating the concepts of personality and temperament. Strelau (1987) argues that first, temperament is biologically determined, while social processes determine personality. Second, the structure of personality is shaped much later in development than that of temperament, which is thought to be present very early in childhood. Personality is also thought to be a behavioral phenomenon exclusive to humans, whereas tempera-

ment traits such as approach and withdrawal have been shown in many species. It should be noted, however, that several researchers are currently exploring the existence of what are called the big five personality factors in primates (James King and Aurelio Figueredo 1997).

One way that many researchers have thought about temperament as the “quality of behaving,” and differentiated it from personality, is by defining temperament as an emotional trait. Gordon Allport (1937) originally proposed this view, defining temperament as constituted by the emotional characteristics of behavior. Albert Mehrabian (1991) has outlined a general emotion theory of temperament, in which the key concept is the emotion state, defined as the transitory emotion that serves to relate situations to personality variables. The average of emotion states over time and across situations constitutes the emotion trait or temperament.

Several temperament researchers have discussed temperament as a dynamic developmental process (e.g., Rothbart, Ziaie, and O’Boyle 1992; Strelau 1991). This perspective is not incompatible with an emotion- or personality-based view. The difference rather is one of static vs. dynamic and addresses the assumption of temperamental stability. For example, Mary Rothbart and her colleagues (1992) defined temperament as created by individual differences in reactivity and self-regulation. According to this approach, self-regulation and reactivity are the two defining aspects of temperament. Self-regulation refers to the set of processes that modulate activity, including selective attention and responsiveness to cues. Reactivity refers to the arousability of the multiple physiological and behavioral systems of the organism. As the child develops, self-regulating processes increasingly moderate reactive processes. Temperament is defined by an individual child’s reactivity to environmental events and stimuli, in combination with her ability to self-regulate those processes. Thus, a highly reactive child could appear similar in temperament to a less reactive child, if the former child has adequate self-regulating skills.

Another widely accepted conception of temperament is the goodness-of-fit model proposed by Alexander Thomas and Stella Chess (1977). Based on an analysis of the relationship of nine behavioral dimensions in the context of the indi-

vidual’s environment, temperament can be defined in terms of the goodness of fit between an individual’s behavioral style and the environmental demands placed upon him. Chess and Thomas define goodness of fit in the following way:

There is a goodness of fit when the person’s temperament and other characteristics, such as motivations and levels of intellectual and other abilities, are adequate to master the successive demands, expectations, and opportunities of the environment. If, on the other hand, the individual cannot cope successfully with the environmental demands, then there is a poorness of fit. With a goodness of fit, psychological development and functioning progress favorably. With a poorness of fit, the individual experiences excessive stress and failures at adaptation, and his or her development takes an unfavorable course. (1991, 16)

Using the goodness-of-fit model, one can begin to see the relationship between temperament and ecology. One of the foundations of ecological approaches to developmental psychology is that development is a product of both individuals and environments actively shaping one another. Temperament plays a key role in the manner in which an individual actively shapes and organizes her unique ecological environment. Shy, inhibited children seek to find or modify their environments in such a way that they will have to experience little novelty. Conversely, outgoing, uninhibited children actively elicit novel experiences, always seeking to try new things. Indeed, as a result of this organizing role and the way in which it interacts with various ecological factors, temperament is related to a number of developmental outcomes such as substance use, academic success, eating disorders, adolescent risk-taking behaviors, and memory.

Moreover, there is a small but growing body of evidence that suggests that temperament itself may be modified by ecological factors (Wachs and Kohnstamm 2000). The goodness-of-fit model of temperament certainly suggests that under the right ecological conditions an underlying temperament trait may never become evident. However, a case for the stronger statement that temperament traits are the result of a multitude of

developmental factors might be made. Such developmental factors might include biological and behavioral reactivity; self-regulatory cognitive-behavioral attributes; caregiver attitudes and behaviors that serve to encourage or undermine self-regulatory abilities; and ecological factors providing a contextual setting, as well as directly facilitating or suppressing self-regulatory skills. It may be the dynamic interplay of all of these variables over the course of development that serve as the foundation of temperament profiles rather than simply individual differences in biology alone.

Ty Partridge

See also: Child Development, Cultural and Community Influences on; Ecodevelopmental Theory; Epigenetic Principle

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Tobacco Prevention and Youth

The ecological approach to youth tobacco prevention stresses the need for interventions to target larger social environments versus focusing specifically on individual change. Substantial evidence exists that prevention efforts only targeting individual behavior and education are marginally effective at bringing about significant reductions in tobacco use (Cummings 1999). Since tobacco addiction is the most preventable cause of death in the United States and almost all individuals who become addicted to nicotine start smoking or chewing as adolescents, it is imperative that we consider the larger socioecological systems that encourage and support youth tobacco use and addiction.

The tobacco industry relies on its ability to attract adolescents to experiment with its products in order to create a new stream of customers chronic users either quit or die of tobacco-related diseases. An adolescent who starts smoking today will typically smoke for a minimum of sixteen years if male and twenty years if female (Pierce and Gilpin 1996). The end result of youth experimentation with tobacco products can be devastating, including long-term nicotine dependency and the subsequent life-threatening diseases caused by prolonged use of tobacco products. Because nicotine addiction almost always begins in adolescence, it is paramount to develop strategic and successful prevention interventions for young people. By that course of action, millions of individuals can be spared the dire health consequences associated with chronic tobacco use.

Historic efforts to prevent youth drug use, including tobacco, can be broadly categorized by interventions focusing on either supply or demand. Supply interventions can be defined as efforts aimed primarily at eliminating or reducing the ability of youth to obtain tobacco products and hence prevent them from becoming addicted to nicotine. Laws aimed at restricting or eliminating the sale of tobacco products to minors are an example of supply-based interventions. Demand-based interventions represent the majority of tobacco prevention approaches. These interventions aim to reduce or eliminate adolescent interest in tobacco or desire to experiment with or initiate tobacco usage. The three main classifications of demand-based programs are (a) the information deficit model, (b) the affective education model, and (c) the social influences model.

The information deficit approach provides specific knowledge or information about the dangers of tobacco use. Often these messages are aimed at inducing fear about the long-term health impacts of being addicted to nicotine. Although providing information about the effects of tobacco use remains an important function for educators, studies indicate that information alone is not an effective method to modify the behaviors of most youth. Because of the limitations inherent in information-based interventions, researchers turned to the development of affective models. These interventions use motivational or affective techniques that are aimed at increasing self-worth and helping young people develop a value system based on a healthy nontobacco lifestyle. Affective educational models have proven to be no more efficacious than their predecessor.

Tobacco prevention efforts have most recently focused on the social factors that encourage youth to use tobacco products. Overall, the social influence models recognize the tremendous impact that social environments play in facilitating or preventing youth from smoking or chewing tobacco. Interventions based on this model typically include ways youth can resist both peer pressures and marketing pressures from the tobacco industry. These methods often include training in social and life skills, communication skills, or decision-making skills, or all three. One reason given for the success of these approaches is that they focus more on the short-term immediate issues facing adolescents. In contrast, information programs

that use scare tactics focus on the long-term health risks and complications of tobacco use. For adolescents, this information not only may be hard to imagine but does not directly address and relate to their current needs and life situation.

Traditionally, both demand and supply tobacco-control programs have focused almost exclusively on individual behavior change and individual education. Programs focusing solely on individuals as the target of intervention typically do not consider how broader systemic elements (i.e., peer groups, families, tobacco companies and retailers, community organizations, schools, health-care institutions, legal bodies, and so on) can interact and contribute to youth tobacco use.

In contrast to the historic supply and demand interventions, ecological approaches include the profound influence of environment on behavior. In terms of tobacco prevention specifically, tobacco use is conceptualized as an interaction between individual characteristics and elements of social contexts. That is, a young person's tobacco experimentation and use is influenced and shaped not only by personal and individual factors, but also by contributions from the psychosocial environments in which people live. Rather than targeting specific individuals or groups, the ecological approach aims to alter tobacco use in entire populations by impacting the larger social systems that contribute to and support adolescent nicotine addiction.

Those interested in using ecological interventions need to address the larger structures and systems that influence individual tobacco-use behavior. In fact, an ecological prevention effort may not involve any direct service to individuals at all (Cummings 1999). As with individual approaches, ecological efforts may focus on either supply or demand dimensions; the ecological approach, however, targets multiple systems and utilizes multiple strategies. In addition, ecological approaches are appealing because they contribute to community development and empowerment by facilitating community organization and coalition development (Aguirre-Molina and Gorman 1996).

Ecological interventions that attempt to decrease the supply of tobacco products examine larger systemic structures that enable youth to obtain tobacco, including public policy, local city ordinances, retailer education, and even cigarette tax laws. For example, a community-based program in California (Bidell et al. 2000) targets local ordi-

nances for retailer display of cigarette products, as an effective means to reduce illegal sales rates to minors. An ecological framework can also be utilized when intervention goals are centered on reducing the demand for tobacco products.

The association between exposure to problematic peer behavior and adolescent substance use highlights the potential for prevention efforts that intervene at the level of the peer environment (Coker and Borders 2001). Policies limiting tobacco advertising, as well as media efforts aimed at changing tobacco-related norms, may contribute to decreased demand for tobacco products. Strategies that enhance family management and monitoring of youth activities can also play a role in decreasing opportunities for substance use and hence reduce youth's desire to use tobacco products (Dishion and Skaggs 2000). Family management skills and the quality of caregiver-adolescent relationships can mediate the influence of peer associations. Adolescents with a positive bond to caring adults may be less likely to engage with substance-using peers, and the involvement of family members decreases opportunities for young people to engage with deviant peers (Dishion, Capaldi, and Yoerger 1999; Dishion and Skaggs 2000).

In summary, an ecological model to prevent youth tobacco addiction posits that both mental and somatic health of children is directly connected to the health of families, schools, communities, corporations, and the society as a whole. Accordingly, ecological interventions target the various systems within which adolescents develop, seeking to curtail both the demand for and supply of tobacco products.

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See also: Community Youth Development; Smoking and Tobacco Use

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Transition from School to Work and Adult Life

In schools, universities, and businesses today, the term "transition" is used most commonly to refer to the process of learning and applying the skills necessary to successfully move from childhood through adolescence and into adult life. Preparing students for this transition has been assumed to be an important job of schools for many years, but it has become even more of a primary focus in recent years as a result of new federal legislation (e.g., the 1991 Secretary's Commission on Achieving Necessary Skills, the School-to-Work Opportunities Act of 1994, and the 1997 reauthorization of the Individuals with Disabilities Education Act), increased research, and more comprehensive assessment techniques. This recent work has much to contribute to the field of human ecology. Not only has this work involved experts from a variety of different fields and professions (e.g., psychologists, sociologists, and teachers), but it has also examined a variety of different levels of factors believed to influence success in this transition (e.g., societal, neighborhood, school, and family factors).

In the past decade, new federal legislation has dramatically changed transition services. In 1991, the U.S. Department of Labor released the Secretary's Commission on Achieving Necessary Skills (SCANS), identifying four sets of skills that they said schools should teach students to prepare them for adulthood: (1) resources (the ability to identify, organize, plan, and allocate resources), (2) information (the ability to acquire and use information), (3) systems (the ability to understand complex interrelationships), and (4) interpersonal skills (the ability to work with others). The School-to-Work Opportunities Act of 1994 then provided money to states to design and implement programs addressing skills such as these through three primary transition components: school-based learning, work-based learning, and "connecting activities," which help students link skills learned at school and work. Finally, in 1997, the Individuals with Disabilities Education Act (IDEA) was reauthorized and a requirement added stating that, in addition to their academic goals, all special education students must by age 14 have goals in their individual education plans (IEPs) addressing their transition needs.

Results of a recent survey of young adult workers and their employers support the need for systematic preparation for the transition to work (Peterson 1982). The survey found that both groups valued functional and social maturity skills more than practical job skills in preparing students for a successful transition. These skills can be learned both at school and in the workplace. Research by Jeylan Mortimer and Michael Finch at the University of Minnesota (Mortimer and Finch 1996, 8) has demonstrated the potential benefits of quality part-time work for adolescent and adult development. Mortimer's group conducted a long-term study examining the impact of adolescent work on later life and found that work of twenty hours or less in a job that provides the adolescent with opportunities to exercise independence and responsibility is related to a more successful transition to adulthood.

Consistent with the beliefs of human ecologists, Mortimer and Finch have also urged scholars to take a more "ecological" approach to examining the factors that influence the transition process (1996, 1). In the 1970s, Urie Bronfenbrenner (Bronfenbrenner 1979) designed an ecological model for explaining human behavior, arguing

that individual actions are influenced by interactions among multiple different levels of factors, including societal, neighborhood, school and family factors. As yet unpublished work by the author of this entry (Hyson 1999) outlines the range of factors at the individual, micro-, exo-, and macrosystem levels of Bronfenbrenner's model that research has shown to be related to a successful transition to work (see Figure 1). I also suggest that the significance of each of these factors changes as an individual grows and develops. For example, while part-time work experience may be important for adolescents, school success and peer relationships may be more significant factors in childhood.

In fact, researchers, practitioners, and policy makers are agreeing more and more that the transition process is a lifelong process beginning well before the individual acquires her first "real job." School programs addressing the transition process reflect this movement. Two primary types of programs exist at this time: "career development" programs and "transition" programs. The former are designed primarily for college or career-bound students and focus mainly on helping students identify their career interests and aptitudes and explore potential career paths. The latter are meant for special education students and are designed to help them learn the work-related skills necessary to make the transition to work, postsecondary learning and adult life. Increasingly, however, researchers and policy makers are calling for more integrated transition programs, designed to address the needs of all students.

In fact, research has shown that effective career development and transition programs share similar strengths. Effective programs (1) involve families, businesses, and community agencies as equal partners in preparing students for a successful transition, (2) begin early in a student's academic career, and (3) focus on teaching work-related competencies such as those outlined in the SCANS report (Levinson 1995a, 912; Levinson and Brandt 1997, 541). Stephen Hamilton and Mary Hamilton's recent comprehensive report on the implementation of the School-to-Work Opportunities Act (Hamilton and Hamilton 1999) and a Web site created by the All Means All School-to-Work Project at the University of Minnesota (www.ici.coled.umn.edu/all) provide descriptions of several exemplary integrated transition programs at the school, district, region, state, and corporate levels.

Stephen Hamilton (1990) has also closely examined the apprenticeship model popular in Germany and advocates for its usefulness in providing youth with the on-the-job training necessary for a successful transition to work and adult life.

It is impossible to design any successful transition program, however, without knowing the strengths and weaknesses of the students it will be serving. Any effective transition program includes, within its curriculum, assessment tools designed to help teachers and students identify the interests, aptitudes, and skills outlined above. According to the experts, the most effective assessments employ a variety of tools, including student interest inventories, learning styles inventories, interviews, vocational evaluations, behavior rating scales, and portfolios (Levinson 1995b). In addition, although practitioners vary in the specific tools they use, recent work in the field suggests that all assessments should include an evaluation of the work-related skills necessary for a successful transition.

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See also: Catholic Schooling: The Achievement of Poor and Minority Students; Community Schools; Developmental Transitions across the Life Span; Early Intervention and the Individuals with Disabilities Education Act; Full-Service Schools; High School; High School, Advising Students in; Young Adulthood

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Treatment Adherence

Adherence, sometimes referred to as compliance, is typically defined as the extent to which the patient's behavior corresponds to medical or health advice (Haynes, Taylor, and Sackett 1979). The term "adherence" has become more popular than "compliance" because it reflects a mutual or interactive responsibility shared at least by the health care provider and the patient (Rudd and Marshall 1990).

Treatment nonadherence is a significant problem; it crosses treatment regimens, age and gender groups, and socioeconomic strata. It is estimated, for example, that 50 percent of individuals discontinue participation in cardiac rehabilitation programs within the first year, 16 percent to 50 percent of hypertension patients discontinue their medication within the first year of treatment (Flack, Novikov, and Ferrario 1996), and 20 percent to 80 percent of patients who have antidepressant medications prescribed fail to adhere to the prescription after one month (DiMatteo, Lepper, and Croghan 2000). Nonadherence rates for hormonal replacement medication over one to two years range from 27 to 61 percent (Faulkner et al. 1998). Rates of treatment adherence decline with increases in regimen complexity. Since the beneficial effects of risk reduction on many chronic diseases and problems are not realized immediately, long-term adherence is essential for the strategies to be effective (Burke, Dunbar-Jacobs, and Hill 1997).

Most research involving treatment adherence has focused either on the role of the provider or on the patient. Treatment adherence research has typically neglected to consider the multiple layers of the patients' social context and the influence of that context on their treatment adherence. Lawrence Wallack and Marilyn Winkleby (1986) and others have suggested that the environmental

context, including social and political factors that ultimately affect individual choice, has been understudied and undervalued.

Examining treatment adherence may begin with a patient's behavior, but one must also consider the multilevel influences on patients' treatment adherence. Kenneth McLeroy and his colleagues (1988) developed an ecological model for health promotion that is a variation on Urie Bronfenbrenner's model (Bronfenbrenner 1979). The model developed by McLeroy and his colleagues is composed of five factors: intrapersonal factors, interpersonal factors, institutional factors, community factors, and public policy issues. In this ecological model, attention is directed not only at the behavior of the individual but also at the many environmental factors affecting behavior. The importance of using an ecological model to understand treatment adherence becomes clear if one looks at the role of these factors as revealed by studies examining pharmacological behaviors among older adults.

Intrapersonal factors that may influence medication adherence include such characteristics of the individual as knowledge, attitudes, cognitive abilities, and motivation. It is well documented, for example, that adherence requires that adults taking medications understand the purpose of taking them and the potential side effects they may encounter. In other words, patients must be aware of the negative experiences associated with taking the medication as well as with the benefits to be gained. Hypertension, for instance, is an asymptomatic disease, but there are side effects associated with antihypertensive medications (e.g., sexual dysfunction, headaches). Antihypertensive medications, however, significantly decrease the risk of such diseases as coronary artery disease, stroke, and congestive heart failure.

Other intrapersonal factors that potentially affect treatment adherence include memory problems. Declines in memory function may contribute to missed doses (Park 1994). In terms of specific diseases, such as mental illness or AIDS, the stigma attached to the disease is a powerful obstacle to seeking care, particularly among older adults (Sirey et al. 2001), for whom seeking care in the mental health sector entails both countering the discriminatory idea that depressive symptoms are not a normal part of aging and confronting the stigma attached to mental health treatment. The effect of the stigma is greater once treatment is ini-

tiated and the individual must face the reality of having a diagnosis, taking medication, meeting with a clinician, and so on (Link et al. 1989).

Interpersonal processes include both formal and informal social network and social support systems, including the family, work group, and friendship networks, as well as relationships with the healthcare provider. Perceived social support, either from family members (Trevino et al. 1990) or from the healthcare provider (Stanton 1987), may enhance medication adherence. Support from one's social network may provide necessary information, encouragement, or logistic means for ensuring medication adherence, as well as increasing the likelihood of individuals seeking preventive health care services such as hypertensive screening and treatment.

The relationship between provider and patients has a significant impact on treatment adherence. There are several compelling reasons to identify ways to improve physician-patient communication, especially in the management of chronic disease. Many patients want a more active role in their medical care. Patients of physicians who involve them in treatment decisions have better health outcomes, both in psychological and functional status, than those whose physicians do not (Joos et al. 1996). Furthermore, patients who feel that they have participated in decision making are more likely to follow through on those decisions than those who do not (Cooper-Patrick et al. 1999). Second, many chronic diseases, such as hypertension and diabetes, require substantial responsibility by the patient for implementing treatment regimens settled on during the physician-patient visit. Effective physician-patient communication must include the transfer of sufficient information to hypertensive patients to permit them to implement the treatment regimen correctly, and equally importantly must persuade patients that the agreed-upon regimen should be carried out (Kaplan, Greenfield, and Ware 1989). Conversely, short, impersonal consultations where the patient's expectations remain unfulfilled have a detrimental effect on blood pressure control (Stason et al. 1994). Judith Hall, Debra Roter, and Nancy Katz (1988), for example, observed greater adherence among patients of physicians who communicated positively (e.g., gave reassurance, support, and encouragement) and refrained from negative communications (e.g., anger and disapproval). Sherrie Kaplan

and her colleagues (1989) reported that hypertensive patients whose physicians were less controlling or who allowed more patient participation during the office visits had better functional status and lower follow-up blood pressure than patients of more controlling physicians. Thus, interpersonal relationships, particularly between providers and patients, have the potential for having a significant impact on patients' treatment adherence.

In terms of treatment adherence, institutional factors may be related to barriers to care and may exist at the patient, provider, or organizational levels (Miller et al. 1997). Many individuals from lower socioeconomic strata lack health insurance and are unable to afford required medical devices and medications. The cost of therapy and of the medical visit, and perhaps also the time off from work, may significantly reduce the patients' disposable income. Good health may become a low priority for the patient or the patient's family, or both, because of other competing needs and limited resources. In addition to the patient's limited resources, health personnel and facilities are not always available where people live and work. Barriers to adequate treatment adherence include lack of health insurance, lack of a primary care physician for hypertension care, long distances to travel, and waiting times, as well as the cost of care and medications.

The influence of community and public policy factors on treatment adherence remains underresearched, but some attention has been given to the influence of nonadherence on public health, which is a concern of both the community and public policy makers. Treatment adherence research among tuberculosis and HIV/AIDS patients has been especially concerned with public health issues.

Tuberculosis remains an important public health problem, particularly in urban areas. Treatment of latent tuberculosis infection with isoniazid reduces the risk of developing the active disease by 60 percent to 90 percent (Whalen et al. 1997). Although isoniazid therapy is highly efficacious and inexpensive, its usefulness is limited by poor adherence to treatment by asymptomatic patients. Poor adherence also contributes to increased drug-resistant strains of tuberculosis.

Community and public policy issues impacting treatment adherence have gained more attention in the United States with the advent of new medications and the AIDS epidemic. As with tubercu-

losis, suboptimal medication adherence has been recognized as having significant public health implications for patients with human immunodeficiency virus (HIV). Infected patients who take highly active antiretroviral therapy (HAART) and do not adhere well to their regimen allow ongoing viral replication and facilitate the emergence of HIV-1 variants resistant to the drugs being used (Race, Dam, Obry, Paulous, and Clavel 1999). The public health implications of nonadherence to combination therapies for HIV/AIDS is further problematic because, despite reduction in the frequency of dosing, and in the clarity of instructions for taking medications at meal times, most of the regimens continue to involve more than twenty pills, capsules, or tablets per day. The combination therapy regimen for a person living with HIV is among the most complex regimens ever prescribed for continuous and open-ended treatment for a large population (Chesney et al. 1999). In addition to the complex medication regimen, HIV/AIDS treatment adherence is further complicated by the fact that optimal adherence is typically observed when medications remove symptoms, whereas adherence is adversely affected if medications produce side effects. Unfortunately, the early stages of HIV/AIDS, like hypertension, are asymptomatic, so there are no symptoms present for the drug to remove, and as with medication for hypertension, the new therapies for HIV/AIDS do produce side effects.

Treatment adherence can have a strong impact on community and public policy issues in other ways. Overdosing, underdosing, or erratic intake intervals can diminish drug action and cause adverse effects, as well as reducing the effectiveness of treatment. Poor adherence to hypertension medication, for example, is associated with increased risk of stroke, coronary heart disease, hospitalization, and mortality (e.g., McCombs et al. 1994). Bruce Psaty and his colleagues (1990) reported that individuals on beta blocker therapy for hypertension had a fourfold increase in relative risk of coronary heart disease when they failed to renew prescriptions at intervals allowing for at least 80 percent adherence, as compared to patients who did renew their prescriptions. As a consequence, nonadherence has considerable financial implications, contributing to the increasing cost of medical care (Whitney et al. 1993). Given the aging of our society and the subsequent in-

creases in health care expenditures, particularly medication costs, the role of nonadherence is likely to play an increasingly important role because of its contribution to unnecessary costs.

The preceding discussion has focused on identifying the need for, and the characteristics of, an ecological perspective on medication adherence, with brief examples to clarify each level of the ecological model. The purpose of an ecological model is to focus attention on the environmental causes and impacts of medication nonadherence. It is important to acknowledge that, although many of these levels of influence may affect the individual's behavior, the ecological model implies reciprocal causation between the individual and her environment. Thus, the most successful interventions are those that target not only the individual, but also the family, healthcare providers, the community, and public policy.

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See also: Asthma; Hypertension and Blood Pressure Control; Juvenile Diabetes; Social Support

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Twins

Twins are two individuals who are born from the same mother at the same time. Twins are fascinating because they are the perfect natural experiment that allows us to study how genes and the environment interactively influence human development. Twins can be either fraternal (dizygotic) or identical (monozygotic). Fraternal twins occur when the mother releases two ova (eggs) at the same time. Two separate sperm then fertilize these eggs. Fraternal twins share about 50 percent of their genes. Any additional similarities between these twins are due to sharing the same environment. Genetically, fraternal twins are essentially brothers and sisters. Therefore, fraternal twins may or may not be the same gender, and they usually do not resemble each other more than any other brother or sister do. Identical twins occur when a single fertilized egg splits in two within the first two weeks after conception (further splitting of the egg may result in multiples). Identical twins share 100 percent of their genes. Therefore, identical twins are always the same gender and may ap-

pear to be physically identical. Any differences between identical twins are due to the environment.

Fraternal twins are much more common than identical twins. Overall, fraternal twins occur in approximately 1 in 125 births. However, rates of fraternal twinning vary with ethnicity (fraternal twinning rates are 1 in 330 for Asians, 1 in 125 for Caucasians, 1 in 62 for African Americans, and 1 in 11 for Nigerians). In addition, mothers who are between the ages of 35 and 39, who are taller or heavier, who have had more pregnancies, and who have used fertility drugs are all more likely to have fraternal twins (Kyvik 2000; Segal 1999). Recently, there has been an increase in the fraternal twinning rate in the United States. This increase is most likely due to the increase in the number of women delaying childbearing and in the number of women using fertility drugs during the past few decades. The prevalence of identical twinning has remained stable, with identical twins occurring in about 1 in 250 births. Identical twinning appears to happen randomly. Factors such as genes, ethnicity, and age do not influence this type of twinning (Kyvik 2000).

Twin Research

Many researchers use "twin studies" to examine whether a trait or behavior is influenced more by genes or the environment. Twin studies compare similarities (and differences) in behaviors across twin pairs. As mentioned previously, identical twins and fraternal twins both usually share similar environments; identical twins, however, share more of their genes (100 percent) in comparison to fraternal twins (who share about 50 percent). Therefore, if the concordance rate (similarity) for a trait is greater for identical twins than for fraternal twins, it is thought to be genetically influenced. Alternatively, if the concordance rate for a trait for identical twins is similar to the rate for fraternal twins, then the environment is believed to be more influential than genes for that particular trait.

Twin studies have shown that identical twins are much more similar to one another in physical characteristics such as height and weight than are fraternal twins. Identical twins also resemble each other more in personality characteristics such as shyness, extraversion, and activity level, in comparison to fraternal twins. Therefore, these traits are believed to be influenced at least partially by genes. Twin studies also have indicated that per-



Identical twins (Elizabeth Crews)

sonality characteristics such as optimism, drinking behaviors and alcoholism, psychopathology (e.g., conduct disorder, schizophrenia, manic-depression), and intelligence all are influenced by genes. Nonetheless, it is important to understand that the environment also influences these traits. Twin studies have revealed that genetic influences explain approximately one half of the variation of these traits, which means that the environment accounts for the other half (Segal 1999). Research has repeatedly shown that environmental or contextual factors such as family relationships, peer relations, and social class also influence the manifestation of these traits. Moreover, these environmental factors may interact with genes to influence the expression of traits and behaviors. For example, a young adult who has a genetic predisposition for alcoholism may be even more likely to develop alcoholism if his peers are heavy drinkers and he frequently drinks with them. In contrast, if he is rarely exposed to alcohol and therefore never drinks, he will not develop alcoholism.

Developmental Issues of Twins across the Life Span

Twins may not progress through normal developmental stages in the same manner that singletons (individuals without a twin) do. Many developmental tasks are apt to be more difficult for twins. For example, during infancy, all humans experience a need to psychologically individuate from their mother and to begin to recognize themselves as separate persons. This process may be twice as difficult for twins because they also need to individuate from their twins (Stewart 2000).

Similar problems may occur during adolescence, when identity formation typically takes place. Identity formation may be particularly difficult for identical twins (Ainslie 1985). Some twins may never develop a separate sense of identity. These twins may live together, never marry, and even continue to dress like one another. Alternatively, other twins may continuously wrestle with

the issue of identity and try to be as different from one another as possible.

During adolescence, twins also may struggle with the development of autonomy, or independence. The development of autonomy entails emotionally pulling away from parents and becoming an independent person. By the end of adolescence, most individuals have achieved a sense of autonomy, and they begin to function more independently. However, this process may be more difficult for twins, because in order to function as an independent person, they also need to achieve autonomy from their twin.

In contrast, some developmental tasks may be easier for twins in comparison to singletons. For example, during late adolescence and early adulthood, the development of intimacy or the ability to form close, intimate relationships with others occurs. This task may be effortless for twins, because they have experienced an extremely intimate relationship with another since the time they were conceived. Similarly, learning how to empathize with others also is likely to be easier for twins, since they have always had another individual to be concerned about. As can be seen, twins can teach us a great deal about genes, the environment, and human behavior in general.

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See also: Epigenetic Principle

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U

UNICEF

UNICEF, The United Nations Fund for Children, is a body devoted to the well-being of children and women around the globe. UNICEF works in 161 countries addressing children's needs, both in crisis situations and on an ongoing basis. It is one of the oldest bodies within the United Nations and has been one of the most evolutionary and effective, supporting initiatives that include immunization, education, child labor practices, nutrition, and the rights of children. Over 90 percent of UNICEF's budget goes directly to its programs, and most of its employees are in the field.

History of UNICEF

When the United Nations was created in 1945, there was no UN body especially focusing on the problems facing children. However, the funding from the closing of the United Nations Relief and Rehabilitation Administration (UNRRA) was granted to a new United Nations fund: the United Nations International Children's Emergency Fund. The money provided food to the children who suffered in Western and Eastern European countries because of the destruction caused by World War II. The continued need of these children for help led to the UN General Assembly passing Resolution 57 (I) in 1946, which extended UNICEF's mandate. UNICEF became known as an impartial organization devoted to the needs of children, regardless of their nation's political affiliation.

In 1950, when it was time for the UN General Assembly to terminate UNICEF's temporary funding devoted to the needs of children in crisis, the

newly developing nations spoke out. They wanted UNICEF to become active in their own nations. By 1953, the children's organization had become a permanent fixture in the UN system, and the title was changed to the United Nations Children's Fund, but the acronym UNICEF was retained. Having heard the needs of the Third World, UNICEF's new focus was on sustainable development, as UNICEF realized that children were not a separate cause, they were part of every cause. The focus shifted from emergency postwar relief to long-term preventative health care. During this time there were mass campaigns of education about and vaccination against epidemic diseases, such as tuberculosis, yaws, trachoma, leprosy, and malaria. The first epidemic disease to be dramatically reduced was yaws, treated and cured with a few penicillin shots. This campaign against yaws was especially successful in Southeast Asia. With experience UNICEF began to realize that if parents and communities were part of the UNICEF programs, then children would both directly and indirectly benefit.

In 1959, the United Nations General Assembly adopted the Declaration of the Rights of the Child, focused on children's rights to education, nutrition, and health care. Most importantly this document granted children the rights not explicitly granted to them in the Universal Declaration of Human Rights of 1948, and stressed the importance of the role of the family and community in the lives of children.

The UN General Assembly named the 1960s the Decade of Development. The vaccination work of



UNICEF program (Hulton/Archive by Getty Images)

the 1950s had been productive, but for UNICEF to address the needs of the Third World, more work was needed. The 1960 report, *Children of the Developing Countries*, was compiled from reports by specialized UN agencies including the World Health Organization (WHO) for the nutritional needs of children, the UN Educational, Scientific and Cultural Organization (UNESCO) for the educational needs of children, the UN Bureau of Social Affairs for the social welfare needs of children, and the International Labour Organization (ILO) for the work and livelihood needs of children. This report was revolutionary in incorporating children into the social and economic understandings of what development plans should include. The report encouraged further aid in traditional areas

such as maternal and child health care, and in new areas such as education, women's issues, water supplies, and sanitation.

The eradication of so many serious diseases in the developing world through UNICEF's efforts led to a population boom that threatened to cause a shortage of natural resources in these areas. In response to these challenges, UNICEF coordinated a movement to alleviate poverty in newly independent countries and in 1965 was awarded the Nobel Peace Prize for its work. Part of the plan for the alleviation of poverty was a push for increased education. For example, UNICEF supported teacher training and supplied teaching tools in newly independent African countries. In 1965, education as a means of sustainable development constituted

forty-three percent of UNICEF's aid to Africa (<http://www.unicef.org/about/timeline.html>). In another response to these challenges, the UNICEF Executive Board chose, in 1966, to promote "responsible parenthood." In using this terminology, UNICEF signaled that its aim was to improve the survival, well-being, and quality of life of children, mothers, and families. Family planning was not the goal. The goal was to consider the broader context of mothers' and children's health and to promote the status of women, improve literacy, raise the average age of marriage, and avoid unwanted pregnancies.

As economies were in steady decline in the 1970s, populations were growing exponentially in developing countries. The UN General Assembly declared the 1970s the second Development Decade. To continue working toward the alleviation of poverty, UNICEF began operating at a grassroots level, with nongovernmental organizations (NGOs) and directly with local and regional communities. During the 1970s, OPEC's oil shock and two disastrous world harvests in 1972 and 1974 led to price increases in both energy and food costs. This ended cheap development for poorer countries. UNICEF responded to villagers' perception of their needs by promoting local solutions to local problems. Though mobile health care vehicles became more common in rural areas, it was seen as more important to train community-based practitioners and NGOs to identify common childhood illnesses and to treat these illnesses on their own. In 1978, the radical goal of "Health for All by the Year 2000" was set. 1979 was declared the International Year of the Child, rekindling the attention paid to the Declaration of the Rights of the Child of 1959.

In the 1980s UNICEF moved back to the promotion of child survival. The "Child Survival and Development Resolution" pushed for the use of simple medical technologies referred to as GOBI. This acronym stood for Growth monitoring, Oral rehydration therapy (ORT) to treat childhood diarrhea, Breastfeeding as a good start in life, and Immunization against the six vaccine-preventable childhood killers. In support of these initiatives, in 1981 the World Health Assembly adopted the International Code of Marketing of Breastmilk Substitutes, to stop a decline in breastfeeding. Toward the end of the 1980s UNICEF began to recognize the especially important role of women in the education of their children, in particular their daugh-

ters. In 1989 the UN General Assembly adopted the *Convention on the Rights of the Child*, which became international law the following year, with the most widespread ratification of any human rights treaty—today all UN members except Somalia have ratified it.

The 1990s focused on implementation of the *Convention on the Rights of the Child* with initiatives in universal primary education and control of specific diseases and nutritional deficiencies. During the mid-1990s, UNICEF focused almost exclusively on the effects of war on children, publishing reports on the detrimental effects that war had on the development of children, especially in areas of sub-Saharan Africa. In 1998, the United Nations Security Council debated the issue of children in armed conflict, polling children in war-torn countries. UNICEF found that millions of children had been killed or disabled, orphaned, sexually exploited and abused, abducted and recruited as soldiers, uprooted from their homes, separated from their families, and faced with heightened risk of disease and malnutrition. After assessing their findings, UNICEF recommended that countries ban the involvement of children under 18 years old from direct participation in armed forces. To date the 2000 Optional Protocol to the Convention on the Rights of the Child, which works to this end, has been ratified by fourteen countries and signed by ninety-seven.

In 2001, the Say Yes for Children campaign was launched as part of the Global Movement for Children. This campaign emphasizes the importance of mobilizing every citizen of every nation to become empowered to change the world for children. The Say Yes for Children campaign asks people all around the world to pledge their support for critical actions that are crucial to improving children's lives. The ten actions are: Leave No Child Out, Put Children First, Care for Every Child, Fight HIV/AIDS, Stop Harming and Exploiting Children, Listen to Children, Educate Every Child, Protect Children from War, Protect the Earth for Children, and Fight Poverty: Invest in Children. These emphasize the most important actions so that children's rights will be protected and accepted around the globe.

Structure

Although UNICEF initiates many successful programs, it is not an autonomous body within the

United Nations. It is subordinate to the Economic and Social Council (ECOSOC) and works on projects in conjunction with other UN agencies like the World Health Organization (WHO), the Food and Agriculture Organization (FAO), and the International Labor Organization (ILO). UNICEF's main decision making body is its executive board, made up of thirty member states elected by ECOSOC's executive director and staff. The UNICEF staff is both voluntary and paid, and of the 5,600 on staff, 86 percent work in the field. In 2000, the total UNICEF budget was \$1.1 billion. Of this, 92 percent was spent on its programs, 7 percent went to management and administration and 1 percent to write-offs and other charges. In 2000, 64 percent of UNICEF's income came from governments. The rest of the income was from direct fund-raising through the sale of greeting cards and other products, and through organizations such as the United States Fund for UNICEF.

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See also: Breastfeeding and Lactation; Sustainable Development

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V

Violence in Teen Dating

Violence in teen dating is defined as the threat or actual use of physical, sexual, or verbal abuse by at least one member of an unmarried couple against the other member within the context of a dating process. This definition excludes married individuals and divorced couples, includes a range of dating experiences from the first date to cohabitation, and applies to both heterosexual and homosexual relationships (Levy 1993; Sugarman and Hotaling 1989). All academic disciplines, professionals, and practitioners in the fields of human ecology, social work, and education should be knowledgeable about this issue, as its prevalence is high and its consequences potentially deadly.

Approximately one in five female students in the ninth through twelfth grades reports being physically or sexually abused by a dating partner (Silverman et al. 2001). The rate of violence against females by male dating partners is three to six times higher than intimate violence against males. In addition, both minor and major injuries that result from dating violence are significantly more common among female adolescents than among males (Himelein 1995; Silverman et al. 2001).

The experience of both physical and sexual dating violence among adolescent girls is associated with substance use (heavy smoking, alcohol, cocaine), unhealthy weight control (bulimia), suicidal thoughts and behaviors, and pregnancy. Other sexual risk behaviors include having sexual intercourse before the age of 15 and having three or more sexual partners within the past three months (Silverman et al. 2001). Dating violence is also as-

sociated with lower school performance, greater number of violent dating experiences, and being exposed to violence in community and family settings (Kreiter et al. 1999).

Date rape is not an urban phenomenon. Girls in rural communities are at risk for date rape as well. A study of seventh-, eighth-, and ninth-grade girls in a rural school district found that girls who have few friends and a negative self-image were more likely to accept unwanted sexual aggression by their dates in order to get and keep a boyfriend (Vicary, Klingman, and Harkness 1995).

The prevalence of teen dating violence is not surprising, given gender expectations for boys and girls in our culture. For example, aggressive behavior in sports by boys is not only sanctioned, it is rewarded. Boys are seen as “macho” and “cool” if they can control their girlfriends (Nifong 1996). For girls, the pressure to be in a relationship, the difficulty in cutting ties with popular boys, and the presence of girlfriends who reinforce the idea that it is okay for a boyfriend to use violence are the strongest factors relating to girls’ involvement in teen dating violence (Nifong 1996). Adults reinforce the notion that is okay for a boy to use violence against a girl when they tell “Mary” that “Johnny” wouldn’t have pulled her hair if he didn’t like her.

There are a number of warning signs that a relationship may be headed toward abuse (Wilson 1997). Abusive partners may become extremely jealous, possessive, have a controlling attitude, have low self-esteem or unpredictable mood swings, abuse alcohol and other drugs, and have uncontrollable anger.

Extreme Jealousy

Everyone gets jealous sometimes; the key word is “extreme.” Signs of extreme jealousy include becoming angry and abusive or withdrawn and sulking if one’s partner talks to other people, wants to spend time with friends, or expresses positive feelings for anyone else. An abusive adolescent partner treats his girlfriend as if she is a possession belonging solely to him. The possessive person will not want his girlfriend to share her time or energy with anyone else. A controlling attitude is characterized by one partner completely ruling the relationship and making all of the decisions. The victim’s point of view is not important. Often the controlling partner tries to tell the other person how to dress, whom to talk to, and where to go.

Low Self-Esteem

People with low self-esteem don’t think much of themselves. In a dating relationship a person with low self-esteem may say, “I’m nothing without you,” or “You are the only person who understands me.” Nobody stays in the same mood all the time, but a dramatic shift from being jealous, controlling, or angry to being sweet, charming, and loving is another danger sign to be aware of in a dating partner.

Substance Abuse

Many of the reported violent episodes in dating relationships are carried out when one or both partners have been drinking or doing drugs. Alcohol and drug use lower a person’s self-control, but they are not direct causes of violence.

Mood Swings

Anger is not a “bad” emotion. How people handle their anger may be problematic. People whose anger seems to explode may hit walls or lockers, yell loudly, call names, or actually threaten others with violence. If a young man is constantly getting into fights with other boys, he may not hesitate to use violence against his girlfriend.

Other Indicators

Other signs to be aware of may include quick involvement and commitment to a relationship, using force during an argument, demonstrating hypersensitivity, blaming others for his problems or feelings, being cruel to animals or children, having a history of abusing dating partners, and using verbal abuse.

Although there are a number of commonalities between teen dating violence and domestic violence, teen dating violence has a number of unique aspects as well. As mentioned earlier, peer group pressure is often intense for this age group, and definitions of normal masculine and feminine behavior is often stereotypical. Teenagers also have fewer resources and less mobility. Young women may be unable to avoid abusers, as they may live in the same neighborhood, go to the same school or church, be registered for the same classes, ride the same school bus, and have the same friends. At a time when adolescents are trying to demonstrate their independence, they may be less likely to seek help from their parents (Wilson 1997).

Schools can play an important role in teen dating violence prevention and intervention. To prevent violence, schools are adopting curriculum that helps students understand the differences between a healthy relationship and an abusive relationship. For teens already in abusive relationships, support groups for teen victims and intervention programs for abusive young men can be offered by the pupil support team. Schools can also adopt policies that provide safety to teen victims and hold abusers accountable for their behavior. For example, rather than have the victim find another way to school, the abuser can be banned from riding the school bus.

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See also: Adolescents, Alcohol Use Among; Domestic Violence; Sexual Abuse

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Virtual Organizations

Our world is consistently moving toward a greater reliance upon telecommunication and computerization, one that allows us to undertake activities in a new way, both in the workplace and home. Virtual organizations—work teams and social groups typically separated by time or distance but brought together through the use of computer-mediated communication—are now as commonplace as more traditional forms of organization. Some of the earliest discussion of virtual organizations goes back to the early 1990s, residing in the domain of business, though still outside the area of scholarly debate. Kenneth Preiss, Steven Goldman, and Roger Nagel (1995) accept credit for creating the term "virtual organization," which they used in a 1991 report to the U.S. Congress regarding strategic formation of separate groups into networks for larger projects. William Davidow and Michael Malone (1992) and John Byrne (1993) made two of the earliest and most cited contributions to the concept of virtual organizations. They define a virtual organization as the formation of individuals or companies for a temporary, opportunistic goal that satisfies the need of a certain customer group. They state that one of the requirements of any corporation is to fully integrate into a virtual corporation. In other words, a virtual organization is not a piecemeal approach. Rather, it is a full immersion.

While these earlier discussions on virtual organizations were occurring, Charles Handy (1995) offered a similar perspective on virtual organizations, but then focused on the notion of trust. How does any agent trust another in these temporary organizations? This is a question that researchers in virtual organizations continue to struggle with today. These early open discussions of the nature

of virtual organizations caused researchers from a number of other areas to become interested in the debate. In more recent years, research on virtual organizations has dramatically increased, involving wide-ranging conceptualizations and interest from fields ranging from education and distance delivery to the support of technology and work-family balance. Today, definitions for a virtual organization are varied, with a particular focus on group formation that spans obstacles created by distance and time. Some prevalent examples of virtual organizations include telecommuting, outsourcing, and alliances. However, these activities do not necessarily fit into the earlier ideas of temporary or opportunistic formations.

Much of the earlier literature on virtual organization implied that they would be structured in the same way as organizational hierarchies. Some researchers have argued that this way of seeing a virtual organization involves a fundamental error and makes many managers unwilling to try this new form of organization. N. Venkatraman and John Henderson (1998) argued that virtual organizations are process oriented, not form oriented. Instead of thinking of the formation of virtual organizations, we should be thinking of the act of virtual organizing. The difference can have a large impact on the way the phenomenon is viewed.

Some recent reviews of the literature have offered an aggregated view of what the generally agreed notion of virtual organizations is. René Bultje and Jacoliene van Wijk (1998) and Kai Larsen (1999) have offered taxonomies on what defines a virtual organization. By looking at their reviews, we find that a definition of virtual organization includes (1) a relationship or transaction, formed between at least two agents who share some common objective, (2) the dispersion of agents geographically and/or chronologically, and (3) having technology as a significant enabler of exchange within the relationship.

First, a virtual organization involves a relationship that is formed between at least two agents that share some common objective. The relationship may be for a single event, or a series of recurring events. The duration of the event may be brief, or one that is protracted over a greater period of time. The organization that the agent represents may also be of any size. The relationship could be between two individuals, or two corporations; it

may be between an individual and a corporation, or any other combination that may be found on a gradient scale. The operative terms in this first fundamental characteristic are “relationship” and “common objective.”

Second, the agents within a virtual organization are dispersed geographically and/or chronologically. It would seem obvious that if the agents are geographically dispersed, they are not physically located in the same workplace. Interestingly, however, two individuals working from the same location may collaborate on a project, yet carry out all their communication without any face-to-face interaction. Therefore the real meaning of geographic dispersion is that the relationship includes only rare or limited face-to-face interaction.

Agents who are dispersed chronologically work without synchronicity of interaction. In other words, dialogue may be carried out between two agents over extended periods of time via media such as e-mail or newsgroups, rather than over the telephone, which would require both agents to be present at the same time—synchronicity. As well, a geographic dispersion over extended distances may impose limits on synchronicity by virtue of time zones. The possibility of agents who are dispersed chronologically across time zones creates great opportunities; for example, it is possible to create a virtual environment with design teams located in offices around the world. A linking of designers, say in London, Tokyo, and the United States, can provide nonstop, around-the-clock progress on a project. A design can begin in the morning in London, be handed off to the United States at the end of the London business day, then forwarded to Tokyo at the end of the U.S. business day. The design process is then returned to London by the next morning for continuation of design development.

Third, technology is the significant enabler for exchange within virtual organization relationships. It is the advances of information technology and communication methods that have created the ability to coordinate functions that span distance and time. Relationships that span the globe can now be formed with the same immediacy and ease as relationships that cross the street. Technology today requires less specific knowledge to use, allowing a wider, more distributed base of technology users. Without the ability to use technology, virtual organizations as we define them are not possible.

Bultje and van Wilk also offer the types of virtual organizations often referred to, including telecommuting arrangements, outsourced services, alliances or joint ventures, and companies developed for commerce on the Internet. Although these overviews provide greater understanding as to what deserves to be identified as a virtual organization, the differences between them still suggest that there are many different perspectives present.

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Volunteers and Voluntary Organizations in the United States

The ecology of human development is comprised of interrelated people and organizations. In the United States this ecology is marked by people acting to serve others and by organizations facilitating these contributions. Indeed, one hundred and ten million Americans, or one out of every two persons over the age of 18, are active volunteers and contribute an average of four hours a week to the causes of their choice. In addition to their gifts of time, 90 percent of Americans also donate money to charitable causes, providing an average of \$1,600 per family a year.

Volunteering and charitable giving continue to rise as a proportion of the population and among



Habitat for Humanity volunteers building homes (Michael Siluk)

young and old, men and women, Hispanics and African Americans, and all income levels. Though generosity of time and money exist in many parts of the world, we are the only nation where volunteering and giving are pervasive characteristics of so much of the population. In reflecting on all this participation and generosity, the Pulitzer Prize-winning historian Merle Curti observed, “Emphasis on voluntary initiative has helped give America her national character” (Curti 1958).

People volunteer for three primary reasons:

- Someone asks them to participate.
- They want to help and to make a difference.
- They feel rewarded with personal satisfactions, including feeling good about themselves.

The general categories in which volunteers are engaged are the following: (Independent Sector, Executive Summary, 1999)

Religion	14%
Youth Development	10%
Education	10%

Human Services	10%
Health	0.7%
Work Related	0.6%
Environment	0.6%
Arts	0.5%
Recreation	0.5%
Community Betterment	0.5%
Political	0.3%
International	0.2%
Other	0.2%
Informal (e.g., shopping for an elderly neighbor)	15%

The ways people help vary widely. They inform, protest, assist, teach, heal, build, advocate, comfort, testify, support, solicit, canvas, demonstrate, guide, feed, criticize, organize, appeal, usher, contribute, and in a hundred other ways serve their causes. Volunteers usually work together to increase their reach and results. There are more than a million charitable organizations officially registered with the Internal Revenue Service, ranging from small community groups to national crusades, and that number doesn't include most religious congrega-

tions, mutual assistance groups, or local chapters of large national organizations such as the American Cancer Society. Also not counted are the less formal groups concerned and involved with everything from prenatal care to cemeteries. Altogether the total is at least three million organizations and growing.

It's important to be specific about how all this involvement makes a difference. The following is a short but representative list of some of the things volunteers have accomplished in recent times.

In just the past twenty years, volunteers have broken through centuries of indifference to the needs of the dying, and as a result of their crusade, almost every community today has hospice services providing relief to the terminally ill and their families.

In very recent times, volunteers' passion, courage, and tenacity have forced the nation and every region in it to realize that we must preserve for future generations our precious resources such as water, air, and land. That ethic and practice now affect every form of local and national asset, including wetlands, forests, farmland, historic buildings, and whole downtowns.

Volunteers stood up and were counted for common decency and adequate services for retarded children, and those breakthroughs showed the way to many others, who then dared to do the same for cerebral palsy, autism, learning disabilities, and hundreds of other problems we hadn't even heard of twenty years ago.

With the establishment and growth of Alcoholics Anonymous, volunteers pioneered a model of mutual assistance that today extends to almost every serious personal problem. In almost every community there's a group of people who have weathered the storm and are reaching out to others newly faced with such crises as a child's death, mastectomy, depression, stroke, or physical abuse.

Volunteers sang "We are not afraid," though of course they were—but with each new volunteer recruited to the civil rights crusade, their courage, confidence and power grew, and then when their vast army sang and believed "We shall overcome," they did. The civil rights movement subsequently spread to every disenfranchised and underrepresented group, including women, the physically disabled, Native Americans, Hispanics, gays, and so many more.

A few volunteers, at first mostly parents and

students, believed they could do something about drunk driving, but despite its escalating ravages, most of us didn't think they would succeed. Thankfully they did.

Dealing with community problems was one thing, but some issues defied organization or were off limits for reasons of national security. However, some people believed that matters such as control of nuclear power were linked to survival, and they stepped in, at their peril, to reduce our peril.

Volunteers even began to take peace into the territory of our enemies in the Cold War with people-to-people understanding as a fundamental step to reduce international tensions and to build tolerance and friendship.

And all the time a healthy number of people served all of us by promoting the importance and availability of arts and cultural opportunities as central aspects of a civilized society. One of the great waves of voluntary activity and impact has involved community theater, dance, and music to provide opportunities for creativity and enjoyment of it.

The list goes on almost endlessly, with preschool education, day care, social services, cancer control, consumerism, population control, conflict resolution, ethnic museums, early infant care, independent living for the elderly, teen pregnancy, AIDS, substance abuse, job training, and so very much more. The services and impact of volunteers and voluntary organizations extend from neighborhoods to the ozone layer and beyond.

Whether one's interest is wildflowers or civil rights, arthritis or clean air, oriental art or literacy, the dying or the unborn, organizations are already at work, and if they don't suit our passion, it's still a special part of America that volunteers can go out and start their own.

Brian O'Connell

See also: Community-Based Organizations; Death: A Family Perspective

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Vygotsky, Lev

Lev Semenovich Vygotsky (1896–1934) was a Russian psychologist and theorist who is credited as one of the first pioneers of sociocultural theory. Sociocultural theory mainly addresses cognitive development and asserts that development is driven by social interactions and the social contexts and culture in which those interactions occur. Vygotsky did the majority of his psychological research and writings between 1924 and 1934 (when he died of tuberculosis prematurely), at a time when most theorists were focusing on the individual person and internal reasons for development. Roughly forty years before Urie Bronfenbrenner introduced his ecological systems theory (Bronfenbrenner 1979), Vygotsky asserted that the child's development is indeed propelled by and fostered through social interactions that occur in, and are affected by, all levels of the child's culture and environment. Like Bronfenbrenner's systems model, this model included social interactions with peers, older children, and adults at home, at school, in neighborhoods, cities, and countries, and these interactions were all influenced by the larger systems of culture and politics. Due to a variety of complex social and political issues, Vygotsky's major works were not widely available in English and in the West until the 1960s and 1970s. Since the 1980s, many educators, developmental psychologists, and researchers have appropriated his ideas for their practical applications, especially in educational settings. Vygotskian concepts such as the zone of proximal development (ZPD) have been embraced by developmental researchers and educators, and have spawned research terms and classroom and parenting practices such as scaffolding, discussed below. Sociocultural theory is typically included now in child development and psychology textbooks as a mini or emerging theory, alongside the grand theories, such as psychoanalytical, cognitive, and learning.

As noted by Laura Berk and Adam Winsler (1995, 1), there are a variety of detailed biographies available that describe Vygotsky's life. Berk and Winsler drew from these sources to present a brief biography of Vygotsky, and it is on their work that the following information is based. In 1896, Vygotsky was born the second of eight children to a bank executive father and a teacher and homemaker mother in Byelorussia. His family was middle-class and Jewish. In Russia during this time,

university admission as well as career choices were severely restricted for Jews. Although Vygotsky was one of a small percentage of Jews allowed to attend university through a random lottery system, he was not allowed to pursue his chosen disciplines of history and philosophy at university and had to simultaneously attend an "unofficial" institution to do so. After graduating, he became a teacher in a Jewish settlement where he had lived with his parents, and it was there that he married, had two daughters, and began reading, conducting research, and writing in the fields of psychology and education. He and the family eventually moved to Moscow, where he established himself as a psychologist, researcher, and theorist through his work at the Psychological Institute.

As noted by Berk and Winsler (1995), perhaps the most popular Vygotskian concept in the United States is the ZPD. This zone refers to a dynamic range within which a child can succeed at a task with the help of someone who is more skilled, such as a peer, an older child, or an adult (Vygotsky 1978). At the very low end of the range, the child is able to accomplish a task on her own; moving up the range, the child is only able to succeed with increasing amounts of help from someone who is more knowledgeable or skilled. Vygotsky would argue that, to further cognitive development, teachers and other adults in the child's life need to be cognizant of the child's zone of proximal development, and through mentoring and social interaction, help her to constantly expand the range of activities at which she can be successful. Berk and Winsler observed, interestingly, that Vygotsky first conceptualized the ZPD in response to his irritation at the use of standardized intelligence tests, such as Alfred Binet's standard IQ test, which is still used today. Assessing a child's intelligence through her zone of proximal development allows the measurement of the child's potential for learning, rather than simply what she already knows, and this was deemed by Vygotsky to be much more illustrative of the dynamic nature of human cognition.

Drawing on Vygotsky's conceptualization of the ZPD, researchers have studied and further clarified the nature of social interactions that facilitate the child's movement through higher and higher ranges of the ZPD. Barbara Rogoff (1990) coined the phrase "guided participation" to describe these interactions: A skilled person facilitates the learning of a less skilled person by interacting with

them. A popular college child development text (Berger 2000) uses a photo of children in Bali learning a dance ritual to illustrate this concept. Their adult instructor stands close behind them, guiding their arms with his, to facilitate their movements. This picture is also a good illustration of scaffolding, a term introduced by David Wood and David Middleton (1975), used to further refine the idea of mentoring involved in sociocultural theory. Like a scaffold used to support the construction of a building, an adult provides just enough support for a child to succeed at a task, and removes that support incrementally until the child succeeds without any help.

Vygotsky contracted tuberculosis around 1920, and finally succumbed to it in 1934 at the young age of 37. In his tragically short professional life, he managed to produce about 180 publications (Berk and Winsler 1995). *Thought and Language* (1962) and *Mind in Society* (1978) are English translations of earlier works that contain the genesis of his ideas related to sociocultural theory.

Kathie Reid

See also: Bronfenbrenner, Urie; Social Cognitive Theory; Youth Mentoring

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W

Watkins, Susan M.

Susan Watkins is a teacher, designer, researcher, and author, as well as a mentor to a generation of students in the field of functional apparel design. This field is the province of the designer who is interested in the interaction of materials, people, and the environment instead of being primarily concerned with the world of apparel fashion. The functional apparel designer develops apparel that either provides protection or extends human capabilities, or both. It is an area of design within human ecology that uses an interdisciplinary approach to create clothing that addresses the needs of people on a very fundamental level. As a college student Watkins, though interested in clothing design, was searching for meaning in the design process beyond the apparent frivolity of fashion design. No programs existed at this time to satisfy these needs, and Watkins spent her years as a university professor in establishing this field of study at Cornell University and in influencing its adoption across the country.

Susan Watkins was born in Jacksonville, Florida, but moved frequently as a child, living in eight different places before she was college age. Her grandmother in Pennsylvania taught her to sew as a child. At this time treadle sewing machines were still a valued part of many households, almost as efficient as an electric machine, easy to operate once learned, and inexpensive to run, and Watkins learned to sew on just such a machine.

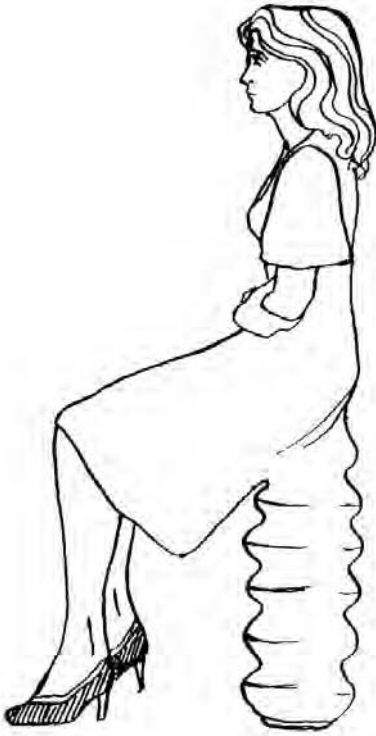
As she entered college, Watkins chose her major based on the fields considered appropriate for women at the time—basically nursing or teach-



Susan Watkins (Courtesy of Dewey Neild)

ing. She had talent in two areas, sewing and music, and she decided that clothing design would be her profession and music would be her leisure activity.

She attended Pennsylvania State University, the Department of Textiles and Clothing, and earned her B.S. in 1965 in consumer services in business, a program geared toward fashion merchandising with grounding in clothing design and in business. She continued in graduate school at the same institution and earned her M.S. in 1967 in textiles



Example of clothing functioning as furniture (Courtesy of the author)

and clothing, with a focus on the social and psychological aspects of clothing.

Watkins came to Cornell University in 1967 as an assistant professor in the Department of Textiles and Clothing. At this time clothing and textile programs nationally were in the process of making a transition from consumer-oriented programs in which women were taught how to provide clothing for families to industry-focused programs that explored the overall issues in clothing design from production to distribution. Watkins taught flat pattern design and clothing construction in the traditional manner at Cornell until guest speaker Stephen Kennedy, a quartermaster from the Army, made a presentation on the many issues involved in the development of uniforms and protective clothing for soldiers.

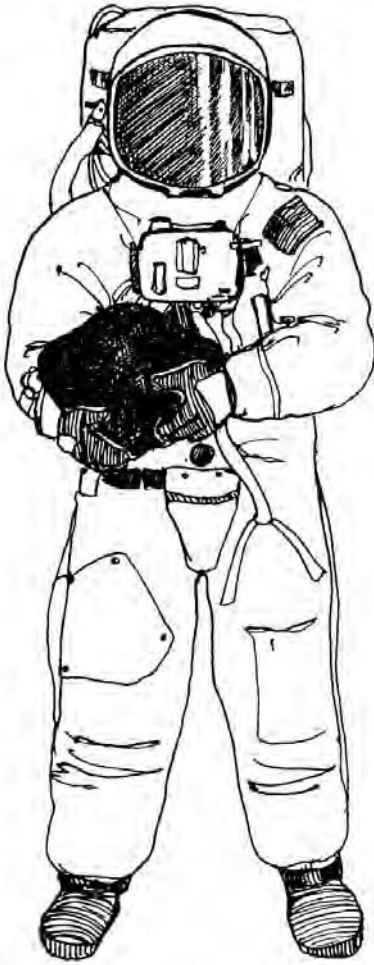
The people who usually created this clothing and equipment were engineers who were trained in clothing design after they joined the army research lab, a process Kennedy believed took well over a decade. Watkins saw the potential to create a program at Cornell University that would prepare students for these design positions. She

toured the army facilities to learn what would be needed and proposed the development of such a program. The clothing design component was already in place at Cornell, as well as strong programs in textile materials and human factors. With the addition of physics, psychology, and an understanding of the design process from the engineering point of view, the unique, multidisciplinary new program slowly took shape. The introduction of one project in a flat pattern class that addressed the issues in the design of skiwear was the first step. Soon other projects such as maternity wear and children's wear were introduced, and in the fall of 1971, Watkins taught an upper-level course that focused specifically on functional clothing design.

Watkins developed the functional design program further in subsequent years, also introducing the concept to other universities in speaking engagements throughout the 1970s and 1980s. In 1984, Watkins contributed to the teaching of functional design in an even more comprehensive manner with the publication of her textbook *Clothing, the Portable Environment*. This book, in its current 1995 edition, provides an inclusive, effective text for designers at every level. It is the only book of its type and is in demand by both educational and research institutions. It is a readable and effective treatment of the subject, accessible to the undergraduate student and yet comprehensive enough for an apparel research lab. The theoretical basis of the book stresses Watkins's problem solving and multidisciplinary approach, contributing an effective teaching framework for apparel programs across the nation, and indeed the world, as it has also been translated into Japanese and Korean.

The book is divided into several sections. The first two sections cover the body responses, textile materials, and clothing systems related to thermal and impact challenges. The next section covers physiological challenges and protection from a variety of hazardous environments. Sections on the mobility of clothing, fastening systems, and special needs clothing follow. The final chapter discusses the design process, and it is a valuable resource for any designer, not just the designer of functional clothing.

In 1988, Watkins wrote an article for apparel educators, titled "Using the Design Process to Teach Functional Apparel Design," in which she synthesized her design and teaching philosophy.



Example of clothing functioning as housing (Courtesy of the author)

The article describes the process of teaching students to be creative designers and is applicable to the teaching of any creative endeavor. Watkins introduces practical tools for engaging the student, for teaching design and problem-solving skills, and for developing the processes of creative thinking. Most of all, she emphasizes the need to focus on process and not product in teaching students to be effective designers. This approach is still fresh and valid fifteen years later.

Watkins also introduced the concept of functional apparel design at the Association of College Professors of Textiles and Clothing (ACPTC), later the International Textile and Apparel Association (ITAA). The design competition for this organization has had a category for functional design since the 1989 event. In 1991 Watkins was inducted as

an ITAA Fellow, the highest honor awarded by this organization, for her contributions in the shaping of the field of functional apparel design and for her leadership in creating the first design competition of the organization in 1989.

As she was building a program in functional apparel design, and developing teaching methodologies, courses, and projects for graduate and undergraduate students, Watkins was also involved in research and consulting projects with the Army, the Air Force, firefighters associations, and many industrial partners, such as a manufacturer of ballistic vests, a manufacturer of chemical protective clothing, and a user of apparel in sterile rooms among others. Watkins brought students and industry together to the benefit of both in well-designed, effective projects that advanced her research objectives and her teaching objectives while benefiting industry and wearers of protective clothing. She also generated publications, slide sets, and presentations for the Cornell Cooperative Extension in the areas of sportswear and sports equipment, pesticide protection, and children's clothing, among others.

During her years teaching, Watkins held a half-time appointment, a choice that enhanced her ability to teach effectively and at the same time to raise her own children. Throughout her career, it was important to her that she serve as a role model to female students as a person who had chosen to commit an equal amount of energy to her marriage and children, and to her career. She mentored many undergraduate students, but only a select few graduate students, always with a determination to teach students how to work creatively and analytically, helping them learn how to think like a designer, and how to develop an effective design process. Her innovative instructional methods focused on multidisciplinary and problem solving strategies. She emphasized the holistic nature of apparel design, teaching how the understanding of physics, physiology, psychology, and materials science interacts with creative thinking in the development of a good design. This approach in combination with her enthusiasm provided a powerful teaching and learning environment, sparking an interest in many students who are now successful designers in the armed forces, in the protective clothing industry, and in research facilities. Her ability as a teacher was to challenge students to think beyond the obvious solutions and achieve

more as designers than they thought was possible. Her approach and that of her students to the teaching of design has had an impact on the theoretical base of the study of textiles and apparel, not only in the area of functional apparel design but in the field of apparel design in general.

Susan Watkins is currently an emeritus professor at Cornell University. In her second career she continues to do design research and consulting, as well as lecturing and teaching short courses through her consulting firm, Portable Environments, LLC.

Susan P. Ashdown

See also: Functional Clothing Design

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William T. Grant Foundation

One of the most important institutions in the development of research on human development in the United States has been the William T. Grant Foundation. The philanthropist William Grant established the foundation in 1936 "to assist research, education and training through the sciences which have their focus in the study of man" (Cahan 1986, 10). Because of this mission, the foundation has been one of the premier supporters of the social sciences of human development.

The Origins of Philanthropy

The industrialization of the early twentieth century generated a number of wealthy men who became determined to use their business sense and accumulated wealth to address society's problems. A variety of charities existed, but these new philanthropists viewed the existing charities as providing temporary relief through treating symptoms. Philanthropists such as Andrew Carnegie, Henry Ford, and John D. Rockefeller wanted to "solve" social problems by identifying core causes and attending to them. Many of the currently largest private foundations arose early in the century: the Russell Sage Foundation in 1907, the Carnegie Corporation in 1911, the Rockefeller Foundation in 1913, and the Commonwealth Fund in 1918, to take a few prominent examples. Government was not involved in social welfare to any

appreciable degree, so the need for these new foundations was clear (Cahan 1986; Gregorian 2000; Katz and Katz 1981; Wisely 1998).

Because of their interest in identifying core causes of social problems, these new philanthropists looked to science, with its ability to identify causes and effects, for the tools for their efforts. As general purpose foundations, their objective was to advance public welfare, and science was seen as a means to that goal. Science with its clear distinction of cause and effect provided a strategy for approaching the "solution" of social problems by identifying core causes that could be addressed, as opposed to alleviating symptoms or temporarily providing relief (Cahan 1986; Katz and Katz 1981). Although most of these new foundations did not fund very much science, the appreciation of science as a tool provided a funding context that fueled the growth of the social behavioral sciences and the universities in which they became housed (Prewitt 19980, 1995; Sherrod 1998).

By the time that philanthropy entered the scene early in the twentieth century, the research-based social science disciplines and the university were already wed (Prewitt 1995). Philanthropy, however, played an important role in the growth, expansion, and differentiation of the social sciences. The Laura Spelman Rockefeller Memorial Fund and the Commonwealth Fund were important to nourishing child development research. The Laura Spelman Rockefeller Memorial Fund contributed to the support of the Social Science Research Council and the founding of the Society for Research in Child Development, both in the 1930s at the time the Grant Foundation was established (Cahan 1986). The Grant Foundation was to become an equally important contributor to research on human development.

Founding of the Grant Foundation

It was in this context that Grant established his foundation. Grant built a chain of dry goods stores, selling miscellaneous household wares at economical prices. His first store opened in 1906, and when he retired in 1966, there were over a thousand stores across the country. Grant was particularly interested in his employees, many of whom were young people whose lives were compromised by a variety of social, emotional, or health problems. He wanted his foundation to focus on the study of man. By this time, foundations had en-

abled important progress in the medical and health sciences (funding research on the causes, treatment, and prevention of numerous physical ailments such as yellow fever and hookworm, for example) and in macro-level studies relating to social reform (for example, working for world peace following World War I). Grant, however, wanted his foundation to fund research that would help children live up to their full potential. He also wanted the Grant Foundation to focus on prevention of problems, rather than adopting a patchwork approach to solving current problems, as the charities of that time seemed to be doing. He recognized that even the brightest and most successful individuals could be at risk. Furthermore, he thought it equally important to understand developmental successes and failures (Cahan 1986). In this way, he foreshadowed several currently important ideas in the study of child development: for example, resilience and prevention (Sherrod 1998).

Mr. Grant established his foundation to contribute to the development of a science of human development; in so doing, he, like several others (e.g., Frederick Gates, John D. Rockefeller's early consultant, and Birdseye Rum, who headed the Laura Spelman Rockefeller Memorial Fund; Prewitt, 1995), carried the trend of his philanthropic contemporaries one step further, to directly fund social-behavioral science inquiry that could then be used to address social and individual problems. The federal agencies that support research on human development in the United States, the National Science Foundation, for example, and the National Institutes of Health, originated around midcentury, too late to contribute to the early development of these fields (Sherrod 1999).

History of the Foundation

The very first study funded by the foundation is still ongoing. This study, the Harvard Grant Study in Social Adjustment, recognized that even the brightest and most privileged face developmental risks, and sampled four freshman classes during the 1930s from Harvard University. A variety of physical and social measures were taken, and the sample was followed over the years. The latest investigator working with this study has been George Vaillant, who joined the project staff in 1966. Although there were numerous distinguished men in the sample, newspaper editors, federal judges and Nobel winners, for example, not

all were so successful. Numerous publications have been produced from this study; the first by Heinz Hartmann in 1937, *Ego Psychology and the Problem of Adaptation*. Vaillant's books have pursued similar topics, *Adaptation to Life* (1977), and *The Natural History of Alcoholism* (1983) (Cahan 1986).

Since that first study, the foundation has continued to fund research on child development, and its roster of grantees reads like a who's who of the science of human development, including John Bowlby, Anna Freud, Jane Goodall, Margaret Mahler, Benjamin Spock, and Robert Thorndike (Cahan 1986). Virtually every immediately past president of the Society for Research in Child Development (SRCD) has been a recent grantee.

The specific foci of the foundation's program have varied across its history, reflecting a balance between the state of knowledge and social needs for information. Unlike most other private foundations, the Grant Foundation has always allowed investigators to contribute to its agenda by funding mainly investigator-initiated research. As a result, there has always been a productive synergy between its announcement of interests and the response from relevant fields of research. There had to be a readiness in the field to respond to the foundation's initiatives. One can witness this interaction in its impact on research across the past few decades.

In the 1960s, attention went mainly to infancy. That focus reflected the concern for early development at that time and newly emerging technologies for probing the baby's mind. There was also a need for information on early development because of women's entry into the workforce during and following World War II and because of the newly developing war on poverty (Cahan 1986).

In the 1980s, the Foundation turned its attention to school-aged children. Infancy research had matured and had achieved considerable federal support. Furthermore, life span research was demonstrating the importance of continuing development beyond the early years. And school-aged children were facing an array of social problems, such as parental divorce, abuse, and, among adolescents, vulnerability to risks such as pregnancy and substance abuse (Haggerty 1990).

As a result of this new focus, the foundation's funding of research had a significant impact on the growth of research on adolescence during the

1980s. In fact, much of its funding went specifically to adolescent research rather than to research on school-aged children in general (Haggerty 1990). This trend resulted from the growth of interest in the field and the increasing need for information to deal with issues such as teen pregnancy. Prior to the 1970s, articles in the leading developmental journal, *Child Development*, had focused disproportionately on infancy. Beginning in the 1980s, in part because of funding available from the Grant Foundation, the balance began to shift to adolescence. There are now two journals devoted to adolescence and a professional society, Society for Research on Adolescence. Thus the foundation, therefore, contributed to the growth of a new field.

It was in the early 1980s when Robert Haggerty, M.D., took over as president and redirected the focus to stress and coping in school-aged children, that the foundation's program for junior investigators, Faculty Scholars, was established. This program is still ongoing and has been enormously successful in keeping the very best minds in academic research on human development (Cahan 1986). Beginning in the 1990s, when I joined the foundation as vice president, this program became fully multidisciplinary. We discovered that diversifying the selection committee resulted in applications beginning to arrive from fields outside the traditional disciplines of developmental studies: psychology, pediatrics, and psychiatry. This program has thus contributed substantially to broadening the field of research on child development. The scholars funded now cover virtually every field of human development.

Also in the 1990s, the foundation announced an interest in funding research on late adolescence and the transition to adulthood. In the mid-1980s the foundation had funded a commission that produced a report, *The Forgotten Half* (1986), documenting the plight of that half of the youth population who do not attend college. Compared to the half that do attend college, they lack social services and assistance (Halperin 1990). This report directed attention to the transition from school to work, and Haggerty and I, with the approval of the board, agreed that the full variety of transitions that characterize the transition to adulthood merited attention (Haggerty 1990). There were several longitudinal studies whose samples were nearing this age period, and the assumption of adult re-

sponsibilities was being increasingly delayed. At the same time, globalization was increasing creating one large worldwide youth culture. Studies of young adulthood are now as frequent as of early adolescence.

Beatrice A. Hamburg, a longstanding member of the foundation's board of trustees and chairperson of the faculty scholars selection committee took over the presidency of the foundation in the early 1990s, succeeding Haggerty. Her husband David was then president of the Carnegie Corporation. They were the first couple ever to jointly head private independent foundations. Given Beatrice Hamburg's longtime association with the foundation, she did not redirect the overall focus, but she did develop two important programmatic themes: educational reform and juvenile justice (Hamburg 1993). A variety of research projects connected to innovative social endeavors characterized her years as president of the foundation.

Hamburg was succeeded by Karen Hein, M.D., who has brought a concern for youth development and an eagerness to insure that the research funded by the foundation impacts the well-being of youth. As a result, an overarching concern for communication has been added to the foundation's portfolio, and the foundation has also emphasized its concern for research, not just on individual development, but also on the social context in which that development occurs (Hein 1998–2000). Lawrence Gianinno joined the Foundation as its first vice president for strategic communications in 1999. I left the Foundation in 2000 after ten years there, and Robert Granger, formerly senior vice president at the Manpower Demonstration Research Corporation, joined as senior vice president for program. It is therefore a new era for the foundation, and its potential for setting the agenda of research on human development has never been greater.

In 2002, the Foundation celebrates its 100th Faculty Scholar. It continues to develop the frontiers of research on human development, to push the edges of innovative approaches to research, to maximize the usefulness of research knowledge, and to build leaders in the science of human development. William Grant's founding wisdom and foresight continue to be the driving forces. The foundation has always wisely positioned itself at the leading edge of important new areas in the fields in which it funds. It has been successful in achieving a good

balance between exciting developments in the field and social needs for information.

Lonnie R. Sherrod

See also: Freud, Anna; Resilience; Transition from School to Work and Adult Life

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Women, Infants, and Children (WIC), Special Supplemental Nutrition Program

WIC, the acronym commonly used for Special Supplemental Nutrition Program for Women, Infants and Children, is a federal grant program designed to provide supplemental nutritious food by a voucher system to eligible participants. This program improves the well-being of families and individuals by helping to prevent long-term negative effects of poor nutrition. Eligible groups are pregnant women, women up to six months postpartum who are not breastfeeding, breastfeeding women up to twelve months postpartum, infants, and children up to age five. These individuals must also meet income guidelines and a state residency requirement, and be identified as at nutritional risk by a health professional. To be eligible on the basis of income, applicants’ gross income must fall at or below 185 percent of the U.S. Poverty Income Guidelines, or they must participate in the Food Stamp Program, Medicaid, or Temporary Assistance for Needy Families (TANF). “Nutritional risk” is defined as a situation of risk according to medical criteria, such as anemia, excessive or insufficient weight gain, or a history of poor pregnancy outcomes, when that situation is compounded by inadequate dietary intake compared to the Food Guide Pyramid.

Purpose

WIC is designed to meet nutritional needs on a short-term basis at times when nutritional risk is the greatest. Once eligibility requirements are met, the participant is certified for six months, provided the individual is pregnant, postpartum, nursing, or is under five years of age.

Benefits

Prenatal WIC participation has effectively helped reduce infant mortality, low birth weight, and maternal and newborn medical costs (Devenay 1992). Infant and children participation in WIC has improved nutrient intake, growth rates, and cognitive development (Oliveria and Gunderson 2000). Participation in WIC has effectively reduced the rate of iron deficiency anemia.

WIC provides food vouchers, which list the quantity of specific foods that can be purchased with the vouchers. WIC foods include iron-fortified infant formula and infant cereal, iron-fortified adult cereal, vitamin-C-rich fruit and vegetable juice, eggs, milk, cheese, peanut butter, dried beans or peas, tuna fish, and carrots. These foods provide nutrients (calcium, iron, vitamins A and C, and protein) that are often lacking in diets of low-income women. Special infant formulas and certain medical foods may be provided when prescribed by a physician or health professional for a specified medical condition. Additional coupons are provided to purchase locally grown produce at participating farmers' markets through the WIC Farmers' Market Nutrition Program.

In addition to food vouchers that participants can redeem at authorized grocery stores, WIC provides individual and group nutrition counseling and referrals to health care services. These health care services include breastfeeding support, immunizations, prenatal care, family planning, and substance abuse programs.

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See also: Breast-Feeding and Lactation; EFNEP: The Expanded Food and Nutrition Education Program; Low Birth Weight Infants; Public Policy and Early Childhood

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Work and Families

Work includes employment outside the home and unpaid tasks occurring within the home. Human ecologists are concerned with this topic because it is a major part of family life, as well as being one significant context in the ecology of human development. Families not only complete unpaid tasks to care for themselves (e.g., cooking food, raising children), but also must work outside the home to earn income to support themselves. When families

cannot perform these functions, they either get help (such as social assistance or day care) or struggle to meet their daily needs. Moreover, various features of society, such as gender ideology and employment policies, affect the work that individuals in families do and how easily they are able to do it.

Gender is a powerful factor affecting the work that women and men do. Historically, a pattern emerged after the industrial revolution in which women's and men's work became segregated (Gerson 1993, 18). When production of goods moved outside of homes, men came to be seen as responsible for (paid) work outside the home and women responsible for (unpaid) work inside the home. Men started earning a "family wage"—a higher wage paid only to men so they could support their whole family financially (Gerson 1993, 19). Many working-class, poor, minority, and single women or single mothers still worked outside the home because their families needed their incomes. They did not earn family wages, however, because they were not expected to be financially responsible for their families.

The legacy of the family wage lives on in many ways. In 1994, women's weekly wages were 76 percent of men's weekly wages (Haas 1999, 572). Single mothers and their children are more likely to live in poverty than any other family group (Blank 1998, 40). Even though women are more likely to be part of the paid labor force than in the past, and despite a decline in real wages that has made two incomes a necessity for many families (Haas 1999, 572), men and women still are ambivalent about women's roles as financial providers (Daly 1996, 152). Although women are increasingly employed full-time, they still remain responsible for the majority of unpaid family work (Haas 1999, 576), whereas men's identities are more related to their careers or jobs than their families. Not surprisingly, women's lower incomes helps reinforce the expectation that women are more useful to their families at home than in the workforce.

Unpaid family work is a complex concept to study. It often is combined with leisure, which makes it hard to clearly recognize or define (Daly 1996, 169). Christmas, for example, must be "created" before the holiday can be enjoyed. Additionally, there are many types of unpaid work, and sometimes researchers and practitioners do not agree on what is or is not work. Unpaid work typi-

cally refers to the accomplishment of activities that produce tangible outcomes, such as having a clean bathroom. This *task accomplishment* (Mederer 1993, 134) is usually what people think about when referring to unpaid family labor. Much family work does not produce tangible outcomes, however. *Emotion work* includes all the activities (observable and nonobservable) and time spent providing emotional support to family members and enhancing their well-being (Erickson 1993, 888). Employed parents may engage in high amounts of emotion work to make up for time they have not been able to spend with their children as a result of their employment. *Kinwork* involves the maintenance of cross-household ties, involving activities such as making phone calls, sending birthday cards, creating holiday or ritual celebrations, and all the mental work of reflection needed to accomplish these tasks (Di Leonardo 1987, 442). *Household management*, which is done before task accomplishment, is invisible work consisting of all the mental preparation of deciding what needs to be done, how and when to do it, and what standards to follow (Mederer 1993, 133).

Even though gender attitudes have become more egalitarian since the 1960s (Haas 1999, 574), women do more unpaid family work than men and are expected to be more responsible for it. Survey data have indicated that women spent an average of thirty-three hours a week on household tasks, whereas men spent an average of fourteen (Haas 1999, 577). Women tend to do tasks that are repetitious and time-consuming, such as cooking meals, whereas men are more likely to do traditionally male activities that are less time-consuming and often involve leisure, such as gardening. Household management is even more gendered (with women doing it more than men) than actual task accomplishment (Mederer 1993, 143). Women also tend to be more responsible than men for maintaining kin ties (Di Leonardo 1987, 443).

There are several theories about why this inequity persists. The *time availability model* suggests that women do more housework than men because they have more time to do it. It predicts that when women enter the workforce, their husbands will pick up the slack at home because women have less time. Studies do not find conclusive support for this. Employed women do spend less time on housework, but what is not clear is whether their husbands pick up the slack (Haas

1999, 579). The *resource model* suggests that whoever has more power can get out of housework. It suggests that if women are employed, they will have more power in their marriages (because employment equals money, and money equals power) and therefore domestic tasks will more likely be shared. Research findings only find partial support for this theory (Haas 1999, 581). The *ideology model* suggests that it is individuals' gender attitudes that affect whether or not division of labor is gender-based. For example, men appear to do more housework when both husbands and wives have egalitarian attitudes toward gender (Haas 1999, 581). Partial support is found for this model also. Researchers are beginning to look at additional factors, such as institutional constraints, that can affect division of labor (Haas 1999, 581).

Previously, researchers believed that individuals acted in ways in which they were socialized as children, but recent studies have recognized that childhood experiences do not necessarily dictate how women and men will approach work issues later in life (Gerson 1993, 23). Individuals experience various constraints and opportunities as they move through adulthood, and some of these may be unexpected events that change the direction of a person's life (Gerson 1993, 260). For example, a work-oriented man may marry a woman who is very committed to her career, which may steer him toward being more focused on home life. Similarly, a working-class husband may hit a dead-end in his job, thereby becoming more family- or home-focused.

Combining paid work and family work and life is a challenge for many families. *Spillover* occurs when experiences in one domain (e.g., employment) affect experiences in another domain (e.g., family). It may be positive or negative, and its direction may be from employment to home or from home to employment. Negative spillover may occur when individuals' job demands increase stress levels to the point that they are always angry at home or when parents are so preoccupied with organizing a child's birthday party that it affects their ability to concentrate at work. Positive spillover can occur when a positive experience at work results in people feeling invigorated and energized, which enhances their interaction with family members.

Some families may try to reduce negative spillover by using individual strategies such as

cutting back on their work hours. However, factors in the structural context, such as work and government policies, also are important in determining how well families are able to combine work and family life or meet their financial needs. Flextime, dependent care assistance, and family leave policies are examples of helpful institutional strategies (Haas 1999, 596). Such strategies should be scrutinized on a regular basis to make sure they actually are helping families in the intended ways. For example, the 1993 Family and Medical Leave Act, while increasing previous unpaid family leave substantially, only applied to organizations of a certain size (Haas 1999, 597). Programs related to alleviating poverty need to be monitored. Although public assistance programs have helped many poor families (Blank 1998, 133), any extra income usually means a loss of benefits. As a result, many families find it difficult to get ahead (Edin and Lein 1997, 7). When they controlled for family size, researchers found that working single mothers had *more* financial hardships than single mothers on welfare (Edin and Lein 1996, 117). This situation is due to a combination of increased work-related costs and loss of government benefits. Fewer employment opportunities for lower-skilled workers combined with declining real wages also means that employment is no longer a sure way out of poverty for many families (Blank 1997, 52).

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See also: Child Care: Issues for Infants and Children; Gender and Families; Gender Roles and Society; Work-Family Conflict

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Work-Family Conflict

When the conflicting pressures between work and family become incompatible so that participation in one role is made more difficult because of participation in the other role, work-family conflict (WFC) is said to occur (Greenhaus and Beutell 1985). Managing the conflict between work and family is increasingly a challenge for employees, especially as greater numbers of households change from single-earner to dual-earner. A considerable amount of research has focused on the causes and consequences of conflict between work and family, and a recent meta-analysis that reviewed all published studies that examined work-family conflict and job and life satisfaction found a consistent negative relationship between work-family conflict and both satisfaction measures. Other research has shown that work-family conflict is related to marital dissatisfaction, job burnout, turnover, and outcomes related to psychological distress as well as work productivity and financial costs incurred by an organization. Employers have attempted to establish workplace programs (e.g., flexible work schedules) to alleviate work-family conflict, but research has shown that their effects are often limited. Recent research points to the importance of individual differences in such factors as time management strategies in explaining why some employees (e.g., those higher in self-control skills) tend to deal better with the antecedents of work-family conflict than others.

Conflict between Work and Family Roles

Conflict between work and family roles can occur in two ways: work interfering with family (WIF) and family interfering with work (FIW) (Frone, Russell, and Cooper 1992). Both kinds occur when "(a) time devoted to the requirements of one role makes it difficult to fulfill requirements of an-

other; (b) strain from participation in one role makes it difficult to fulfill requirements of another; or (c) specific behaviors required by one role make it difficult to fulfill requirements of another” (Greenhaus and Beutell 1985, 76). Time-based conflict can have two forms: time pressures of one role make it physically impossible to fulfill the requirements of the other role, or pressures from one role cause mental preoccupation with it even while physically attempting to meet the demands of the other role. Role overload at work, which can be seen as the inability to fulfill one’s work role requirements in a given period of time, contributes to time-based work-family conflict.

Work-family conflict models propose that conflict arises when the demands of one domain are incompatible with demands of the other domain (Adams, King, and King 1996). Data in the area of work-family stress has suggested that the domains exert both direct and reciprocal influences on each other. Michael Frone, Marcia Russell, and Lynne Cooper (1992) asserted that a reciprocal relationship between WIF and FIW exists, based on the assumption that if work stressors (work pressure, lack of autonomy, and role ambiguity) begin to interfere with family obligations, these unfulfilled family obligations may then begin to interfere with work functions. Because of this close relationship, consideration of both types of conflict is necessary.

Antecedents to Work-Family Conflict

Several possible antecedents to work-family conflict have been investigated in prior research. The research can be divided into two camps: antecedents of work-family conflict at work and antecedents of work-family conflict at home. The following work variables have all been found to be related to work-family conflict: length and difficulty of the commute to and from work, amount and frequency of overtime, job autonomy, task challenge, work load, management support and recognition, level of importance assigned to work roles, job involvement, and role overload at work. The relationship between each of these factors and work-family conflict is different. For example, the more job autonomy employees have at work, the more flexibility they will have in dealing with the conflicting demands of work and family. Thus, as job autonomy increases, the level of work-family conflict decreases. On the other hand, the more

overload one experiences at work, the less time one has to meet conflicting family demands.

Research into the antecedents of work-family conflict in the family domain suggests positive linkages between WFC and marital status, size and developmental stage of family, level of importance assigned to family roles, family stressors (parental workload, extent of children’s misbehavior, lack of spousal support, and degree of tension in the marital relationship) and family involvement. For example, low levels of spousal support are associated with higher levels of work-family conflict.

Outcomes of Work-Family Conflict

The conflict that occurs between work and non-work roles can be a source of stress, with physical and psychological outcomes for the individual. These outcomes may, in turn, impact the work organization as well as the family relationships of the individual. Conflict can have a significant impact on the quality of both work and family life. For example, it has been found that psychological burnout, alienation, and reduced job satisfaction were all related to high levels of work interfering with family (Allen et al. 2000). Also, there is some evidence that WIF plays a mediating role between work role-conflict or overload and job burnout and satisfaction. For example, research suggests that lower job satisfaction, organizational commitment, and life satisfaction in employed graduate students was related to family interfering with work. Frone, Russell, and Cooper (1992) noted a relationship between higher levels of family interfering with work and clinical depression and job stress in working adults. Other research has shown WIF and FIW are related to job, life, and marital dissatisfaction; job burnout; turnover; and outcomes related to psychological distress, as well as to work productivity and financial costs incurred by an organization. Recent research also suggests that child and adolescent adjustment may be affected by work-family conflict. Specifically, the antecedents of work-family conflict (e.g., feelings of overload and strain) in parents are related to less positive adjustment in children.

In summary, prior research has linked several factors from both the work and family domains to perceived levels of work-family conflict. Furthermore, research has also identified many of the outcomes of perceived work-family conflict. Another line of research that has been undertaken is con-

cerned with how one can alleviate work-family conflict. The two basic areas that have been considered are organizational interventions to reduce work-family conflict, and individual factors (e.g., time management skills) that may reduce work-family conflict.

Organizational Influences on Work-Family Conflict

Organizations vary in their degrees of supportiveness for employees dealing with work-family conflict. Some organizations recognize the difficulties individuals face in balancing work and family responsibilities and implement policies and programs to help employees meet all their work and family responsibilities. These policies and programs include benefits such as on-site child care, maternity and paternity leave, child sick days, flexible scheduling, and the like. Family benefits provided by the organization are believed to assuage work-family conflict by enabling employees to have greater control over both work and family domains.

Research has indeed found that use of on-site child care positively affected employees' attitudes about managing work and family responsibilities. Other studies have shown that the number of family benefits provided by the organization and used by the employee is related to work-family conflict, strain, and employee attitudes about the supportiveness of the organization. In addition, the amount of supervisor support for employees in dealing with work-family conflict was positively related to employee attitudes about managing work and family responsibilities. Similarly, research has found that supportiveness of employees' immediate supervisor, in the form of flexibility when family needs arise, was related to lower levels of employee-reported work-family role strain. In general, however, organizational influences on work-family conflict have been limited.

In their review of current literature in work-family policy, Ellen Kossek and Cynthia Ozeki (1999) noted that only half of the studies reviewed showed clear positive effects of organizational policies on reducing work-family conflict. One explanation offered by Charlene Marmer Solomon (1994) points to a discrepancy between policies and actual practice. Too often, corporate culture does not support employees' use of organizational benefits, thus discouraging employees from making use of benefits in dealing with work-family

conflict. Though organizations may implement benefits programs designed to decrease work-family conflict, attention must be put on changing corporate culture if these programs are to have their full effect. Aside from corporate culture, other outside factors seem to influence whether employees make use of these programs, and the degree to which they feel relief from work-family conflict as a result. Therefore, it stands to reason that individual differences in employees may play a significant role in determining work-family conflict levels. Both personality factors and strategies used by individuals in dealing with the limited resources resulting from WIF and FIW may influence perceived levels of work-family conflict. Thus, differences in work-family conflict levels may be related to differences in personality (e.g., resourcefulness or lack of it), use of one or more strategies (e.g., time management strategies), or the availability of other resources (e.g., social or spousal support).

Individual Differences and Work-Family Conflict

There is evidence that individual differences in such factors as self-control skills can help predict the impact a stressor (such as work-family conflict) will have on a person's physical and mental well-being. For example, research has found that the more self-focused attention an employee reported, the lower their severity of depression and reported somatic symptoms. More recently, it has been found that women who possessed self-control skills (such as resourcefulness) were less stressed by handling multiple roles than were women who did not possess these skills.

Time Management

Time management involves three dimensions: (1) goal setting and prioritization, which involves daily decisions about what is most important to be accomplished; (2) mechanics of time management, which includes such activities as making to-do lists; (3) preference for organization, which involves maintaining a methodical, organized approach to work. However, when Steve Jex and Tina Elacqua (1999) investigated the moderating effects of these three dimensions of time management on the relationship between WIF and strain, they concluded that the effects were not substantively meaningful.

In a related study, Gary Adams and Jex (1999) investigated both the direct and indirect (through perceived control of time) relationships between the three dimensions of time management and WIF and FIW. Results showed a negative relationship between time management and FIW that was entirely mediated by perceived control. That is, the use of time management strategies led employees to feel greater perceived control of time, which in turn led to lower amounts of FIW conflict. A similar relationship was found for time management and WIF, as well as a direct relationship between preference for organization and goal setting and prioritization. Surprisingly, the relationship between goal setting and WIF was a positive one. Adams and Jex postulated that this finding was due to the tendency for work-related activities to be given a higher priority than family-related activities.

In summary, time management strategies do seem important in predicting who will deal better with the antecedents of work-family conflict. However, the relationship, as shown above, is a complicated one.

Social and Spousal Support

Social and spousal support are both believed to have a negative relationship with WIF and FIW. That is, the more support one has, the less work-family conflict one will experience. Research has found that supervisor support had a direct inverse relationship with levels of WIF, and that supportive organizational policies (i.e., flexible schedules) had an indirect relationship through perceived control. Recent research also found that family support moderated the relationship between role stressors and WIF and FIW.

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See also: Work and Families; Workplace: Psychological Contracts

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Workplace: Psychological Contracts

The "psychological contract" is a term used for the unwritten set of expectations that an individual has with respect to a relationship with an individual or organization. The nature of the psychological contract has been related to work performance and attitude outcomes such as absenteeism, innovation, job satisfaction, job security, intention to quit, layoffs, organizational commitment, workplace performance, resistance to change, and team spirit. The nature of this unwritten set of expectations has had differing interpretations since the term "psychological contract" was first introduced in the early 1960s.

Chris Argyris (1960) first presented the term when studying the relationships of shop workers with their foremen. He found that there was a tacit acceptance that if one leaves the other to do their job a balance of good work and fair treatment would exist. Harry Levinson (1962) further developed the concept of the psychological contract, providing a definition that suggested it was a shared agreement between an individual and an organization that involved unwritten expectations for both parties. This definition seems to have been influenced by contract literature, embracing

the legal perspective of agreement and exchange equity. These earlier conceptions of the psychological contract clearly involved concepts of reciprocity and equity.

The psychological contract was later revised by Denise Rousseau (1990) to embody a different way of seeing it. Rousseau saw a psychological contract as something that could only happen between two individuals, not between an individual and an organization. She argued that organizations cannot hold beliefs or perceptions about a deal, and that individuals cannot make agreements with organizations, at least directly, that an individual must always be an agent for the organization. In Rousseau's new conception, the individual held a subjective view of their agreement with the employing organization, and any perceived breaches of the contract were held solely to be an individual responsibility. This one-sided perspective holds a very different sense with respect to the spirit of exchange. Criticisms of this conceptual split have been numerous. The newer perspective is considered to run contrary to any spirit of contract, and critics argue that the metaphorical use of the term "contract" should be abandoned. Others have argued that this new perspective has placed the organization at a disadvantage in the typical thrust and parry of contract negotiations and agreement. As it stands, both views of the psychological contract are being applied today.

Rousseau also made a new distinction, classifying contracts as either *transactional* or *relational*. Exchange relationships in general are composed of two areas, involving the transactional and relational components of a relationship. This categorization is applied by organizational researchers in the study of relationships and is "consistent with various areas of contract law, including laws governing agency, employment, incorporation, and marriage" (Rousseau 1995, 92).

An example of a transactional exchange is one that involves a contract or relationship that has a short duration involving a straightforward exchange of money for a good or service. Buying a newspaper at a local corner store is a good example of an exchange that is high in transactional content. The purchase involves an exchange that is both explicit and agreed upon. The newspaper has a predetermined price, and the purchaser pays the necessary amount of money. The exchange between the buyer and seller is made, and the needs

of both parties are satisfied. In general, exchanges that are high in transactional content entail some form of task-specific, explicit economic incentives, established time frames with limited flexibility before the deal would have to be renegotiated, or the utilization of employees without any intention of future skill development.

On the other side of the exchange continuum is the relational component, which emphasizes a more social exchange and greater interdependence. Relational exchanges involve open-ended relationships, where reciprocity is expected some time in the future, but may not be explicitly stated at the time of an exchange. If we look at the purchase of the newspaper at the corner store again and add that the store is a place regularly visited by the shopper, and that the store owner knows him and thinks well of him, the storekeeper may allow the shopper to take the newspaper and pay for it later. Possibly the shopper has helped the store owner in the past by picking up spilt goods or spotting a shoplifter, and in return the storekeeper allows the shopper to occasionally have the newspaper without having to pay money for it. These types of exchange would constitute ones that are high in relational content. Relational exchanges involve open-ended time frames with unwritten criteria. Relational exchanges can also involve relationships that regularly change with the intention of future skill development.

Measuring, or getting a sense of what is contained within a psychological contract has been attempted in three different ways. The first is by evaluating the *dimensions* of the psychological contract. The second is by evaluating the *content* of the contract (such as benefit types, hours of work, and the like), and the third involves the explicit evaluation of the psychological contract by the actual holders of the contract. The latter two approaches, however, are considered rather problematic, particularly when measuring different groups across regions and time. The content of a psychological contract constantly changes; the benefits and constraints of an agreement can vary from year to year and place to place, leading to assessments that are not necessarily relevant to others in the same industry but in different organizations or at different times. In addition, any evaluation of the psychological contract by its holders potentially presents problems due to subjective bias and a sense of pressure to provide socially accepted responses.

Evaluating the psychological contract by examining the dimensions, help to define the type of environment in which such psychological contracts are formed. Rousseau initially introduced five dimensions: *scope*, *focus*, *tangibility*, *time frame*, and *stability*. The scope of a psychological contract has to do with the degree to which an employee's work impinges upon her personal time (home time, work/home balance). The focus has to do with the nature of the work: For example, the work may be high relational/emotional focus (like the work of a nurse or a counselor) or high transactional (like the work of an accountant or line worker). The tangibility of a contract has to do with the degree of explicitness of the work arrangement, with such questions as whether the job description is in writing and current. The time frame is the anticipated length of time the individual will have the job. The stability depends on the relative security of the job as it currently stands; do the demands of the job or description change regularly or are they rather static?

The dimensions were later added to with the rationale that the existing dimensions need to also represent workers who are nontraditional, or *contingent*. *Multiple agency*, *particularism*, and *volition* were added to the dimensions. As well, the concept of time frame was split to allow consideration of both *duration* and *precision*. To take multiple agency into account is to recognize the fact that not all employees report to a single individual. For example, consultants and temps (temporary employees hired to fulfill a shortterm need within an organization) will report to both their employing organization and the client they are assigned to. To consider particularism is to consider the skill set of the individual: Is the individual working in a specialized field or are the required skills for the job widely available? Volition is the level of free will an individual has in a job, with whether it

was his choice to be in the job or he felt coerced into it. Finally, if one looks at the duration of a time frame, one is considering the nature of any shared agreement as to the length of the period of employment, and precision has to do with the degree of clarity as to when the employment agreement will terminate.

The primary focus of study on psychological contracts has been on contract breach and violation, on the way psychological contracts have been broken as a result of organizations changing in order to meet market demands. This work has dominated the psychological contract literature in the 1990s, primarily as a result of workplace initiatives involving re-engineering and downsizing. Another focus has been the discussion of old and new contracts. The perception by many of the researchers is that in general in the United States there is a new psychological contract, one that does not guarantee job security, benefits, and the like. However, there has been some debate as to whether there ever was an *old* contract; some argue that what is presently defined as the old contract may have been enjoyed only by an elite minority of the workforce.

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See also: Work and Family; Work-Family Conflict
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Y

Young Adulthood

Young adulthood is a stage of the individual life span that bridges adolescence and adulthood. The individual emerges during young adulthood as a member of society, personally responsible for her behavior. Prior to this life span stage, the individual shared the responsibility for her actions with parents, teachers, and society. During young adulthood, the individual is first responsible for committing herself to society by taking on socially sanctioned roles such as life partner, worker, and parent. This stage in the life span is defined by an integration of past experiences into an adult self, with a perspective and a plan for the future.

Whereas Sigmund Freud suggested that developmental maturation was achieved through pubertal maturation, others have suggested and elaborated upon the intrapsychic development that continues after puberty. For example, Robert White (1952) suggested that during young adulthood, individuals would experience a stabilizing of identity, greater ability to relate to others, and a deepening and stabilization of interests, which leads to specialization of skills, a personal commitment to human values, and extension of a social conscience—a greater concern for those in need.

Likewise, Rudolph Wittenberg (1968), a psychoanalyst, suggested that young adulthood is a specific phase of growth during the life span that occurs after adolescence. This phase of the life span can be characterized by five “metapsychologic factors” and three “socioeconomic factors.” In regard to the psychological tasks of young adulthood, he suggested that the postadolescent is chal-

lenged with becoming his own authority. Second, despite the fact that identity has been solidified during adolescence, the postadolescent may sense a temporary estrangement from his identity. This temporary state, Wittenberg suggests, signifies the significant stress that the individual is under to match his identity with prescribed social roles. Third, with the advent of adult roles, many sense a loss of the freedom to experiment with new roles. Fourth, the young adult becomes more acutely aware of the passage of time. The young adult, now more in control of the events of his life, gives more thought about how he chooses to allocate his time. Fifth, the search for a partner takes on significance. This refers to the preoccupation that the postadolescent has with finding a mate with whom to share intimacy.

Wittenberg equally acknowledged the impact of context in shaping the landscape of young adulthood in terms of socioeconomic factors. First, he suggests that young adults are subjected to an economic bind. They are eager to make progress toward financial independence, but are subjected to barriers to participation in the labor force (i.e., continuing need for advanced education to enter the labor force). Second, the young adult must establish a social group formation, which will serve as a support network for the multiple transitions of young adulthood. Lastly, the young adult must develop a philosophy of life, a hierarchy of values, a *weltanschauung*, or a “life dream,” which serves as a guide through adult life.

Erik Erikson put the stage of young adulthood in a life span developmental framework. The stage

of young adulthood is the sixth stage of psychosocial development, following adolescence and prefiguring adulthood (Erikson 1950). He suggested that, between the ages of 18 and 30, young adults are challenged with the specific developmental task of achieving intimacy, the ability to give of oneself freely. The resolution of this developmental crisis results in young adults' love, which allows them to give of themselves to friends, intimate partners, children, and society across the life span. Erikson further proposed that individuals who are not able to meet the challenge of developing intimacy during young adulthood experience isolation, limitations to experiencing intimacy—which constrains the individual from experiencing mutuality with friends, intimate partners, and society. When mutuality is experienced, it serves as a foundation of care and generativity for the next generation through selecting a mate, learning to live with a marriage partner, starting a family, rearing children, managing a home, getting started in a career, taking on civic responsibility, and finding a congenial social group (Havighurst 1952; Erikson 1968).

It has been suggested that the terrain of young adulthood is more difficult for some than others, as a function of salient demographic factors. For example, adjustment during this stage of the life span may be a very different task for young men and women, as socialization of boys and girls toward intimacy and the balancing of work and family—tasks of young adulthood—differ (Gilligan 1982; Levinson 1978; 1996). Moreover, young adulthood requires individuals to take on, for the first time, a set of social roles. The decisions and adaptations of young adult are dependent upon the historic, economic, and social issues of contemporary society (Erikson 1950; Havighurst 1952). In addition to historical time, the economy and the dominant social issues that coincide with an individual's young adulthood influence the decisions and experiences of that period (Goldscheider and Goldscheider 1999; Booth, Crouter, and Shanahan 1998).

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See also: Developmental Transitions across the Life Span; Erikson, Erik Homburger; Friendship across the Life Span; Freud, Sigmund; Transition from School to Work and Adult Life

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Youth Development

Youth development is a philosophy and approach to working with young people that emphasizes several key ideas:

- All young people have common needs and face common tasks as they grow from childhood to adulthood. Knowledge of these needs and tasks is well defined and clearly articulated in a solid body of research around child and adolescent development.
- In addressing these needs and accomplishing these tasks, all young people need regular opportunities to develop skills and competencies that are useful now and in the future.
- Adults play important roles in fostering young people's healthy development. These roles include providing needed protection, guidance, support, and opportunities that promote positive growth.
- Young people are agents of their own development, and all young people have strengths and prior knowledge that are considered assets to their subsequent development.



Youths volunteering to clean up litter (Elizabeth Crews)

Many individuals and institutions support (or hinder) positive youth development—including families, schools, other community institutions, and communities themselves. In addition, there is a formal sector of organizations in American society that is often described as the youth development sector. Organizations in this sector are generally considered to include national youth-serving agencies (such as Boy Scouts, Boys and Girls Clubs, Camp Fire, 4-H, Girl Scouts, Girls Incorporated, YMCA, YWCA); grassroots independent youth organizations; sports organizations (such as Little League and Youth Soccer); religious youth groups; and selected public sector groups, including public libraries and parks and recreation centers.

Youth development differs in several significant ways from prevention and treatment approaches. First of all, youth development revolves around building young people's strengths (assets) and competencies, while other approaches revolve around preventing or treating problems. Second, youth development supports, services, and opportunities address universal needs, whereas prevention and treatment are often targeted to specific groups of young people.

The youth development approach and pro-

grams that are based on this approach rest on a solid base of theoretical and empirical research. For example, the following summarizes first the underlying research base and then the evaluation studies documenting the benefits of this work:

Fact One: All young people need ongoing supports and opportunities on the road to successful adulthood. Extensive research on child and adolescent development indicates that young people need ongoing guidance and support in all of the developmental domains (cognitive, social, emotional, physical, moral, and vocational) if they are to achieve productive adulthood—defined as having competencies that will allow them to participate in the labor economy, in responsible family life and in active citizenship (Eccles 1999).

Fact Two: Consistent adult guidance and support promote positive youth development. Resilience theory indicates that children who have consistent access to adult guidance and support have better outcomes, such as higher education and career aspirations, lower incidence of at-risk behaviors (Bernard 1991). These findings are confirmed by stud-

ies of mentoring programs, such as Big Brothers/Big Sisters (Tierney, Grossman, and Resch 1995).

Fact Three: Nonschool hours represent the single largest block of time in the lives of American children and youth. About 40 percent of young people's waking hours are discretionary—that is, not committed to other activities such as school, homework, meals, chores, or working for pay. By contrast, American youth spend about 32 percent of their waking hours in school (Timmer, Eccles, and O'Brien 1985).

Fact Four: Elementary-age children's participation in high quality after-school programs results in several important learning and development outcomes. In a variety of studies spanning more than a decade, University of Wisconsin researcher Deborah Vandell has documented a host of positive benefits from children's participation in high-quality after-school programs, including better grades, work habits, emotional adjustment, and peer relations (Vandell and Shumow 1999). Furthermore, educational researcher Reginald Clark found that low-income children who spent 20–35 hours of their free time each week in engaged learning (such as reading for pleasure and playing strategy games) got better grades in school than their more passive peers (Clark 1988).

Fact Five: Participation in community-based youth development programs promotes positive academic and social outcomes among teenagers. Stanford education professor Milbrey McLaughlin found that adolescents who participate regularly in community-based youth development programs (including arts, sports, and community service) have better academic and social outcomes—as well as higher education and career aspirations—than other similar teens (McLaughlin 2000).

Fact Six: Well-designed prevention programs have been shown to reduce high-risk youth behaviors such as adolescent pregnancy, substance abuse, juvenile crime, and dropping out of school. Multi-year evaluations conducted by the Association of Junior Leagues, Girls Incorporated, Boys and Girls Clubs of America and WAVE, Inc., have demon-

strated significant results in reducing high-risk behaviors among teenagers—behaviors that often get in the way of positive youth development. (For a summary of this research, see Carnegie Corporation 1992, 38–39.)

Fact Seven: Comprehensive approaches to promoting positive development and reducing risky behaviors have been shown to be very effective. A multi-year evaluation of the Quantum Opportunities Program found that long-term participation in a comprehensive year-round program had significant positive effects on economically disadvantaged high school youth. The intervention offered components that are typical of youth development programs, including academic enrichment and remediation, community service opportunities, academic and career counseling, adult mentors, and close peer relationships. Using a randomized design, this five-year longitudinal study showed powerful results for participants, including better high school graduation rates, higher enrollment in post-secondary education, lower teen pregnancy rates, and a higher level of community involvement (Hahn, Leavitt, and Aaron 1994). Similar positive findings have been documented in a recent multi-year study of a comprehensive youth development and pregnancy prevention program offered in diverse sites around the country (Kirby 2001).

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See also: Adolescent Pregnancy and Prevention; Community Youth Development; Extracurricular Activity Participation; 4-H Youth Development; Positive Development; Resilience; Youth Mentoring

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Youth Mentoring

Youth mentoring involves a supportive relationship between an older, more experienced adult and an unrelated, younger mentee—a relationship in which the adult provides ongoing guidance, instruction, and encouragement aimed at developing the competence and character of the mentee. Over the course of time, the adult and youth often develop a special bond of mutual commitment, respect, identification, and loyalty, a bond that facilitates the youth's transition into adulthood. These relationships can either be established through formal programs that intentionally foster such a relationship, or they can be established through informal connections between the adult and the young person. Although not all mentoring programs are effective, several recent evaluations have suggested that high quality one-on-one mentoring programs can improve the lives of children—facilitating key relationships, lowering the incidence of risk-taking behavior, and improving academic attitudes and behaviors (Tierney and Grossman 1998; Rhodes 2002). Key attributes of high-quality programs are careful screening of mentors, orientation and training for the child and mentor, and ongoing support of the match (Sipe 1999; DuBois et al. 2002). Improvements in the youth are generally not observed until the relationships has lasted

six to twelve months (Grossman and Rhodes in press).

Given the growing recognition that youth can benefit from relationships with caring adults, there has been a large push, both publicly and privately, to expand mentoring programs. Despite much effort to recruit new mentors, however, adult volunteers are in chronic short supply. As a result, many mentoring programs have altered their features in order to be more attractive to volunteers or to use volunteers more intensively. Thus, since the late 1990s there has been an explosion of new forms of mentoring—school-based mentoring, group mentoring, and even e-mail mentoring (Sipe and Roder 1999).

Mentoring programs that occur at a particular site (e.g., school, work, church) typically require less time and forethought on the part of the mentor. Group mentoring uses the program's scarce resource—the mentors—more intensively by assigning more than one child to the volunteer. There is considerably more variation in structure among group programs than one-on-one programs. The groups differ with respect to the number of children and adults in the group, as well as their focus. E-mail mentoring typically asks the mentor to contact his protégé electronically at least once a week. The flexibility embodied in this form of mentoring is aimed at making the volunteering experience as easy as possible.

Because these less traditional forms of mentoring are so new, there are only a few studies available (McClanahan 1998; Herrera 1999; Herrera, Sipe, and McClanahan 2000; Asetline, Dupre, and Lamlein 2000; Herrera in press). However, the emerging results are worth reporting:

- School-based, group, and work-based programs all attract volunteers who are less likely to volunteer for traditional programs, thus expanding the pool of mentors.
- Through teacher referrals, school-based mentoring is able to reach children whose parents are too busy to take them to a traditional mentoring program.
- School-based mentors spend about half as much time with youth as community-based mentors, and benefits may not persist beyond the school year.
- The adults in group mentoring programs report improvements in youth's social skills



Group of children celebrating mentoring program (Skjold Photographs)

fostered through peer interactions central to the group format.

Meaningful and effective relationships between adults and adolescents can occur in many contexts, ranging from highly structured, arranged relationship to the more spontaneous yet influential ties that sometimes arise with cherished aunts, uncles, teachers, or clergy. Although it is tempting to argue for a more caring society that would render the programs unnecessary, it would be a mistake to be anything less than vigilant in supporting a full array of resources for caring relationships between adults and young people. Changes in families, work demands, and communities have left many adolescents bereft of the adult supports that were available just a few decades ago, while those who parent them have faced increasingly complex challenges. No one institution can completely compensate for the social isolation that many children and adolescents experience, and each institution finds its resources stretched by the limitations of the others. Different youth derive benefits from different resources, and there is growing evidence that mentoring programs can protect many youth

against negative choices and support their healthy development.

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See also: Political Participation by Young People; Social Capital; Vygotsky, Lev; Youth Development

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Youth, Political Participation by

See Political Participation by Young People

Youth Sports: An Ecological Perspective

The ecological model and theory (Bronfenbrenner 1979, 1989) frames an understanding of person-context relationships such as the relationships involving children, youth, and adolescents who play sports. The ecological model can help communities understand what actions have to be taken to make sports a positive experience for America's youth. Over 40 million children, youth, and teenagers play sports in school or within the community (Stryer, Tofler, and Lapchick 1998). The young sport enthusiast lists having fun, learning and improving skills, being with and making friends, belonging to a team, and being healthy and fit as reasons for playing sports (Chambers 1991). It is up to the community, sport organizations, coaches, parents, sport officials, and the youth to make sports a positive experience that corresponds with the above listed reasons.

The ecological model consists of five systems, interrelated and interdependent levels that interact with and influence individual behavior and development, and all affect the youth who is participating in sports. The model can be thought of as like a target, with the individual youth placed in the mid-

dle, and the systems in concentric circles: the *microsystem*, the *mesosystem*, the *exosystem*, the *macrosystem*, and the *chronosystem*. The *microsystem* is the immediate environment the youth participates in. The *mesosystem* is shaped by the interrelationships between two or more environments in which the youth participates in. The *exosystem* is any system that influences the youth's life but does not directly interact with the youth. The *macrosystem* includes broad social contexts or social beliefs that affects the youth and his environment. Finally, the *chronosystem* indicates the changes within the culture and the youth over time.

In the youth sports realm, the *microsystem* refers to immediate settings or people that the youth has face-to-face contact with: such settings as the field, court, or arena, and such people as parents, coaches, sports' officials, team members, opponents, and spectators. All these are included in the microsystem. It is important to realize that the interactions between these people and places directly affect the individual playing sports. Indeed, the type of parenting and coaching must be explored. Supportive and noninterfering parents can help youth develop qualities such as self-esteem, self-motivation, good work ethic, positive attitudes, coping mechanisms, responsibilities, teamwork, and discipline. This help can be given by defining winning by level of effort, having open communication with the child and coach, establishing and consistently enforcing rules for the youth, modeling appropriate behavior at games, and giving unconditional love regardless of the youth's sports skill (Hirschhorn and Loughead 2000). Additionally, youth can learn to play with character, ethics, and sportsmanship.

Douglas Hirschhorn and Teri Loughead (2000) indicated that overbearing and stress-causing parents can harm the youth's sports experience by giving the youth the perception that their love is based on the youth's performance, by not having developmentally appropriate expectations, by trying to live through their child's sports experience, and by overcriticizing and underencouraging or underpraising. Like parents, coaches need to strive to be authoritative or democratic and must respect the youth's individual skill level and need.

It is on the microsystem level that parents and coaches can help youth meet their sports-related goals, including skill mastery and self-motivation. Competence motivation theorists have postulated



Youth practicing martial arts (Elizabeth Crews)

that young athletes feel rewarded when they develop a feeling of competence (Murphy 1995). Coaches can help youth feel competent by giving positive feedback and encouragement. Other theorists believe that it is achievement, the actual displaying of competence, that is rewarding to youth (Nicholls and Miller 1984). Accordingly, parents and coaches must give ample opportunities to youth to demonstrate their competence in a given sport. John Nicholl's theory of achievement motivation involves two separate orientations: a task-involved, or intrinsic, orientation, and an ego-involved, or extrinsic, orientation. Task-involved goals help youth perceive themselves as competent based on individual skill improvement and effort. In essence, the youth only competes against herself. Conversely, youth that base their perceptions of competence on ego-involved tasks depend on medals, parent or coach approval, and peer comparison. Both parents and coaches can directly affect the motivational climate of the sports realm.

They have the power to teach youth that success is not synonymous with scoring points, but rather with working for goals such as mastery of skills and having fun.

The type of competition that is promoted by the parents and coaches (and communities) is also important. According to Daniel Midura and Donald Glover (1999), there are several different types of competition. The Military competition encourages players to see the opponents as the enemy. The Reward model promotes championships and is based on winning at all costs. Finally, the Partnership model encourages the youth to "win" by completing a task or skill. Youth are encouraged to be friends with their opponents and to respect their opponents' skills (Midura and Glover 1999). This last type of competition is highly correlated with task-orientation goals.

The *mesosystem* is the bridge, or the connection, between the arena and coach or any other microsystems. The interactions between microsys-

tems can directly affect the youth's development, sports' participation, and relationships. According to James Garbarino (1982), the more constructive and positive the relationships are within the mesosystem, the more positive the impact on the youth is. Accordingly, it is important for coaches and parents, coaches and officials, and parents and officials to be positive in their interactions with each other.

Interactions and structures that affect the youth only indirectly, such as parent-coach meetings and sport organizations, are included in the *exosystem* and have a grave importance in making youth sports a positive experience. The rules and regulations made by the sports organization or the nature of the parent-coach relationship can affect how child feels about himself. Coaches have an opportunity to establish a clear standard of expectations with parents about focusing on competencies. If it is positive and results in coaches and parents delivering the same message, the coach-parent relationship provides an opportunity to ensure a positive experience related to sports.

The *macrosystem* involves societal forces such as the media, the economy, and societal attitudes. If a community's attitude is that teams should be highly competitive and have a win-at-all-costs attitude, then a player may quit the team or sports altogether. Hence, how the media portrays competition or how a community supports a losing team may affect youths' sports experience. Communities can often set the stage for the type of competition that is encouraged. Consequently, it is important for the community and its sports organizations to understand the difference between task- and ego-involved goals. Communities and sports organizations must value the parents' and coaches' beliefs that sports are more beneficial when the youth are taught in a task-oriented motivation climate. This climate promotes the youth's willingness to try new learning strategies and take on new challenges (Treasure 1997). Additionally, a task-oriented motivational climate also supports the youths' willingness to try again even after losing a game (Duda 1993).

Issues such as when youth enter a new level of school or begin a sport and the effects of puberty fall within the *chronosystem*. This level concerns the development of the person and her environment over time (Bronfenbrenner 1989). Accordingly, issues such as cognitive, emotional, and phys-

ical readiness to play sports are within the realm of the *chronosystem*. In her book *Care of the Young Athlete*, Sally Harris defined ascertaining readiness as a "process in which an individual child's cognitive, social, and motor development is evaluated to determine whether the child can meet the demands of the sport" (2000, 19). Parents, coaches, and even community organizations must understand child and youth development in order to make personal and community decisions on sports readiness and youth. Harris (2000) reported that some pediatricians claim that most children are not physically ready to play organized sports until at least the age of 6. In 1988, Richard Magill authored a readiness model. This model indicated that children needed to have some knowledge of the skill, be physically, emotionally, and socially mature enough to learn the skill, and be motivated to complete the skill (Smoll, Magill, and Ash 1988). Richard Magill (1988) indicated that it is not how early a child gets involved in a sport that is important but rather getting the child involved at the optimal time. In many specific ways, then, the ecological model allows all those involved in youth sports to be aware of every aspect of youth involvement with sports, and how to work on each aspect so that as many young people as possible will be involved in sports and will benefit from that involvement.

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See also: Bronfenbrenner, Urie; Parenting Styles; Youth Development

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