

Tobacco

in History and Culture

AN ENCYCLOPEDIA



SCRIBNER *TURNING POINTS* LIBRARY

Tobacco

in History and Culture

AN ENCYCLOPEDIA



Editorial Board

Editor in Chief

JORDAN GOODMAN

Honorary Research Fellow
Wellcome Trust Centre
University College, London

Board Members

MARCY NORTON

Assistant Professor of History
George Washington University

MARK PARASCANDOLA

Cancer Prevention Fellow
National Cancer Institute

SCRIBNER TURNING POINTS LIBRARY

Tobacco

in History and Culture

AN ENCYCLOPEDIA

JORDAN GOODMAN
Editor in Chief

VOLUME

1

Addiction-
Music, Popular

CHARLES SCRIBNER'S SONS

An imprint of Thomson Gale, a part of The Thomson Corporation

THOMSON
★
GALE

Tobacco in History and Culture: An Encyclopedia

Jordan Goodman

© 2005 by Thomson Gale,
a part of the Thomson Corporation.

Thomson and Star Logo are trademarks and
Gale and Charles Scribner's Sons are regis-
tered trademarks used herein under license.

For more information, contact
Charles Scribner's Sons
27500 Drake Road
Farmington Hills, MI 48331-3535
Or visit our Internet site at
<http://www.gale.com/scribners>

ALL RIGHTS RESERVED

No part of this work covered by the copy-
right hereon may be reproduced or used in
any form or by any means—graphic, elec-
tronic, or mechanical, including photocopy-
ing, recording, taping, Web distribution, or
information storage retrieval systems—
without the written permission of the
publisher.

For permission to use material from this
product, submit your request via Web at
<http://www.gale-edit.com/permissions>, or you
may download our Permissions Request form
and submit your request by fax or mail to:

Permissions Department
The Gale Group, Inc.
27500 Drake Rd.
Farmington Hills, MI 48331-3535
Permissions Hotline:
248-699-8006 or 800-877-4253, ext. 8006
Fax: 248-699-8074 or 800-762-4058

LIBRARY OF CONGRESS CATALOGING-IN-PUBLICATION DATA

Tobacco in history and culture : an encyclopedia / Jordan Goodman, editor in chief.
2 v. cm. – (Scribner turning points library)
Includes bibliographical references and index.
Contents: v. 1. Addiction—Music, popular—v. 2. Native Americans—Zimbabwe.
ISBN 0-684-31405-3 (set hardcover : alk. paper) – ISBN 0-684-31406-1 (volume 1) – ISBN
0-684-31407-X (volume 2) – ISBN 0-684-31453-3 (e-book)
1. Tobacco—History—Dictionaries. 2. Tobacco—Social aspects—Dictionaries. 3. Smoking—
History—Dictionaries. I. Goodman, Jordan. II. Series.
GT3020.T594 2004
394.1'4—dc22

2004007109

This title is also available as an e-book.

ISBN 0-684-31453-3 (set)

Contact your Gale sales representative for ordering information.

Printed in the United States of America

10 9 8 7 6 5 4 3 2 1



Contents

Color Plates

**EIGHT PAGES OF COLOR
PLATES APPEAR NEAR THE
CENTER OF EACH VOLUME**

Volume 1

Preface **ix**
Timeline **xiii**

A

Addiction **1**
Additives **6**
Advertising **11**
Advertising Restrictions **19**
Africa **23**
Age **31**
Air Travel **33**
Alcohol, Tobacco, and Other
Drugs **35**
American Tobacco Company **42**
Antismoking Movement Before
1950 **45**
Antismoking Movement From
1950 **51**
Antismoking Movement in
France **59**
Appetite **61**
Archaeology **66**
Architecture **71**
Arents Collection **73**

B

Bad Habits in America **77**
Black Patch War **80**

Body **81**

Botany (History) **85**
Brazil **88**
British American Tobacco **92**
British Empire **96**

C

Calumets **103**
Camel **105**
Caribbean **107**
Chemistry of Tobacco and Tobacco
Smoke **111**
Chesapeake Region **117**
Chewing Tobacco **125**
China **129**
Christianity **135**
Cigarettes **144**
Cigars **150**
Class **153**
Connoisseurship **155**
Consumption (Demographics) **167**
Cuba **186**

D

Developing Countries **193**
Disease and Mortality **199**
Doctors **214**
Documents **216**
Dutch Empire **219**

E

English Renaissance Tobacco **223**
Ethnicity **226**

F

Film **231**
Fire Safety **238**
French Empire **240**

G

Genetic Modification **245**
Gitanes/Gauloises **248**
Globalization **251**

H

Hallucinogens **259**

I

Industrialization and
Technology **261**
Insurance **267**
Intellectuals **270**
Iranian Tobacco Protest
Movement **272**
Islam **274**

J

Japan **277**
Judaism **281**

K

Kentucky **285**
Kretek **287**

L

Labor **291**
"Light" and Filtered
Cigarettes **298**
Literature **302**

CONTENTS

Litigation **307**
Lobbying **314**
Lucky Strike **318**
Lung Cancer **320**

M

Marketing **327**
Marlboro **337**
Mayas **339**
Medical Evidence (Cause
and Effect) **343**
Menthol Cigarettes **348**
Mexico **350**
Middle East **355**
Missionaries **360**
Music, Classical **364**
Music, Popular **369**

Volume 2

Timeline **vii**

N

Native Americans **375**
Nazi Germany **382**
New Deal **385**
Nicotine **387**

O

Oceania **393**
Opium **396**
Origin and Diffusion **397**
Ostracism **403**

P

Philip Morris **407**
Philippines **410**
Pipes **414**

Plantations **423**
Politics **428**
Portuguese Empire **440**
Processing **447**
Product Design **450**
Prohibitions **456**
Psychology and Smoking
Behavior **467**
Public Relations **473**

Q

Quitting **481**
Quitting Medications **488**

R

Regulation of Tobacco Products in
the United States **491**
Retailing **496**

S

“Safer” Cigarettes **505**
Sailors **509**
Secondhand Smoke **512**
Shamanism **517**
Sharecroppers **522**
Slavery and Slave Trade **525**
Smoking Clubs and
Rooms **533**
Smoking Restrictions **535**
Smuggling and Contraband **542**
Snuff **547**
Social and Cultural Uses **551**
Soldiers **568**
South and Central America **570**
South Asia **575**
South East Asia **579**
Spanish Empire **585**
Sponsorship **593**

Sports **597**
State Tobacco Monopolies **599**

T

Taxation **603**
Therapeutic Uses **609**
Tobacco as an Ornamental
Plant **616**
Tobacco Control in
Australia **619**
Tobacco Control in the United
Kingdom **622**
Tobacco Industry Science **625**
Tobacco Mosaic Virus **628**
Toxins **630**
Trade **634**

U

United States Agriculture **653**

V

Virginia Slims **663**
Visual Arts **665**

W

Warning Labels **675**
Women **679**

Y

Youth Marketing **689**
Youth Tobacco Use **694**

Z

Zimbabwe **699**

Contributors List **703**
Index **707**



Editorial and Production Staff

PROJECT EDITOR

Ken Wachsberger

CONTRIBUTING EDITOR

Cindy Clendenon

DEVELOPMENT EDITOR

Sarah Turner

PROOFREADING, COPYEDITING

Shane Davis
Bill Kaufman
Gina Misiroglu
Anna Nesbitt
Patricia Onorato
Aarti Stephens

INDEXER

Linda Fetters

PERMISSIONS

Margie Abendroth
Lori Hines
Ann Taylor

PRODUCT DESIGN

Kate Scheible

IMAGING AND MULTIMEDIA

Dean Dauphinais
Lezlie Light
Dan Newell
Kelly Quin

COMPOSITION

Evi Seoud

MANUFACTURING

Rita Wimberley

SENIOR DEVELOPMENT EDITOR

Nathalie Duval

EDITORIAL DIRECTOR

John Fitzpatrick

PUBLISHER

Frank Menchaca



Preface

T*obacco in History and Culture: An Encyclopedia* is a unique resource. It is a single authoritative encyclopedia on every aspect of tobacco, one of the world's most pervasive substances. We expect this encyclopedia to be used by a wide variety of groups. While it is a useful resource for high school and college curricula in courses on history, business, health, and political science, it is also a scholarly resource for those doing research related to tobacco and its history.

There are over 130 entries in this encyclopedia, each written by an expert in his or her field. The editorial team has assembled the best contributors from all the fields in which tobacco exists—historians, anthropologists, sociologists, economists, botanists, chemists, pharmacologists, physicians, epidemiologists, biostatisticians, lawyers, activists, policy makers and analysts, and collectors. Many of our authors fit more than one of these descriptors. We have endeavored to cover the entire history of tobacco, from its prehistory in Mesoamerica to the most recent developments. Because tobacco knows no political boundaries, the scope of this encyclopedia is international.

In the pages that follow the reader will find a vast array of information, historical and contemporary, from throughout the world. Entries cover the scientific aspects of tobacco, its botany, chemistry, and pharmacology. Here the reader will find out what the tobacco plant is, how it grows, and the chemicals it makes. Special attention is given to nicotine, the plant's psychoactive ingredient. Some chemicals are present in the plant but others are produced when tobacco is burned. These, too, are discussed in the encyclopedia, with the most up-to-date information available.

The tobacco plant requires special cultivation and processing in order to bring it to the point at which it can be consumed. There are specialized entries on all the aspects of bringing tobacco leaf to market. Slave plantations, sharecropping, peasant and tenant farming, and other methods of organizing tobacco cultivation and the labor associated with it are fully considered; as are the methods of growing, harvesting, and curing the leaves and getting them to the manufacturers. The reader will learn in these pages of the diverse types of tobacco leaf and the different ways tobacco is consumed. "Virginia," "Burley," "flue-cured"—words that are often used when talking about tobacco—are given clear definitions.

Tobacco leaves have been consumed in many ways, all of which, with the exception of the modern cigarette, were known in the Americas before the arrival of Christopher Columbus at the end of the fifteenth century. The pipe, the cigar, and the cigarette are the most common forms of consuming the smoke from burning tobacco, but there are many other, more local, forms of smoking that are less common. While we are now accustomed to think of burning the leaf as the most common way of consuming

tobacco, it has not always been so. Tobacco has been consumed as a drink, in the form of an infusion; it has been chewed; and it has been taken in powder form in the mouth and as a nasal preparation. While we generally think of tobacco as a recreational substance it has not always been that way. For many centuries, and up to quite recently in the west, tobacco was used for medical needs, in the form of poultices for abrasions and infections and enemas for ailments of the gut. The reader will find a wealth of fascinating material about these methods of consumption in the encyclopedia.

The cigarette—shredded tobacco leaf in a paper wrapper with or without a filter—is a recent addition to the myriad ways of consuming tobacco. It is the icon of the modern tobacco industry. In the encyclopedia, the reader will find entries on all aspects of the cigarette, from its first appearance in the early nineteenth century to its industrialization with mass-production machinery in the late nineteenth century and to its contemporary dominance over all other methods of consuming tobacco throughout the world. Entries on the business side of cigarette production discuss big players, both companies and individuals, in the history of this singular object; the role of advertising; globalization; and competition.

Tobacco has always been a regulated substance, whether in pre-Columbian America or early twenty-first century New York City. The history of regulation forms an important part of the encyclopedia. Select entries deal with local, national, and international regulation; with anti- and pro-smoking organizations; with advertising and sponsorship bans; and with age and gender proscriptions.

Consuming tobacco has its own varied and highly fascinating history. Whether we think about it as a sacred and highly ritualized substance in native America or as a recreational substance in a secular setting, tobacco has cultural meanings in all the societies in which it has had a place. The means of consuming tobacco, as well as the practices associated with that consumption—the technologies, the artifacts (cigarette papers and packs, cigar boxes, snuff bottles and boxes), the paraphernalia (cigarette cases and holders, tobacco containers, lighters, ashtrays, and clothing), even the gestures—are culturally active. These are discussed in the pages that follow.

Smoking, in particular, has spawned a substantial cultural industry. Whether through literature, art and photography, film, or music, both popular and classical, tobacco has been the object of cultural comment. The representations of tobacco and its consumers have been a powerful element of the history of the substance and entries on its cultural manifestation abound in the encyclopedia.

Tobacco has been a powerful agent of European settlement overseas and European colonialism. The economic development of Spanish America, Brazil, the Chesapeake colonies of Virginia and Maryland, the Caribbean islands, French and Dutch possessions in the Americas, Africa, and Southeast Asia has been, to a greater or lesser extent, affected by tobacco cultivation and its culture. Almost as soon as they realized that taxing tobacco was a lucrative business, whether by imposts or by regulating manufacture and sales through monopolies, European governments have recognized the value of growing tobacco in their distant possessions. This has been true from the sixteenth to the twenty-first century, and users of the encyclopedia will be rewarded with full discussions of tobacco's role in extending European power worldwide over this long period of time.

The second half of the twentieth century witnessed a remarkable change in our relationship with this remarkable plant. Tobacco has been implicated as a major cause of some of the deadliest of diseases and has been blamed for millions of premature deaths worldwide. Attacks on the use of tobacco have come from a wide variety of directions, from the health sector, from environmental groups, from nutritionists and fitness experts, from workers exposed to secondhand smoke, from human rights groups, not to mention government agencies themselves, often using scientific evidence

to make their case. In response, other groups have sought to argue against these findings, appealing to the importance of tobacco growing and sales to local economies and the right of the individual to choose to use tobacco. Both sides have wrangled over issues of risk, addiction, economics, and politics. The encyclopedia has entries on all of these conflicts. Other entries discuss several high-profile legal cases, which have led to extraordinary settlements, between individuals and governments, on the one hand, and tobacco companies on the other. The release of sensitive and highly secret documents from the tobacco industry, an outcome of the lawsuits, is also covered in the pages that follow.

It is well, however, to remember that conflicts over and around tobacco are not new. The encyclopedia covers the historic relationship between tobacco and religion, tobacco and the state, and tobacco and medicine, and brings out the nature of our complex association with the plant over the many centuries and in virtually every society.

We believe that this encyclopedia is unique in that it brings together, in one place, the extensive connections between tobacco and human life. We hope that our approach to tobacco will stimulate readers to appreciate the powerful ways in which this plant has made history.

I wish to thank Sarah Turner, and the development team—Nathalie Duval, Frank Menchaca, and John Fitzpatrick—for initiating this project. I also want to thank the entire editorial team—especially Cindy Clendenon and Ken Wachsberger—for bringing the project to completion.

To the authors of the many entries, I wish to acknowledge my gratitude for their support and contributions. Finally, I would like to express my warmest and deepest thanks to my outstanding editorial colleagues, Marcy Norton and Mark Parascandola, for their unstinting efforts in giving this encyclopedia its ultimate shape and contents.

■ JORDAN GOODMAN, EDITOR IN CHIEF



Timeline

- c. 50,000 B.C.E.:** Australia populated. Humans there may have begun chewing tobacco species: *Nicotiana. gossei*, *N. ingulba*, *N. simulans*, *N. benthamiana*, *N. cavicola*, *N. excelsior*, *N. velutina*, and *N. megalosiphon*.
- c. 15,000–10,000 B.C.E.:** Americas south of the Arctic populated. Humans there may have begun to pick and use wild tobacco species.
- c. 5000 B.C.E.:** Maize-based agriculture develops in central Mexico, probable beginnings of tobacco cultivation as well.
- c. 1400–1000 B.C.E.:** Remains of cultivated and wild tobacco dating from this period have been found in High Rolls Cave in New Mexico. Dates established by radiocarbon methods.
- 1492:** Columbus sees Taíno (Indians of Greater Antilles) with leaves that are probably tobacco. Two men among Columbus's crew explore the interior of Cuba and see people smoking.
- 1518:** Juan de Grijalva, leader of expedition to Yucatan and Gulf of Mexico, accepts offerings of cigars or pipes.
- 1535:** Publication of Gonzalo Fernández de Oviedo's *Historia general de las Indias*, which has first published reference to tobacco. It condemns it as a "vile vice" but also notes that the habit spread to "Christians" and black slaves as well.
- 1535:** Jacques Cartier encounters natives using tobacco on the island of Montreal.
- 1555:** Franciscan Friar André Thevet of Angoulême (France) witnesses Brazil's Tupinamba Indians smoking tobacco; following year sows tobacco seeds in France.
- 1560:** Jean Nicot, France's ambassador to Portugal, writes of tobacco's medicinal properties, describing it as a panacea. Nicot sends *rustica* plants to French court.
- 1561:** Nicot sends snuff to Catherine de Medici, the Queen Mother of France, to treat her son Francis II's migraine headaches.
- 1565:** Sir John Hawkins's expedition observes Florida natives using tobacco.
- 1571:** Publication of Nicolas Monardes's *Segunda parte del libro, de las cosas que se traen de nuestras Indias Occidentales, que sirven al uso de medicina* [The second part of the book of the things brought from our Occidental Indies which are used as medicine], which has the most extensive and positive description of tobacco to that date.
- 1583:** Council of Lima declares that priests cannot consume tobacco in any form before saying mass, under threat of excommunication.
- 1585:** Francis Drake expedition trades for tobacco with Island Caribs of Dominica.
- 1587:** Gilles Everard's *De herba panacea* (Antwerp) is first publication devoted entirely to tobacco.
- 1588:** Thomas Hariot publishes *A Brief and True Report of the New Found Land of Virginia*, in which he describes Virginia native people smoking tobacco.
- 1595:** Anthony Chute publishes *Tabacco*, the first book in the English language devoted to the subject of tobacco.
- 1600:** Franciscan missionary presents tobacco seeds and tobacco tincture to Tokugawa Ieyasu, who will become Shogun of Japan in 1603.
- 1603:** Spanish colonies of Cumaná and Caracas (Venezuela) produce 30,000 pounds of tobacco.
- 1604:** King James I publishes *A Counterblaste to Tobacco*, in which he condemns tobacco smoking as unhealthy, dirty, and immoral.
- 1606:** King of Spain prohibits the cultivation of tobacco in Caribbean and South America to thwart contraband trade between Spanish settlers and English and

TIMELINE

- Dutch traders. Edict rescinded in 1612.
- 1607:** Inhabitants of Sierra Leone seen sowing tobacco.
- 1607:** Jamestown, the first permanent English colony in the Americas, is founded.
- 1612:** John Rolfe raises Virginia's first commercial crop of "tall tobacco."
- 1617:** Mughal Shah Jahangir (reigned 1605–1627) bans smoking because tobacco consumption creates "disturbance in most temperaments."
- 1624:** Texts by Chinese physicians Zhang Jiebin (1563–1640) and Ni Zhumo (c. 1600) mention tobacco in section on pharmacopoeia.
- 1627:** Tobacco cultivation in Ottoman territory is banned.
- 1636:** First state tobacco monopoly established in Castille (Spain).
- 1642:** Papal Bull forbids clerics in Seville from using tobacco in church and other holy places.
- 1674:** Tobacco monopoly established in France.
- 1682:** Virginia colonists rebel when the government fails to decree a cessation in tobacco crops after bumper crops lead to low prices. Disgruntled planters destroy thousands of tobacco plants; six ringleaders are executed.
- 1698:** In Russia, Peter the Great agrees to a monopoly of the tobacco trade with the English, against church wishes.
- 1724:** Pope Benedict XIII learns to smoke and use snuff, and repeals papal bulls against clerical smoking.
- 1753:** Linnaeus names the plant genus *nicotiana*, and describes two species, *nicotiana rustica*, and *nicotiana tabacum*.
- 1760:** Pierre Lorillard establishes a "manufactory" in New York City for processing pipe tobacco, cigars, and snuff. P. Lorillard is the oldest tobacco company in the United States.
- 1794:** U.S. Congress passes the first federal excise tax on snuff, leaving chewing and smoking tobacco unaffected.
- 1827:** First friction match invented.
- 1828:** Isolation of nicotine from tobacco by Wilhelm Posselt and Karl Reimann.
- 1832:** Paper-rolled cigarette is invented in Turkey by an Egyptian artilleryman.
- 1839:** Discovery that flue-curing turns tobacco leaf a bright brilliant yellow and orange color. The bright-leaf industry is born.
- 1843:** French tobacco monopoly begins to manufacture cigarettes.
- 1847:** In London, Philip Morris opens a shop that sells hand-rolled Turkish cigarettes.
- 1849:** J. E. Liggett and Brother is established in St. Louis, Missouri, by John Edmund Liggett.
- 1854:** Philip Morris begins making his own cigarettes. Old Bond Street soon becomes the center of the retail tobacco trade.
- 1868:** British Parliament passes the Railway Bill of 1868, which mandates smoke-free cars to prevent injury to nonsmokers.
- 1880:** James Bonsack is granted a patent for his cigarette-making machine.
- 1881:** James Buchanan (Buck) Duke starts to manufacture cigarettes in Durham, North Carolina.
- 1889:** Five leading cigarette firms, including W. Duke Sons & Company, unite. "Buck" Duke becomes president of the new American Tobacco Company.
- 1890–1892:** Popular revolts against imposition of British-controlled monopoly on sale of tobacco take place in Iran.
- 1899:** Lucy Payne Gaston founds the Chicago Anti-Cigarette League, which grows by 1911 to the Anti-Cigarette League of America, and by 1919 to the Anti-Cigarette League of the World.
- 1902:** Imperial Tobacco (U.K.) and American Tobacco Co. (U.S.) agree to market cigarettes in their respective countries exclusively, and to form a joint venture, the British American Tobacco Company (BAT), to sell both companies' brands abroad.
- 1907:** The U.S. Justice Department files anti-trust charges against American Tobacco.
- 1908:** The U.K. Children Act prohibits the sale of tobacco to children under 16, based on the belief that smoking stunts children's growth.
- 1910:** Gitanes and Gauloises cigarette brands are introduced in France.
- 1911:** U.S. Supreme Court dissolves Duke's trust as a monopoly, in violation of the Sherman Anti-Trust Act (1890). The major companies to emerge are American Tobacco Co., R.J. Reynolds, Liggett & Myers Tobacco Company (Durham, N.C.), Lorillard, and British American Tobacco (BAT).
- 1913:** R.J. Reynolds introduces the Camel brand of cigarettes.
- 1913:** China has its first harvest of Bright leaf tobacco, grown from imported American seeds and using American growing methods.
- 1916:** Henry Ford publishes an anti-cigarette pamphlet titled *The Case against the Little White Slaver*.
- 1924:** Philip Morris introduces Marlboro, a women's cigarette that is "Mild as May."

- 1927:** Long Island Railroad grants full rights to women in smoking cars.
- 1933:** United States Agricultural Adjustment Act of 1933 compels tobacco farmers to cut back on output by reducing acreage devoted to tobacco production, in return for price supports. They are saved from economic ruin.
- 1938:** Dr. Raymond Pearl of Johns Hopkins University reports to the New York Academy of Medicine that smokers do not live as long as nonsmokers.
- 1950:** Five important epidemiological studies show that lung cancer patients are more likely to be smokers than are other hospital patients.
- 1954:** Results from two prospective epidemiological studies show that smokers have higher lung cancer mortality rates than nonsmokers. The studies were conducted by E. Cuyler Hammond and Daniel Horn in the U.S. and Richard Doll and Austin Bradford Hill in the U.K.
- 1957:** First Japanese-made filter cigarette, Hope, is put on the market.
- 1964:** *Smoking and Health: Report of the Advisory Committee to the Surgeon General*, the first comprehensive governmental report on smoking and health, is released at a highly anticipated press conference. It concludes that smoking is a cause of lung cancer, laryngeal cancer, and chronic bronchitis and “is a health hazard of sufficient importance in the United States to warrant appropriate remedial action.”
- 1965:** U.S. Congress passes the Federal Cigarette Labeling and Advertising Act, requiring health warnings on all cigarette packages stating “Caution—cigarette smoking may be hazardous to your health.”
- 1970:** U.S. Congress enacts the Public Health Cigarette Smoking Act of 1969. Cigarette advertising is banned on television and radio.
- 1970:** World Health Organization (WHO) takes a public position against cigarette smoking.
- 1972:** First report of the surgeon general to identify involuntary (secondhand) smoking as a health risk.
- 1977:** American Cancer Society (ACS) sponsors the first national “Great American Smokeout,” a grassroots campaign to help smokers to quit.
- 1986:** Congress enacts the Comprehensive Smokeless Tobacco Health Education Act, requiring health warnings on smokeless (spit) tobacco packages and advertisements and banning smokeless tobacco advertising on radio and television.
- 1988:** Liggett Group (L&M, Chesterfield) ordered to pay Antonio Cipollone \$400,000 in compensatory damages for its contribution to his wife Rose Cipollone’s death (she died in 1984). First-ever financial award in a liability suit against a tobacco company. However, the verdict was later overturned on appeal, and the lawsuit was dropped when the family could no longer afford to continue.
- 1988:** Publication of *The Health Consequences of Smoking: Nicotine Addiction*, the first surgeon general’s report to deal exclusively with nicotine and its effects.
- 1990:** Airline smoking ban goes into effect, banning smoking on all scheduled domestic flights of six hours or less.
- 1991:** U.S. Food and Drug Administration (FDA) approves a nicotine patch as a prescription drug.
- 1992:** World Bank establishes a formal policy on tobacco, including discontinuing loans or investments for tobacco agriculture in developing countries.
- 1994:** Six major domestic cigarette manufacturers testify before the U.S. House Subcommittee on Health and the Environment that nicotine is not addicting and that they do not manipulate nicotine in cigarettes.
- 1995:** *Journal of the American Medical Association (JAMA)* publishes a series of articles describing the contents of secret documents from the Brown & Williamson Tobacco Corporation indicating that the industry knew early on about the harmful effects of tobacco use and the addictive nature of nicotine.
- 1996:** President Bill Clinton announces the nation’s first comprehensive program to prevent children and adolescents from smoking cigarettes or using smokeless tobacco. Under the plan, the Food and Drug Administration would regulate cigarettes as drug-delivery devices for nicotine.
- 1998:** California becomes the first state in the nation to ban smoking in bars.
- 1999:** U.S. Department of Justice sues the tobacco industry to recover billions of dollars spent on smoking-related health care, accusing cigarette makers of a “coordinated campaign of fraud and deceit.”
- 1999:** Attorneys general of 46 states and 5 territories sign a \$206 billion Master Settlement Agreement with major tobacco companies to settle Medicaid lawsuits.
- 2000:** In Canada, Health Minister Allan Rock unveils new health labels that include color pictures.
- 2000:** U.S. Supreme Court issues a 5–4 ruling that existing law does not provide the Food and Drug Administration with authority over tobacco or tobacco marketing, thus invalidating the 1996 Clinton Administration’s regulations.
- 2001:** BAT breaks into Vietnam market, announces that it has been granted a license for a \$40 million joint venture with

TIMELINE

Vintaba to build a processing plant in Vietnam.

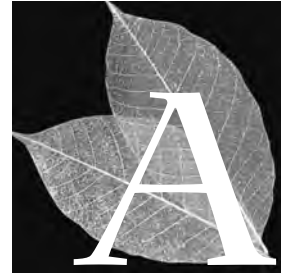
2003: First stage of the Tobacco Advertising and Promotion Act 2002 bans new tobacco sponsorship agreements, advertising on

billboards and in the press, and free distributions. The ban also covers direct mail, Internet advertising, and new promotions.

2003: New York City's smoking ban goes into effect, forbidding

smoking in all restaurants and bars, except for a few cigar lounges.

2004: Complete public smoking ban goes into effect in Ireland.



Addiction

For most of the twentieth century, cigarette smokers counted in the millions and smoking was regarded as a willful behavior. Health care practitioners did not view smoking as a drug addiction, nor was it considered a major cause of premature death. A drastic change in thinking occurred during that century, and smoking was viewed in a new light by the dawn of the twenty-first century.

An explosion of research on the effects of nicotine took place during the last quarter of the twentieth century that profoundly changed how the health care field viewed tobacco products. The leading force was an overwhelming scientific base, which proved the deadly and addictive effects of tobacco beyond deniability even by the tobacco industry itself. The United Nation's World Health Organization (WHO) led the development of a Framework Convention treaty to control tobacco use and tobacco-caused diseases. Two driving motivations of the WHO Framework Convention provoked this change: the recognition that nicotine was an addicting drug and that tobacco addiction would lead approximately one-half of the world's more than 1 billion tobacco users to premature death. The WHO views addiction to nicotine as a powerful biological force that needs to be countered by powerful social, medical, and public health forces.

Why is tobacco recognized as an addicting substance? How do tobacco products compare to other addicting substances in their addicting power? Could nicotine-addicted tobacco users reduce their risk of disease without giving up nicotine? These are some of the key questions being addressed by governments around the world, regulatory agencies such as the U.S. Food and Drug Administration, and the United Nations through the WHO.

History of Nicotine Science

Ludwig Reimann and Wilhelm Heinrich Posselt, chemists at the University of Heidelberg, first isolated nicotine from the tobacco plant in 1828. It was quickly discovered that nicotine was a potent and powerful



Because each puff on a burning cigarette delivers only a small amount of nicotine, the addicted smoker must renew the dose via hundreds of daily puffs and one cigarette after another. © ROYALTY-FREE/CORBIS



chemical that could be absorbed through the skin, which made it an effective pesticide that is still used around the world. By the 1890s John Langley, a physiologist at the University of Cambridge, began a series of studies on nicotine that covered three decades and generated discoveries profoundly important to understanding nicotine actions as well as how the nervous system works. His research showed that nicotine produced strong effects on the nervous system that were transmitted through what he termed “receptive substances” on nerves, known simply as “receptors.” His studies showed that the strength of the effect was closely related to the amount administered (the “dose”); that repeated dosing led to weaker effects (“tolerance”); and that the effects could be countered by other chemicals such as curare (“antagonists”). This pioneering research on nicotine helped lay the foundation for modern research techniques with other nerve acting agents including morphine, cocaine, and drugs used to treat various psychiatric disorders and muscle diseases.

Many observers of behavior (writers, psychologists, religious leaders) documented tobacco’s power to lead some of its users to habitual behavior. Understanding tobacco as a truly addicting substance similar to morphine or cocaine, however, developed slowly, and understanding nicotine was a key finding in this discovery. Louis Lewin’s classic analysis of addicting drugs, *Phantastica* (University of Berlin, 1924) concluded that “the decisive factor in the effects of tobacco, desired or undesired, is nicotine.” Lewin’s conclusions fueled decades of investigations that ultimately confirmed his conclusions that nicotine was a critical determinant not only in the effects of tobacco but of why people used tobacco and of the difficulty in giving up tobacco. His ideas were a source of motivation for considerable subsequent research and further theory although scientific confirmation of his theory was not established until the 1980s.

NICOTINE RESEARCH AND ADDICTION. The path to confirmation was complicated, however, by evolving concepts of what defined addicting drugs. During the 1940s and 1950s, WHO reports highlighted the personality disorders of some individuals vulnerable to addictions, and how tranquilizing agents (such as morphine) and intoxicants (such as alcohol) produced addiction. Easily observable and powerful withdrawal symptoms, such as the flu-like symptoms of morphine withdrawal and convulsions from alcohol withdrawal, were also assumed to be hallmarks of addicting drugs. Cocaine addiction did not fit these symptoms but it was recognized as addicting in part because the pure drug was sought by people who were exposed and who had no apparent medical need except that the drug itself seemed to fuel powerfully persistent use in some of those who were exposed.

By contrast, many if not most users of tobacco were upstanding citizens who did not have personality disorders; experience intoxication with nicotine (although it could occur in first-time users or in overdose); or show readily apparent signs of withdrawal (the withdrawal syndrome was assumed to be psychological in nature until the studies of the 1970s and 1980s, which confirmed physical and psychological components). Finally, although few challenged Lewin’s core conclusions, the absence of evidence that pure nicotine would substitute for

tobacco or be sought by users left in doubt the conclusion that nicotine was truly addicting. Even the landmark 1964 report of the U.S. Surgeon General on smoking and health, which concluded that cigarette smoking caused cancer, stated that smoking was most appropriately categorized as a habitual behavior not as drug addiction.

An explosion of research on the effects of nicotine took place during the 1970s and 1980s and continues to the 2000s. These studies confirmed that in compulsive users, the strength of the addiction and difficulty in quitting could be as strong for cigarettes as for heroin or cocaine. Studies of nicotine absorption revealed that the cigarette did for nicotine what crack did for cocaine, namely, provide a portable means of producing tiny but explosively fast spikes of drug in the brain that set off a cascade of biological effects that the smoker wanted to repeat. Other studies showed that there was a nicotine withdrawal syndrome that involved impairment of mental functioning, nicotine craving, and other symptoms. This work contributed to the development of objective standards by major health organizations, including the World Health Organization, for diagnosing the tobacco addiction-related disorders, which were technically termed “withdrawal” and “dependence.” Basic research studies mapped the actions of nicotine in the brain and showed that nicotine could produce powerful changes in brain function. Similar to cocaine and morphine, nicotine produces the entire range of physical and behavioral effects characteristic of addicting drugs. These effects include activation of brain reward systems that create behavioral effects and **physiological** cravings that lead to chronic drug use, tolerance and physical dependence, and withdrawal upon discontinuation.

Research on nicotine showed that it was possible to become addicted to pure nicotine, which led to the development of nicotine-delivering medicines, such as chewing gum containing nicotine and nicotine patches, to relieve withdrawal symptoms and make it easier to quit smoking. Thus, the scientific understanding of nicotine and tobacco as well as the concept of addiction changed during this productive period, which culminated in the 1988 report of the U.S. Surgeon General, *The Health Consequences of Smoking*. This report concluded that cigarettes were addicting; nicotine was the drug that caused addiction; and the underlying processes were similar to those that determined addiction to other drugs such as heroin and cocaine. These conclusions had radical implications for public health efforts to prevent tobacco use, medical efforts to help people quit smoking, and regulatory efforts to control the sale, distribution, and advertising of tobacco products.

Cigarettes: The Most Addicting Form of Nicotine

All tobacco products deliver addicting levels of nicotine and can lead to addictive patterns of use. The risk of addiction, however, varies across tobacco products. Oral smokeless products such as **snuff** and chewing tobacco do not produce as rapid an effect on the brain as cigarette smoke inhalation. In similar fashion, although many cigar and pipe smokers become addicted, these tobacco products are generally taken up later in life, are less likely to be inhaled, and lead to somewhat muted effects. The overall risk of addiction from these products is lower when compared to cigarettes. Speed of delivery is most remarkable with cigarettes,



physiology the study of the functions and processes of the body.



snuff a form of powdered tobacco, usually flavored, either sniffed into the nose or “dipped,” packed between cheek and gum. Snuff was popular in the eighteenth century but had faded to obscurity by the twentieth century.

which both require and reinforce smoke delivery to the lung with nicotine “hits” to the brain within seven seconds.

The modern cigarette is a technological, albeit addictive and deadly, marvel from the perspective of engineering and pharmacology. It delivers a chemical cocktail of substances and is designed to be maximally addicting through this combination of chemicals. Other design features increase the ease and acceptability of obtaining high daily doses of nicotine. The tobacco industry recognized and took advantage of its knowledge of the impact of cigarette designs and ingredients and their effects on smokers. By the 1950s it was actively engaged in its own highly confidential research on topics such as the effects of nicotine on the nervous system and hormone regulation, how to manipulate the nicotine dosing capacity of cigarettes, and how to increase nicotine absorption efficiency. Its knowledge and efforts, however, were not extensively revealed until the 1990s by investigations of government agencies and lawyers who were suing the tobacco industry. Documentation of these studies was then posted on the Internet and today is readily accessible worldwide. Among the tobacco industry’s documents is the following conclusion about the fundamental nature of the cigarette from a 1972 report by a leading scientist at Philip Morris Tobacco Company, Dr. William Dunn:

The cigarette should be conceived not as a product but as a package. The product is nicotine. Think of a cigarette as a dispenser for a dose unit of nicotine. Smoke is beyond question the most optimized vehicle of nicotine and the cigarette the most optimized dispenser of smoke (Hurt and Robertson).

Scientific studies have made it clear that the cigarette has many characteristics that make it such a powerfully addicting form of nicotine. Compared to a cigar, because the cigarette is a small package of nicotine, it must be used often, putting the user on a nicotine “roller coaster” that must be constantly refueled by hundreds of daily tiny puffs. This contributes to powerfully conditioned behavior in the user that can become inextricably entwined with nearly every aspect of the user’s life.

The modern cigarette is more than simply a package of nicotine. It is a highly engineered device that employs state-of-the-art drug delivery technology, engaging physicists who specialized in topics such as drug dosage controls and the physics of smoke particles and other aerosols, combustion technology, and a combination drug delivery system to provide an extraordinarily addictive form of nicotine. Physicists working with tobacco companies helped them to develop cigarettes in which the size of smoke particles was controlled to be of the optimal 0.5- to 1-micron median diameter to allow deeper penetration into the lung. Chemists helped to develop concoctions with substances such as **menthol** and propylene glycol to sooth the throat and reduce the irritant effects that might prevent deep inhalation. Pharmacologists helped to understand and develop the balance of ingredients and processing materials to provide more explosively addictive forms of nicotine that were devoid of the electrical charge that so-called ionized nicotine molecules carry in their naturally occurring state. This yielded a non-ionized form of nicotine more commonly called “free-base” nicotine, which was more efficiently carried from the cigarette to the bloodstream. There can be no doubt that the modern cigarette has been designed to be the most addicting form of nicotine delivery.



menthol a form of alcohol imparting a mint flavor to some cigarettes.

LOW-TAR OR “LIGHT” CIGARETTES. The conclusion of the 1964 Surgeon General’s report—that cigarettes caused lung cancer and that cancer risk was roughly proportional to the amount of smoking—led the Surgeon General to advocate for reduced levels of **tar** from cigarettes. Although there was no conclusive evidence that nicotine caused cancer, lower levels of nicotine were also encouraged because of the then-suspected role of nicotine in other illnesses such as heart disease. This led to a system of testing cigarettes for tar and nicotine levels known as the Federal Trade Commission (FTC) method in the United States and the International Standards Organization (ISO) method in most other countries. The method involved testing cigarettes in smoking machines programmed to take relatively small and infrequent puffs comparable to the behavior of most smokers.

The tobacco companies quickly learned to modify their cigarettes to produce much lower levels of tar and nicotine delivery but to enable smokers to continue to obtain high levels of tar and nicotine when they smoked cigarettes. The technology was sophisticated and extensive, and included features such as burn accelerants to make the cigarettes burn faster in smoking machines and hidden air vent holes that diluted the smoke in the machines but could be unknowingly blocked by the smoker’s lips or fingertips. The end result, as documented by the U.S. National Cancer Institute in a 2001 landmark report on “light” cigarettes, was that low tar or “light” cigarettes did not reduce disease risk. The report concluded that the problems involved two major findings: (1) the design of the cigarette enables smokers to easily get much higher doses of tar than implied by the FTC or ISO tests; and (2) the powerful biological drive of addiction led smokers to inhale more smoke if it was diluted with air or lower in tar and nicotine content.

Treating Nicotine Addiction to Reduce Cancer and Other Diseases

The understanding that nicotine addiction drives the process of tobacco use has been met by safer ways of satisfying and treating the addiction. For example, some people can be counseled to gradually reduce their dependence on nicotine and thus break the addiction over time, that is, typically a few months. Others can be treated with nicotine-delivering medicines (chewing gum, skin patch, inhaler). Most people who quit smoking using this method usually discontinue the medicine within two to three months of use of the medicines. By the 1990s medicines delivering nicotine were available in several forms including chewing gum, skin patch, nasal spray, and lozenge. Also by the 1990s medicines that did not contain nicotine were recognized as effective including clonidine, nortriptyline, and bupropion. The dawn of the twenty-first century witnessed yet new generations of medicines including vaccines intended to keep former smokers from going back to smoking by preventing nicotine from getting to the brain in those who tried to resume smoking.

Some people, however, appear unable to discontinue nicotine use. Finding safer ways other than smoking to feed their addiction may be lifesaving. Thus, although not advocated by the pharmaceutical companies that make nicotine-delivering medicines, many health professionals recommend that these smokers continue to use nicotine gum or patches as long as needed to remain abstinent from tobacco.



tar a residue of tobacco smoke, composed of many chemical substances that are collectively known by this term.

International public health organizations recognize that many people will be unable to give up their addictions completely and that tobacco products should be made as low in actual harmfulness as possible. The international Framework Convention for Tobacco Control includes articles that could lead to the genuine reduction of the toxicants in tobacco products through government regulation and thus to reduced disease risk in people who do continue to use tobacco. However, public perception that smoking regulated cigarettes might be less hazardous may discourage some smokers from quitting, ultimately leading to a net increase in tobacco-related disease and death. These efforts may take decades to implement and have not yet been proven effective. Therefore, for many years to come the most reliable way to reduce tobacco-caused death and disease will be to address the addiction with a nontobacco delivery system, and ultimately to achieve complete nicotine and tobacco abstinence.

See Also Chemistry of Tobacco and Tobacco Smoke; Chewing Tobacco; Cigarettes; Documents; “Light” and Filtered Cigarettes; Nicotine; Product Design; Psychology and Smoking Behavior; Quitting Medications; Snuff.

■ JACK E. HENNINGFIELD
■ PATRICIA B. SANTORA

BIBLIOGRAPHY

- Hurt, R. D., and C. R. Robertson. “Prying Open the Door to the Tobacco Industry’s Secrets about Nicotine: The Minnesota Tobacco Trial.” *Journal of the American Medical Association* 280 (1998): 1173–1181.
- Kessler, David A. *A Question of Intent: A Great American Battle with a Deadly Industry*. New York: Public Affairs, 2001.
- Kluger, Richard. *Ashes to Ashes: America’s Hundred-Year Cigarette War, the Public Health, and the Unabashed Triumph of Philip Morris*. New York: Vintage, 1997.
- Kozlowski, Lynn T., Jack E. Henningfield, and Janet Brigham. *Cigarettes, Nicotine and Health: A Biobehavioral Approach*. Thousand Oaks, Calif.: Sage Publications, 2001.
- U.S. Centers for Disease Control and Prevention. *Morbidity and Mortality Weekly Report*. Online. Available: <<http://www.cdc.gov/mmwr>>.
- U.S. Department of Health and Human Services. *The Health Consequences of Smoking: Nicotine Addiction: A Report of the Surgeon General*. Washington, D.C.: Government Printing Office, 1988.



Nearly all commercial tobacco products contain chemical additives. As long ago as the sixteenth century, Spanish sailors applied licorice water to tobacco as a preservative (Browne, p. 55). Today, both cigarette and smokeless tobacco manufacturers publicly acknowledge the use of hundreds of additives in their products. The modern U.S.-style cigarette contains about 10 percent additives by weight, mostly in the form of

sugars, humectants, ammonia compounds, cocoa, and licorice. Smokeless tobacco likewise incorporates moisteners, sweeteners, and flavors such as cherry juice. These additives may affect the flavor of the product, sensory properties such as smoothness and impact, and other important product characteristics. Additives can also be used to enhance or alter nicotine delivery, a practice denied by manufacturers.

Role of Additives in Product Design

The flavor of a tobacco product is primarily determined by the tobacco leaf blend, while additives are used to modify or enhance tobacco flavor characteristics. **Menthol** is the only commonly recognized tobacco flavor category, although vanilla, cherry, orange, and other product flavors have been introduced commercially. Most additives are used in very small amounts—less than .01 percent of total weight. As a result, although the cumulative effect of additives on tobacco flavor may be significant, it is often difficult or impossible to assess the impact of specific flavorants.

Additives perform a number of roles in addition to altering product flavor. For example, additives may also control cigarette burn rates, properties of tobacco such as moisture and consistency, and delivery of specific smoke constituents. Not surprisingly, the most widely used additives—including sugars, cocoa, and licorice—demonstrate important sensory, **physiological**, and respiratory effects. Both theobromine, the principal alkaloid of the cocoa bean, and glycyrrhizin, the active component in licorice, act as bronchodilators, relaxing the bronchial muscle and therefore enhancing respiratory inhalation. Likewise, the addition of sugars helps to offset bitterness, improve smoothness, and reduce irritation caused by tobacco smoke. Highly aromatic compounds, such as vanillin, may also be used to alter the aroma of side-stream smoke (the smoke produced from the lit end of the cigarette between puffs).

Some additives demonstrate properties that significantly alter product chemistry. A number of additives in both cigarettes and smokeless tobacco products are used for modification of “smoke pH,” which is a measure of its acid/base chemistry. Increased “smoke pH” allows more nicotine to be present in the chemical freebase form, which is more readily available for absorption and use in the body (much as crack cocaine is a more potent freebase form of cocaine). Other additives increase or alter the effects of nicotine, or produce their own effects on the central nervous system and brain. For example, pyridine, a cigarette additive, acts as a **depressant** in much the same way that nicotine does, although it is less potent.

Manufacturers have used modified forms of tobacco, in combination with other design changes, to reduce the amount of **tar** produced per cigarette and to cut production costs. Modified tobaccos, such as reconstituted tobacco (combined from stems, leaves, and other tobacco scraps), rely on additives to maintain their physical integrity, to promote consistency, and to control resulting tobacco and smoke chemistry. Additional flavorants or enhancing agents may also be used to counteract the loss of sensory or other subjective response in these reduced delivery products.



menthol a form of alcohol imparting a mint flavor to some cigarettes.



physiology the study of the functions and processes of the body.



depressant a substance that depresses the central nervous system. The most common depressant is alcohol.

tar a residue of tobacco smoke, composed of many chemical substances that are collectively known by this term.



Bidi cigarettes, particularly popular among urban youth, are displayed on a counter in Chicago, 11 December 2000. As of 1 January 2001, the potent imported cigarettes that come in almond, cinnamon, clove, root beer, strawberry, and vanilla flavors were banned in Illinois. The flavors mask the fact that bidis have more than twice the amount of tar and nicotine delivery as unflavored cigarettes. AP/WIDE WORLD PHOTOS

Many products today are marketed with the claim “no additives.” However, a true evaluation of additives must include not only the flavors applied directly to the tobacco but also other chemicals used during stages throughout the production and manufacturing process. Additives are used as tobacco processing agents, as treatment for cigarette papers or filters, or even applied to product packaging (which then allows transfer to the finished product). The hundreds of pesticides and other chemicals used in the growing or harvesting of tobacco may also be present as residues in manufactured tobacco products.

Physiological and Behavioral Effects

Additives may produce important changes to the effects of tobacco, altering dependence, toxicity, or use behaviors. For example, additives may increase the addictive character of tobacco smoke by altering the effects of nicotine or by exerting other pharmacologic effects on the user. Changes to the physiological properties of nicotine could also radically alter the character of tobacco dependence. Additives that enhance the body’s interaction with nicotine or other constituents may increase their addictive or toxicological effects. For example, menthol has been shown to enhance drug absorption and demonstrates effects on metabolism that could alter the pharmacological action of other substances in tobacco smoke. Moreover, industry research has demonstrated a 50 percent increase in the binding of nicotine to brain receptors in the presence of the additive levulinic acid. These and other additives could

significantly alter the effects of nicotine and other constituents, again without noticeably changing the amount of nicotine delivered.

Changes in chemical composition of tobacco products could alter the site and rate of uptake of nicotine and other constituents. For example, a greater percentage of nicotine delivered in freebase form may result in increased rates of absorption in the mouth (in the case of smokeless tobacco) as well as faster absorption from the lower respiratory tract to the brain (in the case of cigarettes). These changes could alter the intensity of response and increase dependence. The addition of bronchodilators to cigarettes may have similar effects by allowing deeper inhalation and deposition of smoke constituents in areas of the respiratory tract where they are more likely to be absorbed.

One primary use of additives in cigarettes is to counteract the irritation of tobacco smoke and its active component, nicotine. The perception of smoother smoke may facilitate increased or deeper inhalation of tobacco smoke by removing physical barriers. Similarly, reduced irritation may encourage or support increased frequency of use. Published research suggests that increasing ease of inhalation may be linked to increased rates of initiation among youth. Candy-like flavors, such as cherry, may also be used to target youth.

Health Risks and Regulation

No systematic assessment has been conducted of the hundreds of additives used in tobacco products. However, a number of these additives are known to pose direct health risks. Deer tongue extract, once a widely used tobacco flavorant, was banned in some countries and ultimately phased from use due to its high concentration of coumarin, a known animal **carcinogen**. The combustion products of cigarette additives may pose additional health risks even though the additive from which they were generated is considered safe. For example, cocoa, although harmless on its own, produces carcinogenic compounds when burned. Another significant health issue is exposure to environmental tobacco smoke (ETS). Research suggests that additives may be used to reduce the visibility, irritation, or odor of ETS, possibly increasing nonsmokers' exposure, without rendering the smoke less harmful.

Tobacco manufacturers emphasize in public statements that the majority of additives have been shown to be safe when eaten in foods. However, compounds are significantly more toxic when inhaled or absorbed directly into the bloodstream rather than ingested. In the digestive system, additives and other complex molecules are broken down by enzymes into simpler chemical structures and/or transformed into other compounds. These processes render most substances less toxic to the body. In contrast, tobacco additives escape the metabolic pathways that would help make them less toxic. Although a number of additives are present in commercial products only in small concentrations, it does not follow that these can be considered harmless. Since people often use tobacco products for decades, their long-term exposure must be taken into account.

Even though the use of additives raises significant concerns regarding increased health risks, the tobacco industry has largely been left to police itself. Many countries regulate tar and nicotine levels of tobacco



carcinogen a substance or activity that can cause cancer. Cigarette smoking has been proven to be carcinogenic, that is, cancer causing.

Increased Addictiveness: Ammonia and Acetaldehyde

The use of ammonia in Marlboro cigarettes has been widely publicized. Ammonia compounds, especially ammonium hydroxide and diammonium phosphate (DAP), are used in the ammoniation of reconstituted tobacco. The ammonia compounds are reacted with sugars at a high temperature to produce pyrazines and other flavors through a chemical process known as Maillard browning. These flavors demonstrate unique sensory and pharmacological effects. The ammoniated tobacco produces a characteristic mild smoke, increased "smoke pH," and a more efficient transfer of nicotine, all of which combine to make the cigarette more addictive. Early adoption of DAP in tobacco processing in the 1950s is widely believed to be responsible for the unique flavor of Marlboro cigarettes and, ultimately, their success worldwide.

In the early 1980s, the research scientist Victor DeNoble and coworkers at Philip Morris studied the behavioral effects of nicotine and acetaldehyde (a byproduct of sugar) in rats. The results of this research showed that the two compounds work together to produce greater addictive effects. DeNoble later claimed in public testimony that based on this information, Philip Morris increased the level of acetaldehyde in Marlboro cigarettes by 40 percent between 1982 and 1992 through the addition of sugars (Bates 1999).

products and require that this information be reported to the public. In most cases, however, legislative authority does not extend to disclosure of additives. Only a handful of countries (Thailand, Canada, Ireland) have enacted meaningful additive disclosure laws, and in each case the availability of information to the public has been severely limited. Some countries have limited or banned use of particular additives, or specify additives that may be permitted for use. In Canada, the list of permitted additives for use in cigarettes is quite small; as a result, Canadian cigarettes differ significantly from cigarettes sold elsewhere.

In 1994 in the United States, major cigarette manufacturers voluntarily released to the public a list of 599 potential additives for use in their products. A similar list was produced by smokeless tobacco manufacturers. Both lists were composite and did not provide brand-specific information. Some tobacco manufacturer websites provide an updated summary of additives used in their products, including maximum levels, although again this information is composite rather than brand-specific. Overall, the information provided by tobacco manufacturers is not sufficient to provide a reliable assessment of the effects of additives on addiction and toxicity.

See Also Addiction; "Light" and Filtered Cigarettes; Menthol Cigarettes; Nicotine; Processing; Product Design; Regulation of Tobacco Products in the United States; "Safer" Cigarettes; Toxins; Youth Marketing.

■ GEOFFREY FERRIS WAYNE

BIBLIOGRAPHY

- Bates, Clive, Gregory Connolly, and Martin Jarvis. "Tobacco Additives: Cigarette Engineering and Nicotine Addiction." *Action on Smoking and Health* (July 1999). Available: <<http://www.ash.org.uk/html/regulation/html/additives.html>>. An accessible summary analysis of use of additives through study of internal industry documents.
- Browne, C. L. *The Design of Cigarettes*, 3rd ed. Charlotte, N.C.: Hoechst Celanese Corporation, 1990. A widely accepted industry reference on basic cigarette design.
- Doull, J., J. P. Frawley, and W. George. *List of Ingredients Added to Tobacco in the Manufacture of Cigarettes by Six Major American Cigarette Companies*. Washington, D.C.: Covington & Burling, April 12, 1994. A commonly cited list of cigarette additives released by U.S. manufacturers. The list is widely available online; see <<http://www.tobacco.org/Resources/599ingredients.html>>.
- Ferris Wayne, G., and G. N. Connolly. "How Cigarette Design Can Affect Youth Initiation into Smoking: Camel Cigarettes, 1983–1993." *Tobacco Control* 11 (2002): 32–39. Links the use of additives to an increase in youth initiation.
- Hoffmann, D., and I. Hoffmann. "The Changing Cigarette, 1950–1995." *Journal of Toxicology and Environmental Health* 50, no. 4 (March 1997): 307–364. Describes the use of additives in the context of other product changes.
- Leffingwell, John C., Harvey J. Young, and Edward Bernasek. *Tobacco Flavoring for Smoking Products*. Winston-Salem, N.C.: R.J. Reynolds Tobacco Company, 1972. The definitive industry review of additive flavorants.
- Wells, John Kendrick, III. "Subject: Technology Handbook" (22 August 1995). Available: <http://tobaccodocuments.org/product_design/945335.html>. Internal industry study of ammoniation, its use and importance historically.



Advertising

From humble beginnings in the 1700s, advertising has become the tobacco industry's primary mechanism for the promotion of tobacco use to each new generation of smokers. Whereas in 1900 tobacco advertising targeted mainly white Western men, by the year 2000 tobacco was promoted to women, men, and even children, in markets across the globe. Although the influence of tobacco advertising is hotly debated, control of advertising is now at the heart of initiatives to reduce tobacco consumption.

Early Tobacco Promotions

Tobacco manufacturers have, at least from the eighteenth century, used strategies to promote their wares. Trade cards, which were used in tobacco distribution in North America from the seventeenth century, and also tobacco wrappers, featured a range of images including those of American Indians, tobacco leaves, **snuff** boxes, and other tobacco accessories. Promotion efforts were taken a stage further with the introduction of branding, which was one of the earliest forms of advertising.

Branding allowed a manufacturer to sell a range of products but this was dependent on the ability to standardize production: "The Brand acted as a source of information for the nature of the product determined by either advertising, a previous sale, or the connotations provoked by the brand name itself or its image" (Hilton 2000). By the 1850s, tobacco products in the United States and Britain were increasingly given brand names and, through these, specific identities. Cherry Ripe and Wedding Cake were brands of chewing tobacco available in the United States, while in Britain Bishops Blaze and Best Bird's Eye competed for the pipe smoker's attention. Symbols also emerged as branding devices. The image of a bull was used effectively on the wrappings and advertisements for the Bull Durham brand of smoking tobacco manufactured by a North Carolina firm in the 1860s.

Advertising of tobacco products took off toward the end of the nineteenth century in the United States, and afterward in Britain. In the United States, Buck Duke organized his own polo team named after one of his leading cigarette brands, Cross Cut. In Britain, one tobacco company published a magazine, *Cope's Tobacco Plant* (1870–1879), to promote smoking in general and its products in particular. Sponsorship of events was utilized effectively to promote Bull Durham's smoking mixture in 1877. Advertisements appeared on billboards, and colorful posters that reproduced the images on cigar labels and cigarette advertisements were available from suppliers in the United States and Britain.

Packaging was a particularly important aspect of advertising. For example, from the 1860s to the early 1900s North American cigar boxes were decorated with attractive and technically sophisticated labels that could take up to a month to create. Images of "exotic" women were a common feature of these labels. **Cigarette cards**, which were used initially to strengthen soft paper cigarette packets, were also well established in the tobacco industry's advertising repertoire by the 1890s. Seductive images of beautiful, and often scantily clad, women were used



snuff a form of powdered tobacco, usually flavored, either sniffed into the nose or "dipped," packed between cheek and gum. Snuff was popular in the eighteenth century but had faded to obscurity by the twentieth century.



cigarette cards paper trading cards sometimes featuring sports personalities or movie stars packaged with cigarettes and offered as an incentive for purchase.



Advertisements for Alba cigarettes (left), and Riz La + tobacco paper (right), both c. 1925. Since tobacco products are essentially similar, image has long been an important marketing tool in cigarette industry advertising. BOTH PHOTOS © SWIM INK/CORBIS

on cigarette cards on both sides of the Atlantic, although there were also more conservative themes such as the Kings and Queens of England and famous sports personalities. These cards were desirable in themselves and highly collectible.

Twentieth-Century Advertising

The prominence of advertising at the turn of the twentieth century was precipitated by a need for new markets for tobacco products and, in particular, mass-produced cigarettes. Mass demand was required to realize the profit potential of new cigarette manufacturing techniques, in particular the introduction of the Bonsack machine. The “tobacco war” between the American and British tobacco industries in 1901 and 1902 added impetus to cigarette advertising, as did advertising wars inside the United States from 1913. Advertising became a major area of expenditure by tobacco manufacturers in the twentieth century, and the biggest area since 1945.

Image was central to tobacco, and especially cigarette, advertising. Although there are clear taste differences between Turkish, Virginian, and mentholated brands, in other respects cigarettes are “fundamentally homogenous products” (Chapman 1986). To enhance the effectiveness of advertising, the tobacco industry enlisted the help of public relations experts, psychologists, and psychoanalysts. In interwar United States,

Washington Hill, the president of American Tobacco, worked with public relations expert Edward Bernays to promote Lucky Strike cigarettes. John B. Watson, one of the founders of behavioral psychology, worked closely with the tobacco industry, and Walter Dill Scott's *Psychology of Advertising* (1902 and 1921) was one of the guiding texts of the industry.

The media emerged as a principal means of direct and indirect cigarette advertising in the twentieth century and the tobacco industry was quick to exploit new types of media: newspapers, periodicals, film, and television. However, in Australia traditional forms of advertising such as counter displays and shop signs continued to dominate the sale of tobacco for pipes and roll-your-own cigarettes until 1950.

National advertising campaigns became common in the West following the expansion of the popular press. The North American Bull Durham brand was promoted in the 1880s using local newspapers and large dailies. Extensive newspaper advertising appeared during World War I when the U.S. tobacco industry initiated campaigns to provide cigarettes for soldiers. The American Tobacco Company struck a deal with one newspaper for a daily front-page display box along with three or four column articles or displays at the top of an inside page. In Britain, too, newspaper advertising grew in importance from the late nineteenth century, and, by the interwar period, 80 percent of advertising expenditure was spent on the press.

Women's magazines have been an important source of cigarette advertising in the West since the 1930s. Although when television and radio advertising became available in Britain and the United States in the 1950s, magazine advertising slumped; later, when bans were imposed on tobacco advertising in television and radio, cigarette advertisements re-emerged in women's magazines. In the 1970s and 1980s most major U.S. women's magazines took cigarette advertisements and in 1979 cigarettes were the most advertised product in some U.S. magazines. In Britain, a survey of fifty-three magazines aimed at fifteen- to twenty-four-year-old women in 1985 revealed that two-thirds featured cigarette advertising.

The potential of film to promote smoking, especially of cigarettes, was also realized by the tobacco industry. Film stars endorsed De Reszke cigarettes in a string of advertisements in Britain's *Vogue* magazine in 1919; by the 1930s this was common practice on both sides of the Atlantic. Although smoking appeared in silent films, and was common from the 1930s, there is little explicit evidence of tobacco industry interventions. In the 1980s, however, the tobacco manufacturer Phillip Morris admitted to paying Sylvester Stallone to smoke Kool cigarettes in the action movies *Rhinestone* (1984) and *Rambo: First Blood, Part 2* (1985). Unofficial sources also indicate that films have been used deliberately to advertise cigarettes through product placement. Marlboro vans, for example, appeared in the background of *Superman II* (1980). An increased occurrence of smoking and of major cigarette brand names has been noted in films released between 1990 and 1996.

The availability of television after 1950 provided important new channels for advertising a range of tobacco products in the West. In the United States in 1968 the largest tobacco company, R.J. Reynolds, concentrated 80 percent of its advertising budget on television promotions,





The use of prominent persons, public figures, and entertainers in cigarette advertising was already common by the turn of the twentieth century. These trade cards for *Between the Acts & Bravo* brand cigarettes featured minor female stars of the theatre: (l to r) Josie Hall, Carrie Coote, and Kate Claxton. © BETTMANN/CORBIS

until a ban in 1971. In Britain, too, bans on television and radio advertising closed off these channels as direct forms of advertising. Direct advertising was not, however, the only form of tobacco promotion on television. Indirect advertising also occurred, particularly when the tobacco industry sponsored major sporting or cultural events. This strategy was commonly used to circumvent restrictions on television and radio advertising. During two state football finals in Australia in 1982, tobacco hoardings were on screen 1,412 times each for an average of 3.7 seconds. This amounted to 26.6 percent of total program time.

In the context of increased restrictions on tobacco advertising since the 1960s, indirect forms of advertising have flourished. One strategy that has allowed the tobacco industry to circumvent advertising bans is the practice of “brand-stretching” whereby tobacco-brand logos appear on nontobacco goods such as Camel boots and Salem holidays.

Whom Do Advertisements Target?

Pipe tobacco and cigars were firmly masculine products in the nineteenth century and remained so throughout the twentieth century. Tobacco advertisers therefore targeted men. The cigarette market was also conceptualized almost exclusively as male prior to World War I, although there were sporadic appeals to Western women smokers before 1918. In Britain, advertisements for mass-produced brands such as De Reske and Players targeted women as smokers from 1919. It was not until 1926 that a U.S. advertisement for a mass-produced brand

addressed women as smokers, and not until 1927 that a woman was featured actually smoking. By the 1930s, North American advertising routinely featured women smoking cigarettes and even offering them to their male companions. In Australia, too, women smokers were regular features of cigarette advertising by this time. But although roughly one-quarter of all Australian cigarette advertisements included images of women between 1927 and 1937, only 6 percent focused exclusively on them. Since World War II, cigarette advertising has increasingly targeted women on a global scale.

Promotion of cigarettes outside Europe and North America began around 1900. China was the main foreign market for British American Tobacco and, in the early 1900s, cigarettes were promoted using outdoor advertising, handbills, wall hangings, posters, and window displays. The global dimensions of cigarette advertising escalated dramatically after World War II. Latin America was targeted in the 1960s and the newly developed countries of Asia in the 1980s. Eastern Europe, territories previously in the USSR, China, and Africa were targeted aggressively in the 1990s. Tobacco brand advertising budgets were some of the largest of any product in countries such as Malaysia, Hong Kong, Kenya, Indonesia, and South China in the late 1980s. In many cases advertising was, and still is, unregulated.

The tobacco industry claims that its advertising does not target children. However, proportionately more ads were placed in U.S. women's and youth magazines between 1960 and 1985 than in those which targeted other groups of the population. In Britain in the 1980s, a study of magazines aimed at women and young people discovered that 58 percent with a readership predominantly under twenty-five years of age featured cigarette advertising, and that of those magazines whose numerically largest readership group was between fifteen and twenty-four years old, 93 percent carried cigarette advertisements. Young people were also being targeted in the 1980s in the new markets of Asia and Africa; for example, a group of teenagers breakdancing appeared in an advertisement on display in Malaysia. Scholars argue that direct advertising is not the only means by which young people are targeted by the tobacco industry. Representations of adult life can also be very appealing to teenagers: "Any marketer of products and services for adolescents knows that to appeal to youth, one needs to construct a campaign that looks as if it is a product for adults" (Chapman). An investigation into the advertising practices of the producers of Viceroy cigarettes in the 1970s revealed that young people were being deliberately courted by the American tobacco industry. Similar results emerged from an inquiry in 2000 into advertising for the U.K. tobacco industry.

Advertising Themes

National identity was a particular prominent theme in British pipe tobacco advertising around 1900 and included images of Queen Victoria, aristocrats, the military, aspects of British heritage and the British countryside. In Australia during World War I, themes of war, nationalism, and masculine identity were used to sell traditional forms of tobacco to men. In interwar Australia, where pipe and roll-your-own tobacco continued to surpass the sale of tailor-made cigarettes, advertisements emphasized masculine identity with stress on defending



Although cigarette advertising was directed mostly toward white Western men in 1900, smoking among children was common as shown in this postcard of a child smoking a cigarette, 1910. © RYKOFF COLLECTION/CORBIS

male space against female intrusion. Advertisements for cigars and pipe tobacco have continued to have male subjects and masculine themes.

Men and masculinities remained a staple of cigarette advertising. In interwar Australia, themes relating to male camaraderie and masculine anxieties were to the fore in the press. Cigarette advertising on Australian radio was also dominated by a series of masculine sea shanties. In the United States, most cigarette advertisements featured men even when women were targeted as smokers from the late 1920s. In Britain, too, men and masculinities were highly visible; indeed the most famous British icon was the sailor that appeared in advertisements for Player's cigarettes. Initially women were featured in tobacco advertisements to add a seductive element, but after 1920 they were increasingly visible as smokers in their own right.

Emancipation was a key theme in early cigarette advertising to British women. Women's liberation re-emerged in the late 1960s and 1970s as a theme in Western advertisements for "female cigarettes," most notably Virginia Slims: "You've come a long way, baby." Emancipation remained a prominent motif in 1980s and 1990s advertising to women in the former socialist countries of central and eastern Europe, plus Japan, Hong Kong, and Africa. Promising liberation as well as westernization to Hong Kong women in the 1980s, an advertisement for Virginia Slims declared, "You're on your way."

In advertisements, cigarette smoking has been associated with a high quality of life: health, leisure, pleasure, sexual attractiveness, affluence. Health and body issues were common themes in interwar advertisements targeted at Western men and women. Craven "A" cigarettes, for example, were marketed widely as "made especially to prevent sore throats." Smoking was also associated with feminine beauty and, in the United States, it was explicitly linked to slimness. Leisure has also been a prominent theme and from the 1930s companionate leisure often provided the context for smoking in advertisements in Australia, the United States, and Britain. Physical activity and the outdoors featured prominently in the 1930s as men and women smoked after a tennis match or while motoring together in the countryside. After World War II, joint leisure activities were more subdued and intimate; for example, bathing on a beach or relaxing by a roaring fire. A Western definition of the "good life" has remained a feature of much advertising to low and middle income countries; in the 1980s, a Fijian advertisement for Rothmans referred to a "great English tradition" while an Indian advertisement for Chesterfield's promoted "the smooth American experience."

From the 1960s, amid widespread publicity about the health risks of smoking, image became increasingly important to cigarette advertising, "not only because it was meant to confer its qualities on the smoker, but because it was designed to blind consumers to the true nature of what they were buying" (Taylor 1985). However, with the introduction of restrictions on tobacco advertising, advertisers have also been forced to rely less on featuring people and to make more inventive use of symbolism as in the 1980s campaigns for Benson & Hedges and Marlboro cigarettes. When advertising restrictions meant that the cowboy could no longer appear in Marlboro advertisements, Marlboro resorted to using the image of wild horses: "They knew that people would look at a pack of Marlboro and still see the cowboy" (Chapman).

Impact of Advertising

Concerns about children's exposure to tobacco advertising are underpinned by the belief that advertising is influential; this influence extends also to adults. Amid knowledge of the health risks of tobacco consumption, the tobacco industry has come under intense criticism for promoting smoking to new groups of potential smokers, especially children and women, and sustaining levels of consumption in established markets.

The influence of advertising is, however, strongly contested by the tobacco industry. The industry's position is that the sole purpose of advertising is to encourage smokers to change their allegiance to brands, and that advertising does not lead people to smoke or hinder their efforts to stop. The scholar Simon Chapman questions the veracity of this claim on three counts. First, all advertising seeks to maximize sales and even advertising industry workers are not convinced that the tobacco industry is any different. Second, advertising is used even in countries where the government has a monopoly on tobacco sales and where there is, therefore, no competition. Third, if advertising only influenced current smokers then it still follows that a ban on advertising may help reduce smoking.

Establishing a causal relationship between advertising and levels of smoking is not, however, straightforward. Methodological problems bedevil attempts to isolate and assess the influence of different types of advertising: "Unlike the effects of nicotine, advertising cannot be dosed and its effects observed physiologically" (Chapman). The reasons why people smoke are complex: "Tobacco advertising is . . . only one factor among many that appears to influence the decision to smoke. These include social, religious, parental, sibling and peer smoking behaviour and attitudes, price and disposable income, age limit proscriptions, measured intelligence and social class" (Chapman).

Isolating the significance of advertising for the promotion of smoking in the past is also difficult, as evident in the debate about the role of advertising in introducing Western women to cigarette smoking before World War II. The sociologist Michael Schudson argues that women did start to smoke prior to the first advertisements that targeted them and that news coverage of smokers helped in "the first instance to legitimise women's smoking"; advertising merely went on to reinforce and "naturalise" this practice (Schudson 1985). Others acknowledge that smoking had appeal for women prior to their direct targeting, but they argue that advertising "indirectly sought women smokers through images that emphasized the sociability and allure of the cigarette" (Brandt 1996). Cheryl Warsh points out that "cigarette advertising could have shaped women's views of what was masculine and therefore what would be an attractive aspiration for 'new women'" (Warsh 1998). Following the initiation of direct appeal to women in the United States, researchers argue, women's smoking increased at a faster rate than before.

Precise measurement of the effect, past and present, of tobacco advertising is elusive. It is, however, widely established that cigarette advertising contributes to a culture in which smoking is normalized and has a positive image. "Whether advertising initiates consumer trends or only reinforces them . . . it is impossible to ignore their wider role in providing people a general education in goods" (Schudson). Unattractive and

negative ways of understanding smoking have often been suppressed by threats from the tobacco industry to deprive the media of advertising revenue. This threat is being eroded by the introduction of national bans on advertising. Studies indicate that a comprehensive set of tobacco advertising bans can reduce tobacco consumption, but that a limited set of advertising bans has little or no effect.

See Also Sponsorship.

■ PENNY TINKLER

BIBLIOGRAPHY

- Albright, Cheryl L. et al. "Cigarette Advertisements In Magazines: Evidence for a Differential Focus on Women's and Youth Magazines." *Health Education Quarterly* 15, no. 2 (1988): 225–233.
- Alford, B.W.E. *W.D. & H.O. Wills and the Development of the U.K. Tobacco Industry 1786–1965*. London: Methuen, 1973.
- Amos, Amanda, and Margaretha Haglund. "From Social Taboo to 'Torch Of Freedom': The Marketing of Cigarettes to Women." *Tobacco Control* 9 (2000): 3–8.
- Brandt, Allan M. "Recruiting Women Smokers: The Engineering of Consent." *Journal of the American Women's Association* 51, nos. 1–2 (1996): 63–66.
- Chapman, Simon. *Great Expectations: Advertising and the Tobacco Industry*. London: Comedia Publishing Group, 1986.
- Ernster, Virginia L. "Mixed Messages for Women: A Social History of Cigarette Smoking and Advertising." *New York State Journal of Medicine* (July 1985): 335–340.
- Goodman, Jordan. *Tobacco in History. The Cultures of Dependence*. London: Routledge, 1994.
- Greaves, Lorraine. *Smoke Screen: Women's Smoking and Social Control*. London: Scarlet Press, 1996.
- Hastings, Gerald, and Lynn MacFadyen. *Keep Smiling, No One's Going to Die: An Analysis of Internal Documents from the Tobacco Industry's Main U.K. Advertising Agencies*. Strathclyde: Centre for Tobacco Control Research, University of Strathclyde, 2000.
- Hilton, Matthew. *Smoking in British Popular Culture 1800–2000*. New York: Manchester University Press, 2000.
- Howe, Holly. "An Historical Review of Women, Smoking and Advertising." *Health Education* (May/June 1984): 3–9.
- Jacobson, Bobbie. *Beating the Ladykillers: Woman and Smoking*. London: Pluto, 1986.
- Jacobson, Bobbie, and Amanda Amos. *When Smoke Gets in Your Eyes*. London: British Medical Association Professional Division, Health Education Council, 1985.
- MacKinnon, Kenneth, and Laura Owen. *Smoking in Films—A Review*. London: HEA, 1997.
- Mitchell, Dolores. "Images of Exotic Women in Turn-of-the-Century Tobacco Art." *Feminist Studies* 18, no. 2 (1992): 327–350.
- Saffer, Henry, and Frank Chaloupka. "The Effect of Tobacco Advertising Bans on Tobacco Consumption." *Journal of Health Economics* 19 (2000): 1117–1137.
- Schudson, Michael. *Advertising: The Uneasy Persuasion*. New York: Basic Books, 1985.

- Stockwell, Theresa F., and Stanton A. Glantz. "Tobacco Use Is Increasing in Popular Films." *Tobacco Control* 6 (1997): 282–284.
- Tate, Cassandra. *Cigarette Wars: The Triumph of "The Little White Slaver."* New York: Oxford University Press, 1999.
- Taylor, Peter. *The Smoke Ring: Tobacco, Money and Multinational Politics.* London: Sphere Books, 1985.
- Tinkler, Penny. "'Red Tips for Hot Lips': Advertising Cigarettes for Young Women in Britain, 1920–1970." *Women's History Review* 10 (2001a): 249–272.
- . "Refinement and Respectable Consumption: the Acceptable Face of Women's Smoking in Britain, 1918–1970." *Gender & History* 15, no. 2 (2003): 342–360.
- Tyrrell, Ian. *Deadly Enemies. Tobacco and Its Opponents in Australia.* Sydney: University of New South Wales Press, 1999.
- Warsh, Cheryl K. "Smoke and Mirrors: Gender Representation in North American Tobacco and Alcohol Advertisements before 1950." *Social History* XXXI, no. 62 (1998): 183–222.



Advertising Restrictions

As the modern antismoking movement gathered force in the 1960s, public health advocates focused much of their attention on limiting advertising of tobacco products. Some countries took steps to ban cigarette ads from television and radio during this period, and since then many industrialized democracies have placed limits on broadcast, print, or display advertising. These moves had to confront not only the opposition of the tobacco industry and media interests that depended on tobacco advertising revenue, but also the question of whether such bans were truly an effective strategy for curbing consumption. Further, countries such as the United States and Canada with constitutional safeguards on freedom of expression had to decide whether the marketing messages of corporations warranted the same types of protections accorded to political or artistic speech.

Early Moves in the 1960s and 1970s

In the wake of the 1964 Surgeon General's report, there was public support for a total ban on advertising in the United States, but the tobacco lobby was able to forestall such regulation. It was only through a series of circuitous legal and political maneuvers that the first restrictions were enacted. An activist lawyer, John Banzhaf, filed a petition with the Federal Communications Commissioner (FCC) demanding that broadcasters allocate air-time to presenting anti-smoking advertisements to counter the effect of tobacco industry messages. The result was a series of powerful "kick the habit" ads that ran for three years. In 1968, when the FCC called for a ban on cigarette advertising on television and radio, the tobacco industry supported the move out of self-interest: the antismoking spots—which would cease once cigarette ads themselves left the airwaves—were hurting

their business more than the industry's own ads were helping it. At the beginning of 1971, cigarette ads were taken off the air in the United States, and a subsequent analysis suggested that the tobacco industry's assessment was correct. During the three years that the antismoking ads had aired, per capita cigarette consumption declined markedly, but when the ads went off, consumption began to inch back upward. The industry simply shifted its dollars to the print media; total spending on magazine advertising doubled and newspaper advertising quadrupled.

During this period, television bans went into effect in other countries, including Great Britain, France, Germany, and Australia. In some cases the tobacco industry negotiated voluntary agreements with governments to reduce or eliminate broadcast ads in order to head off potentially more far-reaching restrictions. However, other forms of marketing remained common, including newspaper and magazine ads, billboards, sponsorship of sporting events, posters and retail displays, and promotional items featuring product logos.

Economic and Political Constraints

The powerful influence of tobacco manufacturers, retailers, and other corporate interests has been evident in countries as different as Australia, which has one of the world's most far-reaching antitobacco regimes in place, and Japan, which has one of the least. In Australia, the industry negotiated a voluntary agreement in 1976 that banned broadcast advertising but contained a provision allowing continued industry sponsorship of sporting events, one of its most popular forms of promotion (where, public health advocates charged, its signs and posters would reach a predominately youthful audience). During the following decade when attempts were made to close the loophole and extend the ban to print advertising, the government was reluctant to antagonize the country's most powerful media barons, who derived significant income from tobacco advertising and sporting events (one of whom also served on the board of Philip Morris). Eventually the ban was extended to all advertising, due in part to the actions of a well-organized antitobacco movement, and even perimeter ads at sporting events, which had been the most contentious issue, were eventually prohibited.

In Japan, where tobacco production was for many decades a state monopoly and continues to have major fiscal importance, a modest set of restrictions that discouraged "excessive" advertising (but provided no sanctions for violating the guidelines) was put in place in 1984. The Japanese cigarette market was closed to foreign producers at this time, and smoking rates among men were the highest in the industrialized world, so manufacturers saw little threat in the limited restrictions. The opening of the Japanese cigarette market to foreign competition changed this dynamic. As American manufacturers began competing with Japanese, the government was forced to issue new guidelines so that domestic producers would not be put at a competitive disadvantage. In 1998, the government issued a more comprehensive set of restrictions, including efforts to limit advertising aimed at youth, that brought Japan closer in line with other countries, but even these rules rely entirely on the voluntary cooperation of industry.



Freedom of Speech and the Effects of Advertising

During the 1980s, a broad spectrum of public health groups in the United States pressed for more comprehensive restrictions that would extend the television and radio ban to other forms of promotion. But their efforts were constrained by the constitutional question of what protections, if any, were due to commercial speech. The United States Supreme Court had handed down inconsistent rulings on the issue, ultimately determining that while advertising did not warrant the same First Amendment protections that applied to political or artistic speech, limits on commercial expression had to be narrowly tailored and advance a compelling state interest.

A similar challenge confronted public health advocates in Canada. That country's Supreme Court declared in 1995 that a sweeping ban passed several years earlier on all forms of advertising was a violation of constitutionally guaranteed freedom of expression. The government responded by modifying the law to ban only "lifestyle" advertisements, those that sought to portray smoking in general as glamorous or appealing, while allowing "brand preference" ads designed to attract smokers to a particular brand.

In addition to legal principles, the debates over the scope of advertising restrictions hinged on a much-disputed empirical question: Did bans on advertising really serve to reduce the use of tobacco? Although

Joseph F. Cullman III, chair of Philip Morris Inc., and chair of the Tobacco Institute, blows smoke as he testifies before the Senate Commerce subcommittee on 22 July 1969. Cullman announced that the cigarette industry, bowing to public and government pressure, had offered to end all television and radio advertising by September 1970. © BETTMANN/CORBIS

the belief that advertising stimulated overall consumption was powerfully intuitive—why would the industry devote billions of dollars to it each year if such expenditures did not increase their market?—there were few data to support either this relationship or the converse hypothesis that limits on ads would result in reduced consumption. Research into these questions had produced conflicting results, but showed that the effect of advertising bans on consumption was modest at best. Cigarette manufacturers, for their part, insisted that advertising served only to lure smokers from one brand to another, not stimulate demand among people who would not otherwise take up the habit. As long as tobacco products remained legal, they claimed, the government had no grounds for limiting consumers' information about them.

A corollary issue that assumed great salience in debates over banning advertising was the effect of ads on young people. Since the majority of smokers began the habit as minors, even those who took a strong antipaternalist stance in opposing restrictions had to concede that the protection of youth from the manipulation of the tobacco industry might provide an acceptable rationale for government intervention. The extremely successful Joe Camel campaign beginning in 1988 galvanized antitobacco activists to press for greater restrictions in order to protect youth, especially after research indicated that the perpetually smoking cartoon character was almost as recognizable to six-year-olds as Mickey Mouse. During the 1990s, protecting children was the basis for increasingly vehement calls for a total ban on advertising in the United States, even though there was considerable doubt whether such a move would be constitutionally permissible.

The Limits of Restrictions

In the United States, a comprehensive set of advertising restrictions was put in place under the Master Settlement Agreement (MSA) that was reached between the tobacco industry and 46 state attorneys general in 1998. The guidelines prohibited advertising targeting youth, and banned billboards and ads on public transportation and in arenas, stadiums, and shopping malls. Retailers were still allowed to post signs up to fourteen feet square. In 2001 the Supreme Court, in a case originating in Massachusetts, addressed the question of how far individual states could press beyond these restrictions. The state had imposed a sweeping set of restrictions geared toward protecting youth. Outdoor advertising within 1,000 feet of schools and playgrounds was banned, and ads placed lower than five feet off the ground, at the eye level of children, were prohibited.

When the rules were challenged by a consortium of tobacco producers and retailers, the Supreme Court agreed with the plaintiffs' claim that they were overbroad. The guidelines would amount to a de facto ban on tobacco advertising in much of the state, the court held, and were thus in violation of the First Amendment. The ruling posed a conundrum for those committed to reducing tobacco use. A growing body of **econometric** research suggested that partial advertising bans had little or no effect on consumption. Only a total ban—the type most likely to be found unconstitutional in the United States—would be effective.



econometrics the study of economic data usually employing statistical methodologies.

Internationally, in 2003, the World Health Assembly adopted the Framework Convention on Tobacco Control, a comprehensive treaty that required all signatories to move toward a comprehensive advertising ban within five years. The document required that countries whose constitutions did not allow complete bans restrict advertising within the limits of their laws. Although the United States signed on to the document after dropping its earlier opposition, it had not formally ratified the treaty as of mid-2004.

See Also Advertising; Antismoking Movement Before 1950; Antismoking Movement From 1950; Marketing.

■ JAMES COLGROVE

BIBLIOGRAPHY

- Bayer, Ronald. "Tobacco, Commercial Speech, and Libertarian Values: The End of the Line for Restrictions on Advertising?" *American Journal of Public Health* 92 (March 2002): 356–359.
- Bayer, Ronald, Lawrence O. Gostin, Gail H. Javitt, and Allan Brandt. "Tobacco Advertising in the United States: A Proposal for a Constitutionally Acceptable Form of Regulation." *Journal of the American Medical Association* 287 (12 June 2002): 2990–2995.
- Feldman, Eric A., and Ronald Bayer, eds. *Unfiltered: Conflicts Over Tobacco Policy and Public Health*. Cambridge, Mass.: Harvard University Press, 2004.
- Goodin, Robert, E. *No Smoking: The Ethical Issues*. Chicago, Ill.: University of Chicago Press, 1989.
- Kluger, Richard. *Ashes to Ashes: America's Hundred-Year Cigarette War, the Public Health, and the Unabashed Triumph of Philip Morris*. New York: Alfred A. Knopf, 1996.
- Rabin, Robert L., and Stephen D. Sugarman, eds. *Regulating Tobacco*. Oxford: Oxford University Press, 2001.
- Saffer, Henry, and Frank J. Chaloupka. "The Effect of Tobacco Advertising Bans on Tobacco Consumption." *Journal of Health Economics* 19 (Fall 2000): 1117–1137.
- Warner, Kenneth E., et al. "Promotion of Tobacco Products: Issues and Policy Options." *Journal of Health Politics, Policy, and Law* 11 (Fall 1986): 367–392.



Africa

It is not known exactly when tobacco was introduced to Africa. However, it is generally accepted that the Portuguese were the first to take tobacco to Africa, probably sometime in the early-to-mid-sixteenth century. It appears that within fifty years of Vasco da Gama's historic circumnavigation of the world in 1497–1499, Portuguese merchants were trading tobacco along the east coast of Africa. In that same period, the Portuguese also introduced tobacco into West Africa through a series of trading posts they were establishing along the coast.



The Early Propagation of Tobacco

Following its introduction along the east and west coasts, tobacco spread into the interior of Africa fairly rapidly. Its cultivation moved quickly eastward from the coastal regions of modern-day Senegal, along the trade routes of interior West Africa during the later half of the sixteenth century, and into the region north of the lakes Nyanza (formerly Victoria) and Albert in east-central Africa by the mid-seventeenth century. Christopher Ehret has demonstrated that “we can track this diffusion through the spread of a single word, *taba*, for tobacco all the way across Africa” (Ehret 2002). By the early 1600s European traders visiting the area of present-day Sierra Leone reported that local Africans were cultivating tobacco next to their homes, that both men and women were smoking, and that they were trading tobacco, along with indigenous produce like bananas, rice, and wood, to crews of European ships.

Tobacco was introduced into other parts of Africa no later than the middle of the seventeenth century. It apparently spread into the interior of the Saharan region of North Africa, along centuries-old caravan routes, after being introduced by the Portuguese to the coastal zones of the southern Mediterranean Sea in the first decade of the seventeenth century. The Portuguese also traded tobacco in the northeast region of Africa, where it was grown extensively in the southern provinces of the area that is modern-day Ethiopia.

The Dutch facilitated the spread of tobacco through the southern regions of the continent, introducing it into the Cape region of modern-day South Africa in the middle of the 1600s. The Dutch East Indies Company first established a trading post at the Cape in 1652 and reportedly immediately began to cultivate tobacco. It sold tobacco to crews of primarily company-owned ships on their way to, or returning from, the Company’s principle trading areas of Indonesia, and used tobacco as one of several trade items to induce the local Khoikhoi pastoralists to supply the Company with cattle. The meat from slaughtered cattle was then used to refit Dutch ships stopping at the Cape. By the end of that century, the Company had taken the land from many Khoikhoi, who increasingly took jobs on Dutch-owned estates in order to survive. It has been reported that one of the main attractions for the Khoikhoi working on these estates was the tobacco provided by their employers as part of their wages. From this initial introduction of tobacco at the southernmost tip of Africa, it followed traditional trade routes into south-central Africa, reaching areas north of the Zambezi River by the early eighteenth century at the latest.

Iain Gately has partially explained this extremely rapid dispersal of tobacco throughout the African continent by noting that “Africans already had pipe and smoking cultures of their own” prior to the introduction of tobacco during the sixteenth and seventeenth centuries. Gately argues that African peoples “had long had an herbal friend whose fumes they drank. **Cannabis**, or *dagga*, as this other combustible weed was known, was valued for its **psychoactive** properties, in particular its ability to generate sensations of well-being.” In addition, some African peoples, such as the Masai pastoralists of East Africa, while not smoking tobacco, did develop an affinity for sniffing finely ground tobacco leaf (Gately 2001). For whatever reason, it is clearly evident that African peoples across the continent had taken up the smoking of tobacco by the mid- to late 1600s. This assertion is supported by accounts made by



cannabis hemp-derived intoxicants such as marijuana and hashish.

psychoactive a drug having an effect on the mind of the user.



Europeans travelers in Africa during this period. From a 1607 account by the British merchant William Finch, as noted in Berthod Laufer's "The Introduction of Tobacco into Africa" (1930), inhabitants of Sierra Leone planted tobacco

about every man's house, which seemeth half their food; the bowl of their tobacco pipe is very large. . . . In the lower end thereof they thrust in a small hollow cane, a foot and a half long, through which they suck it . . . both men and women . . . each man carrying in his snap-sack a small purse (called tuffio) full of tobacco, and his pipe.

Seventy-five years later the Dutch trader O.F. von der Groeben reported that the people of the same area "smoke tobacco—men, women and children indiscriminately, and are so fond of its fumes that they inhale them not only at daytime, but also at night hang small bags of tobacco around their necks like a precious gem." Twenty years later, W. Bosman, a British trader, observed that the people of the Guinea coast, north of Sierra Leone, "were so passionately fond of tobacco that they gladly sacrificed their last penny to get it, and would rather hunger than be without it" (Laufer).

Tobacco's Role in African Trade

From the mid-seventeenth century to the early decades of the nineteenth century, tobacco played an important role in the transatlantic trade. The primary areas concerned were Brazil in South America, the coastal and hinterland zones of the Gold Coast (modern-day Ghana) in West Africa, the Congo River basin, and Angola. In the period between

Djombe natives working on tobacco plantation in German South West Africa, 1918. © BETTMAN/CORBIS



plantation historically, a large agricultural estate dedicated to producing a cash crop worked by laborers living on the property. Before 1865, plantations in the American South were usually worked by slaves.

1637 and 1642, the Dutch replaced the Portuguese as the principal European trading power along the West African coast. However, the Dutch merchants soon realized that their ability to trade with the local peoples was greatly restricted because they did not have access to the one trade item most favored by Africans in the area—tobacco produced in the Bahia region of Portuguese Brazil. Africans along this stretch of the West African coast valued a particular type of Bahian tobacco—a third-grade tobacco manufactured from scrap, or rejected leaves, from the best quality plants, rolled into the form of a thick rope, and then soaked with molasses. To rectify this problem the Dutch were forced to allow Portuguese traders to import tobacco, but no other goods, from Bahia into those areas of West Africa controlled by the Dutch. Portuguese ships from Brazil were obliged to stop at the Dutch fort at Elmina, in present-day Ghana, to have their cargoes inspected and to pay a tax of ten percent of their tobacco. Although Portuguese ships avoided stopping at the fort whenever possible, the system succeeded because both sides benefited from the arrangement. The Portuguese needed to procure African slaves for their **plantations** in Brazil, and the Dutch got the Bahian tobacco they required to trade with local Africans. That trade could be very profitable. For instance, in the first decades of the eighteenth century Africans were willing to trade a pound of ivory for every ten pounds of Bahian tobacco.

The tobacco growers of Bahia were the only ones to perfect this type of manufacturing process and were therefore able to establish a monopoly of trade for this particular type of tobacco. C. R. Boxer, a historian of the Portuguese Empire, notes in *The Portuguese Seaborne Empire, 1415–1825* (1969) that “the monopoly of this third-grade Bahian tobacco consequently gave the Portuguese an advantage over all their European rivals for the whole of the eighteenth century.” In his *Way of Death: Merchant Capitalism and the Angolan Slave Trade, 1730–1830* (1988) the historian Joseph Miller has added that “given the African smokers’ partiality toward the Bahian leaf, it became a small gold mine in itself for the growers and merchants—sometimes literally so, since Bahians sold it also to the Dutch on the Gold Coast for African gold.”

By the eighteenth century tobacco was not only an important part of trade relations between Africans and Europeans, it had also become an important component of trade between African societies. For example, in the Congo River basin tobacco was grown by Africans who traded it, along with locally produced alcohol, for salt, cassava, and palm cooking oil. Further south, along the fringes of Portuguese-controlled Angola, Africans in the Kwango valley grew large amounts of tobacco and exported their surpluses into areas to the east of Portuguese control. A final example, from the early nineteenth century, was reported from central Angola, where local African farmers participated in sophisticated dealings, exchanging tobacco for beeswax.

Domestic Cultivation of Tobacco

Historical evidence for the propagation and use of tobacco in the interiors of eastern and southern Africa is limited for the period prior to the mid-nineteenth century. However, existing evidence demonstrates

clearly that tobacco had long been incorporated into both the economies and social habits of the peoples of those regions by that period. In the late eighteenth century tobacco was one of four new crops introduced into the northeastern part of present-day Tanzania. People grew small amounts of tobacco around their homes, primarily for personal use. They packed surpluses into small, round, hard cakes known as *mzungu*, which could be exchanged in local markets for billy goats or other consumer goods. The tobacco was usually consumed as **snuff**, but older men were reported to also smoke it in pipes.

In another part of Tanzania in this same period, men of the Shambaa kingdom sold surplus tobacco and bought cattle in local markets, while others took theirs to trade on the coast. During the middle of the nineteenth century three British explorers, Richard Burton, David Livingstone, and Henry Stanley, all “noted the ubiquity of tobacco and found time to marvel at African pipe design” (Gately). In 1879 a European visitor to the central Tanzanian coast reported the abundant growth of tobacco in the territory, and in 1896 a German named Schele reported that tobacco was commonly grown in the same region, along with millet, maize, and rice.

In southern Africa during the nineteenth century, Africans also grew tobacco both for personal use and as a trade commodity. After Brazil won its independence from Portugal in 1822, Portuguese colonial officials began to encourage African farmers in Angola to increase their production of tobacco and a number of other crops that they had been producing for internal trade purposes for at least one hundred years. In South Africa, the Thlaping people initially avoided growing tobacco, but after missionaries introduced both irrigation and a new variety of tobacco in mid-century, they began to grow it fairly extensively and used it in trade with neighboring peoples. T. M. Thomas, a missionary to the Ndebele kingdom in southwestern Zimbabwe from 1859 to 1870, noted that not only did every Ndebele village he visited have its own tobacco crop, but the Ndebele also imported a large quantity of tobacco, which they smoked in pipes, from Shangwe growers in central Zimbabwe. The Shangwe people specialized in growing and **air-curing** large quantities of tobacco, which they then traded throughout the regions of modern-day Zimbabwe and southern Mozambique. Finally, in the late 1800s, King Khama III of the Ngwato people of present-day Botswana both encouraged his people to cultivate tobacco and grew it himself as a commercial crop.

By 1900 the European imperialist conquest of Africa was nearly complete, and in the period of European colonial rule that followed tobacco played an important part in several regions of Africa. For instance, in colonial Tanzania, following the failure of food crop production in several districts in the 1920s, the government encouraged African farmers to begin growing tobacco as a cash crop. While over 6,000 African farmers in the Songea district in the southcentral part of the territory eventually grew tobacco, the vast majority produced amounts too small to allow them to develop economic self-sufficiency. When tobacco farmers in that district attempted to form themselves into a growers’ **cooperative** in the mid-1930s, in an attempt to maximize prices being paid by Asian buyers, the government refused to allow them to become a fully recognized organization, fearing that would threaten the governing system of the colony.



snuff a form of powdered tobacco, usually flavored, either sniffed into the nose or “dipped,” packed between cheek and gum. Snuff was popular in the eighteenth century but had faded to obscurity by the twentieth century.



air-curing the process of drying leaf tobacco without artificial heat. Harvested plants are hung in well-ventilated barns, allowing the free circulation of air throughout the leaves. Air-curing can take several weeks. Burley tobacco is air-cured.



cooperative a member-owned organization for buying or selling as a group rather than as individuals. In the early twentieth century, tobacco growers in several states attempted to form cooperatives to raise prices of leaf tobacco.



A Kuba man smokes a pipe, c. 1950. The Kuba tribe, which is now extinct, lived between the Sankuru and Lulua rivers in the Belgian Congo, which later became Zaire. © OTTO LANG/CORBIS



flue-cured tobacco also called Bright Leaf, a variety of leaf tobacco dried (or cured) in air-tight barns using artificial heat. Heat is distributed through a network of pipes, or flues, near the barn floor.

MALAWI. Tobacco was most significant in the British colonies of southern Africa. It was particularly vital to the colonial economy of Southern Rhodesia (present-day Zimbabwe), and its history is covered elsewhere in this collection. Another important tobacco region was colonial Malawi (formerly Nyasaland). Although local Africans were growing tobacco prior to the British occupation of the region in the early 1890s, **flue-cured** tobacco was first grown as a commercial crop by a European in 1889 and was first exported in 1893. At the time, that first small shipment of tobacco was described as the first tobacco imported into England from the empire since the loss of the American colonies. By the 1899–1900 growing season, over 1,300 kilograms of tobacco were exported, primarily to colonial Zimbabwe. After that, production increased at a rate of about 75 percent a year for the following decade, with exports reaching more than 1.7 million kilograms at the end of the 1912–1913 growing season.

Production continued to increase on European-owned farms, and tobacco became the colony's most valuable export. In 1928, however, overproduction in Malawi and its neighboring British colonies caused the price of tobacco to plummet on the English market. This resulted in a large number of growers abandoning their farms and a large reduction in Malawi's total production for the next several years. Another result was that African-produced, dark, fire-cured tobacco surpassed European-produced tobacco in export value for the first time in 1929.

By 1950 African tobacco farmers were producing more than 10 million kilograms of tobacco annually, 89.6 percent of the country's total. That level of production dropped by nearly 20 percent at the beginning of the 1960s. However, following national independence in July 1964, production levels began to slowly recover as the postindependence government increased support for large estates that specialized in producing tobacco for export. Also, by the early 1970s the government encouraged small-scale farmers to increase their production of tobacco. As a result of these policies tobacco exports steadily grew and by 1994 had regained the 10 million kilogram annual level of production, making Malawi one of the world's top tobacco producers. It remains the country's major export crop and accounts for over 60 percent, by value, of Malawi's exports (Crosby 1993).

ZAMBIA. A third African colony where tobacco played an important role in the economy was Zambia (formerly Northern Rhodesia). While local African populations grew tobacco prior to European occupation in the early 1890s, European settlers only produced it for the first time in about 1914. By 1927 tobacco was Zambia's top export, but in the following year it was greatly affected by overproduction in Zambia and neighboring countries. Tobacco made a slight comeback as a commercial crop after World War II but never recovered pre-war production levels. At national independence in 1964 tobacco was primarily produced by African **smallholders** and had ceased to be a major export. It continued, however, to be produced for local consumption by Africans over the next twenty-five years. In the early 1990s the government introduced a land privatization policy and began to actively encourage tobacco production. While production levels rapidly rose, exports still accounted for only a small percentage of gross national product.



smallholders farmers and other rural folk who own modest-sized farms and provide their own labor.

Late-Twentieth-Century Developments

By the 1990s, only Zimbabwe and Malawi could be considered major producers of tobacco by world standards, but a number of African states nonetheless became significant tobacco producers. In countries like Kenya, Mozambique, Nigeria, South Africa, Tanzania, and Uganda, African peasant farmers took up tobacco production for export. This trend has not been generally supported by their governments but has not been discouraged either, as tobacco exports, although small, are valuable sources of foreign currency. For example, in June 2001 the United States Department of Agriculture reported that the trade value of African-produced tobacco had risen from approximately \$125 million in 1961 to nearly \$800 million in 1999.

Of equal, if not greater, concern for African governments has been the rising rate of smoking by both men and women, and particularly by children. While taxes on cigarettes and other tobacco goods have become important sources of revenue for cash-strapped African governments, increased smoking has also added to the health care costs and increased death rates in many countries. In 1999 a report by the Commonwealth Secretariat warned that by the year 2030 tobacco consumption was expected to be the biggest cause of death in sub-Saharan Africa. The rise in consumption has resulted from both increased production in African countries and a major campaign across Africa by

international tobacco companies to promote smoking. The International Non-Government Coalition Against Tobacco clearly stated the problem in 2000 when it announced that Africa “is now the target for profit accumulation by the [international] tobacco industry” (Masebu 2003).

See Also Brazil; British Empire; Dutch Empire; Portuguese Empire; Zimbabwe.

■ STEVEN C. RUBERT

BIBLIOGRAPHY

- Boahen, A. Adu, ed. *Africa Under Colonial Domination, 1880–1935*. Berkeley: University of California Press, 1985.
- Boxer, C. R. *The Portuguese Seaborne Empire, 1415–1825*. New York: A. A. Knopf, 1969.
- Brooks, George E. *Landlords and Strangers: Ecology, Society, and Trade in Western Africa, 1000–1630*. Boulder, Colo.: Westview Press, 1993.
- Crosby, Cynthia A. *Historical Dictionary of Malawi*, 2nd ed. Metuchen, Md.: Scarecrow Press, 1993.
- Ehret, Christopher. *The Civilizations of Africa: A History to 1800*. Charlottesville: University Press of Virginia, 2002.
- Elphick, Richard, and V. C. Malherbe. “The Khoisan to 1828.” In *The Shaping of South African Society, 1652–1840*. Edited by Richard Elphick and Hermann Giliomee. Middletown, Conn.: Wesleyan University Press, 1988. Pp. 3–65.
- Eltis, David. *Economic Growth and the Ending of the Transatlantic Slave Trade*. New York: Oxford University Press, 1987.
- Feierman, Steven. *The Shambaa Kingdom: A History*. Madison: University of Wisconsin Press, 1974.
- Gately, Iain. *Tobacco: The Story of How Tobacco Seduced the World*. London: Simon & Schuster, 2001.
- Goodman, Jordan. *Tobacco in History: The Cultures of Dependence*. London: Routledge, 1993.
- Grotzinger, John J., Brian V. Siegel, and James R. Pletcher. *Historical Dictionary of Zambia*. Lanham, Md.: Scarecrow Press, 1998.
- Iliffe, John. *A Modern History of Tanganyika*. Cambridge: Cambridge University Press, 1979.
- Kimambo, Isaria. “Environmental Control and Hunger in the Mountains and Plains of 19th-Century Northeast Tanzania.” In *Custodians of the Land: Ecology & Culture in the History of Tanzania*. Edited by Gregory Maddox, James L. Gibling, and Isaria N. Kimambo. Athens: Ohio University Press, 1996. Pp. 71–95.
- Kjekshus, Helge. *Ecology Control and Economic Development in East African History: The Case of Tanganyika, 1850–1950*. London: Heinemann, 1977.
- Kosmin, Barry. “The Inyoka Tobacco Industry of the Shangwe People: The Displacement of a Pre-Colonial Economy in Southern Rhodesia, 1898–1938.” In *The Roots of Rural Poverty in Central and Southern Africa*. Edited by Robin Palmer and Neil Parsons. Berkeley: University of California Press, 1977. Pp. 268–288.
- Laufer, Berthod. “The Introduction of Tobacco into Africa.” In *Tobacco and Its Use in Africa*, by Berthod Laufer, Wilfrid D. Hamsley, and Ralph Linton. Chicago: Field Museum of Natural History, 1930. Pp. 1–15.

- Masebu, Peter. "Africa Remains a Viable Market for Cigarette Companies" (18 September 2003). Available: <<http://lists.essential.org/pipermail/intl-tobacco/2000q2/000164.html>>.
- Miller, Joseph Calder. *Way of Death: Merchant Capitalism and the Angolan Slave Trade, 1730–1830*. Madison: University of Wisconsin Press, 1988.
- Newitt, Malyn. *A History of Mozambique*. London: Hurst & Company, 1995.
- Northrup, David. *Africa's Discovery of Europe, 1450–1850*. New York: Oxford University Press, 2002.
- Ogot, B. A., ed. *Africa from the Sixteenth to the Eighteenth Centuries*. Berkeley: University of California Press, 1992.
- Parsons, Neil. "The Economic History of Khama's Country in Botswana, 1844–1930." In *The Roots of Rural Poverty in Central and Southern Africa*. Edited by Robin Palmer and Neil Parsons. Berkeley: University of California Press, 1977. Pp. 113–143.
- Philips, John Edward. "African Smoking and Pipes." *Journal of African History* 24 (1983). Pp. 303–319.
- Rodney, Walter. *A History of the Upper Guinea Coast, 1545–1800*. Oxford: Clarendon Press, 1970.
- Soremekun, Fola. "Trade and Dependency in Central Angola: The Ovimbundu in the Nineteenth Century." In *The Roots of Rural Poverty in Central and Southern Africa*. Edited by Robin Palmer and Neil Parsons. Berkeley: University of California Press, 1977. Pp. 82–95.
- Stinson, F. A. *Tobacco Farming in Rhodesia and Nyasaland, 1889–1956*. Salisbury: Tobacco Research Board of Rhodesia and Nyasaland, 1956.
- Thomas, Hugh. *The Slave Trade: The Story of the Atlantic Slave Trade, 1440–1870*. New York: Simon & Schuster, 1997.
- Zezeza, Tiyambe. *A Modern Economic History of Africa*. Dakar, Senegal: Codesria, 1993.



Smoking has always been a pleasure associated with adult males and, as such, it has always held attractions for the young and a range of connotations for women. Young boys have always experimented with tobacco, and its use in certain initiation ceremonies in Native American culture confirms the link between smoking and adulthood. Countless examples exist of women smokers and takers of **snuff**, especially in the courts of early modern Europe, but smoking remained a largely adult male pastime until the end of the nineteenth century. It was with the introduction of the modern, machine-made cigarette from the 1880s that new demographics of smoking emerged, or at least societies perceived a new problem among smoking youths and women.



snuff a form of powdered tobacco, usually flavored, either sniffed into the nose or "dipped," packed between cheek and gum. Snuff was popular in the eighteenth century but had faded to obscurity by the twentieth century.

Demographics in the Early Twentieth Century

The sight of poor, urban boys smoking cheap, mass-produced cigarettes gave impetus to several antismoking groups around the world, principally in France, Britain, Australia, Canada, and the United States. Early opposition came from Frances Willard's Woman's Christian



In the late twentieth century smoking among young women was increasing even as the health risks of smoking were reasonably well known. Despite the efforts of antismoking campaigns, smoking is often seen by young people as cool, sophisticated, and even rebellious.

© UPI/CORBIS BETTMANN



cigarette cards paper trading cards sometimes featuring sports personalities or movie stars packaged with cigarettes and offered as an incentive for purchase.

Temperance Union and later from such luminaries as Henry Ford and the health advocate and cereal producer, Dr. John Harvey Kellogg. Most zealous of all was Lucy Page Gaston, the self-styled “extremist of extremists.” In 1899 she created the Anti-Cigarette League of America, an organization that eschewed the education and reform of the sinful smoker and advocated instead outright prohibition.

The Anti-Cigarette League’s medico-moral rhetoric, which connected smoking with a whole range of degenerative vices and illnesses, proved popular among Anglo-Saxon Protestants who associated cigarettes with immigrants and urban delinquent youth. By the outbreak of World War I, the movement had succeeded in outlawing cigarettes in thirteen states, with bills in six others pending (virtually every state had already banned the sale of cigarettes to minors). Similar legislation was enacted in Britain in 1908, where cigarettes were blamed for the supposed deterioration of the nation’s racial stock and their increase in sales to an apparent effeminacy in a generation eschewing the more manly pipe and cigar. The legislation was, however, largely ineffective and World War I quickly put to an end the critique of young men’s cigarette smoking. Cigarettes were easier to smoke than pipes in the trenches of the Western Front and tobacco companies, the military, governments, and newspapers organized the constant supply of cigarettes to the troops, an official recognition of the importance of tobacco in offering immediate relief to physical and psychological stress. By 1918, for participating states, the cigarette had emerged as the normal tobacco initiation for teenage boys.

The war too witnessed the growth of smoking among women. Prior to 1914, women’s smoking was associated with actresses and prostitutes, an image fixed in popular imagination through the literary and artistic portrayals of Prosper Mérimée’s and later Georges Bizet’s gypsy factory girl, Carmen, as well as images of scantily clad music hall and vaudeville stars featured on the very first **cigarette cards**. Various metropolitan “new women” of the 1890s smoked in defiance of respectable codes of femininity, though their numbers were relatively small and it was only in New York in 1908 that city legislators were sufficiently shocked so as to ban women smoking in public. In the inter-war period, cigarette smoking rates across Europe increased as women experienced much less resistance to their habit.

By 1929, women in the United States were estimated to consume 14 billion cigarettes, or 12 percent of total consumption. Advertisers were quick to take advantage of this new smoking trend and Philip Morris introduced their Marlboro brand in 1925 targeting the emerging female market. More often, however, advertisers recognized that women were far more likely to smoke the same brands as men. Therefore, Chesterfield’s, in 1926, urged women to “blow some my way” and Lucky Strike, in 1928, suggested they “reach for a Lucky instead of a Sweet.” Certainly, advertising was of some influence—and manufacturers were prepared to pay approximately 20 percent and more of the total cost of the product on promotion—but women, men, and youths took the lead offered by peers, parents, and cinema stars such as Clara Bow, Louise Brooks, Tallulah Bankhead, Marlene Dietrich, James Cagney, Spencer Tracy, Gary Cooper, Humphrey Bogart, and Lauren Bacall.

Later Trends

By 1950, around half the population in most western states smoked (between 44% and 47% in the United States), though such averages hide the fact that in countries such as the United Kingdom up to 80 percent of adult men were regular smokers. Following the smoking and health controversy of the 1950s, smoking rates fell, but far from equally for men and women. The first antismoking health campaigns tended to direct their message to adult men and it is indeed in this demographic that smoking rates have fallen most persistently. In the 2000s, smoking rates are roughly equal for adult men and women in both the United States and Europe (between one-quarter to one-third of the adult population in Europe) but many commentators still argue that smoking is a feminist issue since women are seen to smoke more often “when life’s a drag.”

Moreover, in the late twentieth century, smoking among youths increased, first among girls, and then among boys. While the health risks of smoking may be reasonably well known across all demographics, popular culture still promotes smoking as a cool, sophisticated adult activity. One study of Hollywood films, for example, found that smoking images had increased fourfold between 1990 and 1995 and that smoking was more often associated with rebellion and sophisticated **individualism**.

See Also Consumption (Demographics); Film.

■ MATTHEW HILTON

BIBLIOGRAPHY

- Goodman, Jordan. *Tobacco in History: Cultures of Dependence*. London: Routledge, 1993.
- Kiernan, V. G. *Tobacco: A History*. London: Hutchinson, 1991.
- Klein, Richard. *Cigarettes Are Sublime*. London: Picador, 1995.
- Kluger, Richard. *Ashes to Ashes*. New York: Vintage, 1997.
- Sobel, Robert. *They Satisfy: The Cigarette in American Life*. New York: Anchor/Doubleday, 1978.



individualism an independence of spirit; the belief that self-interest is (or should be) the goal of all human actions.

Agriculture See Processing; United States Agriculture.



Air Travel

The growth of air travel in the 1920s and 1930s paralleled the popularization of cigarette smoking. Originally, smoking was prohibited because of the risk of fire, but by the 1950s passengers could light up except on take-off or landing, and sample packs of cigarettes were distributed on board. In the 1960s, flight attendants, pilots, and passengers



began to question the advisability of smoking on airlines because they were suffering from respiratory illnesses and they were concerned for the safety of the passengers and crew. American Airlines flight attendant Patty Young began organizing coworkers to seek an end to smoking on commercial aircraft. In 1969 consumer advocate Ralph Nader unsuccessfully petitioned the Federal Aviation Administration (in charge of safety rules) and the Civil Aeronautics Board (responsible for accident investigation) for such a ban, but by 1973 he had convinced regulators that polls of air travelers showed support for separate smoking and nonsmoking sections. However, the 1973 rule requiring segregation of smokers and nonsmokers proved problematic as it did not specify how to segregate smokers (in the back, in the front, or on one side) and the demarcation did not prevent smoke from penetrating the nonsmoking sections.

In 1972, Surgeon General Jesse Steinfeld, against the wishes of Secretary of Health, Education, and Welfare Elliott Richardson, issued a Non-Smokers' Bill of Rights calling for measures to protect against exposure to tobacco smoke. Strong evidence to support the need for restrictions on smoking on airlines and other confined spaces was provided several years later by the 1981 studies of epidemiologists Takeshi Hirayama and Dimitrios Trichopoulos documenting a causal relationship between passive smoking and lung cancer. In addition, physicist James Repace found high levels of cotinine (a chemical created by the body's processing of nicotine) in the blood and urine of nonsmokers exposed to tobacco smoke, demonstrating that they had breathed in chemicals from tobacco smoke.

In 1984 the Civil Aeronautics Board banned pipe and cigar, but not cigarette, smoking on commercial aircraft. The mounting scientific evidence implicating tobacco smoke as a cause of disease and disability, compellingly summarized by U.S. Surgeon General C. Everett Koop in his 1986 report *The Health Consequences of Involuntary Smoking*, empowered antismoking advocates to urge Congress to pass comprehensive legislation. During hearings in 1987 before the House of Representatives Aviation Subcommittee, flight attendants testified that they were suffering from bronchitis, sinusitis, and other diseases attributable to their chronic exposure to cigarette smoke. Citing two cigarette-caused fires aboard commercial jets in mid-flight in 1973 and 1983, killing 123 and 33 people respectively, the flight attendants also reminded legislators that smoking jeopardized all passengers.

On 23 April 1988 a ban on smoking on flights of less than two hours took effect. Opponents of the law, principally the Tobacco Institute, lobbied for its repeal, but the ban proved so popular that it was extended to all domestic flights in 1990. In 1991 a class action lawsuit was filed against the tobacco industry by flight attendant Norma Broin, who had never smoked and claimed to have contracted lung cancer as the result of her exposure to the cigarette smoke of passengers and coworkers. The largest settlement of any class action lawsuit against the industry was reached in 1997, as cigarette manufacturers agreed to give \$300 million to establish the Flight Attendant Medical Research Institute to conduct further research on the effects of passive smoking.

In the 2000s most air carriers worldwide have banned smoking on at least some of their flights. Smoking is not permitted on most international

flights of foreign carriers that serve the United States and many of these carriers prohibit smoking on all flights.

■ ALAN BLUM

BIBLIOGRAPHY

- Hirayama, Takeshi. "Nonsmoking Wives of Heavy Smokers Have a Higher Risk of Lung Cancer: A Study from Japan." *British Medical Journal* 282 (1981): 183–185.
- Kluger, Richard. *Ashes to Ashes: America's Hundred-Year Cigarette War, the Public Health, and the Unabashed Triumph of Philip Morris*. New York: Vintage, 1997.
- Repace, James, and Alfred Lowrey. "A Quantitative Estimate of Nonsmokers' Lung Cancer Risk from Passive Smoking." *Environment International* 11 (1985): 3–22.
- Trichopoulos, Dimitrios, et al. "Lung Cancer and Passive Smoking." *International Journal of Cancer* 27 (1981): 1–4.



Alcohol, Tobacco, and Other Drugs

The spread of tobacco usage in the late-sixteenth and seventeenth centuries was part of the global drug confluence resulting from the European voyages of discovery, expanded trade, and the colonial plantation system. As tobacco gained in popularity, users learned to combine it with more familiar substances, often smoking or chewing them together. Drinkers chased their spirits with a pipe full of tobacco, then bought another round. Critics thought tobacco users likelier to consume intoxicants and to come to grief. They were right. Tobacco did interact with other drugs in ways that magnified **psychoactive** and toxic effects. Scientific research has confirmed early intuitions about tobacco, mainly that it was a gateway drug and that combined use multiplied its charms as well as its harms.



psychoactive having an effect on the mind of the user.

Historical Development

By the early 1600s tobacco was established in western Europe as both a medical and recreational drug. People bought and consumed tobacco in apothecaries, alehouses, and, later, cafés, all places where other psychoactive substances, from chocolate to liqueurs, were available. It would have been natural to use them while using tobacco. Soldiers and sailors, those most responsible for spreading the use of tobacco within and beyond Europe, took their leisure in brothels and taverns. The sailor in port, with a drink in one hand and a pipe in the other, puffing away to the amazement of the natives, unconsciously broadcast a cultural message about smoking behavior, that this strange thing should be done with alcohol.

By whatever emulative means, two customs of male conviviality had been established throughout Europe by 1700. They were smoking while drinking alcohol and smoking while drinking caffeinated beverages. The latter practice was also popular in Islamic coffeehouses, where



Tobacco and alcohol were not only consumed together, they were often advertised together, as in this 1876 calendar for cigars and champagne. Note the association of cigars with black labor, still widely employed in tobacco cultivation throughout the Americas.

garrulous men kept the hookahs bubbling. The more tobacco they smoked, the more coffee they drank, for smokers metabolized caffeine half again as fast as nonsmokers.

Though not a drug per se, sugar figured in the emerging tobacco–alcohol–caffeine complex. Merchants used sugar or molasses to coat smoking and chewing tobacco; distillers used it to make distilled beverages; and coffee and tea drinkers used it to sweeten their bitter infusions. Someone enjoying an after-dinner smoke over a cup of sweet coffee with a shot of rum consumed three forms of sugar as well as three distinct drugs. All came to market through the toil of unfree laborers. What made possible the mass consumption of popular drugs and their sweeteners was the steadily declining price of these commodities. What brought down the price was expanded plantation agriculture using indentured and slave labor, the economic common denominator of the early modern drug revolution.

The spread of tobacco usage outside Europe and the Middle East led to other joint practices. Chewing betel quid—the seed of the areca palm wrapped in a betel leaf with lime—was an ancient practice in south and south east Asia. Depending on local custom, betel users sweetened and flavored their quid with sugar and spices like fennel. The spread of tobacco cultivation in Asia during the seventeenth century let them add tobacco leaves, mingling two potent stimulants, nicotine and arecaidine. Subsequent migrations introduced the betel–tobacco combination to



Africa and Europe. It even became common in such places as London's Bangladeshi neighborhoods, which were also hot spots for oral cancer.

Arab traders brought **opium** to China in the eighth century, though it was not until after the introduction of tobacco that the Chinese had a ready means to smoke the drug. The mixture, called *madak*, consisted of shredded tobacco leaves and semi-refined opium. Around 1760 the Chinese learned to smoke purified opium in a separate pipe, a practice that spread from the wealthy to all classes over the next century. Tobacco remained a frequent companion, though no longer taken in the same draw. The mastermind of China's twentieth-century cigarette revolution, the American tobacco baron James B. Duke, said he hoped to lure the Chinese from their opium pipes. Charles B. Towns, who treated thousands of addicts in both America and China, thought Duke's cigarettes were simply a means to get the Chinese to spend even more on tobacco than they did on opium.

Cannabis was another Old World plant that became intertwined with New World tobacco. The consumption of cannabis folk medicines, such as liquid *bhang* mixtures, seems not to have been particularly tied to tobacco. However, recreational smokers, mostly men, learned to mingle the two drugs in the same pipe, cigarette, or cigar. In Morocco *kif* smokers added ground-up tobacco leaves to locally grown cannabis. If tobacco were missing from the mix, the smoker would complain that his *kif* "didn't have salt." In hindsight, it also lacked the nicotine necessary to forestall withdrawal symptoms.

What seems at first glance in this French ad to be a two-drug combination, alcohol and tobacco, is actually three drugs. Absinthe, wormwood dissolved in liquor, also contains the hallucinogen thujone. Though it enjoyed a vogue in the late nineteenth and early twentieth centuries, absinthe's evil reputation and concerns over military preparedness led to widespread bans by 1914. Smokers went back to relaxing with ordinary alcohol. © SWIM INK/CORBIS



opium an addictive narcotic drug produced from poppies. Derivatives include heroin, morphine, and codeine.

cannabis hemp-derived intoxicants such as marijuana and hashish.

Guilt by Association

Tobacco's links to other drugs did not go unnoticed. In the West, the most controversial association was with drinking. The American physician and educator Benjamin Rush, an early critic of alcohol and tobacco, was appalled to see groups of boys, some as young as six, strolling through the streets and smoking cigars. The habit annoyed others, wasted time, and encouraged idleness, the font of vice. However consumed, tobacco gave rise to a thirst which, Rush wrote, could not be slaked with water. "A desire of course is excited for strong drinks, and these when taken between meals soon lead to intemperance and drunkenness" (Rush 1798).

This idea—boys smoke, boys drink, boys go to hell—became a commonplace in nineteenth-century temperance literature. Of all forms of tobacco, cigarettes offered the surest road to ruin. The Keeley Institute, an American addiction-treatment franchise, would not accept cigarette smokers. Experience taught that they had slipped into the use of alcohol and narcotics easily, and that, while they smoked cigarettes, they could not abstain from other drugs. Prohibitionists sought laws against cigarettes for the same preventive reason. It seems not to have occurred to them that boys who were impulsive, defiant, and prone to keep bad company might have used intoxicants anyway. Reformers like the Illinois school teacher Lucy Gaston insisted on blaming the cigarette.

Charles Towns, a lay addiction specialist, offered a more sophisticated critique. Except for a few women, Towns wrote, every alcoholic and addict he had treated had a history of excessive tobacco use. Smoking magnified any personal predisposition toward inebriety "because the action of tobacco makes it normal . . . to feel the need of stimulation." Its irritating effects could be blunted by alcohol, on which the smoker in turn became dependent. Then came narcotics to allay hangovers and other unpleasant effects of drinking. "Cigarettes, drink, opium is the logical and regular series" (Towns 1915).

Towns saw that smoking was socially as well as physiologically conducive to addiction. Boys sought out the back rooms of pool halls and saloons to smoke in secrecy and there learned to gamble and drink. Better-educated men who refrained from smoking until they entered college found themselves "out of it" if they did not light up. Sociability was tobacco's most seductive attraction, and its social utility made it that much harder to quit. Worse, tobacco's use scandalized others, tempting them to follow the same path to intoxication. The very openness and permissibility of the vice, Towns decided, made tobacco the worst of the drug habits.

The notion of biosocial linkages between tobacco and other drugs had an uneven history during the mid-twentieth century. It persisted in otherwise disparate groups—Nazis, Mormons, Evangelical Protestants—that shared an unremitting hostility toward tobacco. But, as millions of ordinary men and women took up cigarettes, the idea that smoking led, or caused relapse, to harder drugs faded. Pamphlets at the Lexington Narcotic Hospital told new patients where to buy their cigarettes; clouds of smoke hung over Alcoholics Anonymous meetings. Researchers shifted their attention toward alcoholism as a separate, phased disease. They tended to ignore nonalcoholic drinking, let alone tobacco products that might encourage it.

Scientific Research

The paradigm shifted again in the last quarter of the twentieth century and in the direction that the early critics of tobacco had anticipated. Epidemiologists found strong statistical support for the anecdotal evidence linking tobacco to other drugs. For example, U.S. adolescents aged twelve to seventeen who reported smoking in the past month were 16 times more likely to drink heavily and 11.4 times more likely to use illicit drugs than their nonsmoking peers. The more they smoked, the higher the likelihood of other drug use. Adolescents who smoked fifteen or more cigarettes a day were twice as likely to use illicit drugs than those who smoked less frequently. These associations were not limited to smoking. High school students who regularly used spit tobacco, when compared to nontobacco users, were 16 times more likely to concurrently use alcohol, 4 times more likely to concurrently use marijuana, 3 times more likely to have ever used cocaine, and 3 times more likely to have ever used inhalants.

The relationship between tobacco and alcohol turned out to be more complex than that between tobacco and illicit drugs. U.S. data indicate that more individuals began their drug use with alcohol than with tobacco, but only a minority of these drinkers went on to smoke (Substance Abuse and Mental Health Services Administration 1999). By contrast, the majority of those who started with cigarettes went on to drink alcohol. Smokers over the age of twelve who reported using cigarettes in the previous month were 3 times more likely to binge drink (have five or more drinks in a row) than nonsmokers. Pack-a-day smokers were also 14 times more likely to binge drink than nonsmokers.

In the 1970s epidemiologists began describing tobacco as a gateway drug, an early step in a drug-use progression that begins with licit substances and advances to illicit ones like marijuana, cocaine, amphetamines, and heroin. In order to qualify as a gateway, a drug has to precede the use of another drug with which it is statistically associated. So, while 86 percent of smokers consumed coffee as compared to 77 percent of nonsmokers, tobacco was not a gateway for caffeine because smokers did not move from tobacco to coffee in a regular progression. The gateway hypothesis was probabilistic. It did not imply that all smokers would move on to illicit drug use, or that all nonsmokers would refrain. But the odds of progressing clearly lay with those who smoked.

Other studies have found gateway effects in different ethnic groups in countries outside the United States, including France, Israel, and Japan. The major sequence—alcohol/cigarettes to marijuana to cocaine to heroin—recurs throughout the literature, with heavier use of a particular class of drugs often preceding movement to the next level. More men than women reach the so-called higher stages, but there is no significant difference in route between the sexes.

The gateway hypothesis remains a statistical description rather than an explanation. The actual process by which tobacco users move on to other drugs involves at least three types of causes—social, learning, and neurochemical. None is necessary or sufficient to induce other drug use, but they all work to increase its likelihood. The social category, or “enabling factors,” refers to the sort of bad influences Towns had in mind when he described boys lighting up in the pool hall. Adolescent smokers are more likely to be part of peer groups in which

Young woman smoking a marijuana cigarette while sitting in a park during a drug legalization rally in Albuquerque, New Mexico. Critics have long suspected—and statistical studies have confirmed—that tobacco predisposes its users toward other forms of drug use, including illicit drugs like cannabis. This idea has come to be known as the “gateway hypothesis.”
AP/WIDE WORLD PHOTOS



alcohol and other drugs are accessible, to become curious about them, to be able to observe how they are used, and to receive praise if they try them.

Learning also plays an obvious role. Smoking is an acquired skill. By learning to inhale smoke into their lungs, individuals acquire the behavior necessary for consuming marijuana and crack cocaine. Because underage smoking is illegal, adolescent tobacco users also learn to develop a set of masking behaviors that can serve to hide later illicit drug use.

Finally, there is the effect of tobacco itself. Smokers have significantly lower levels of monoamine oxidase-B, the enzyme responsible for breaking down **dopamine** in the brain. As a result, they are able to sustain higher levels of dopamine for longer periods of time, particularly if they continue smoking. Elevated dopamine means elevated pleasure; tobacco works synergistically with alcohol, cannabis, cocaine, and narcotics to provide a sustained high. Hence alcohol and other drug users tend to smoke more heavily. The reverse is also true. Alcohol, a **depressant**, mitigates some of the adverse effects smokers experience, such as an increased heart rate. And alcohol activates nicotine-metabolizing enzymes, which makes it necessary to consume more tobacco to achieve the accustomed effect.

The relationship between nicotine and caffeine is complex, but researchers have shown that rats chronically exposed to caffeine self-administer nicotine at higher-than-control levels. Compared to non-smokers, heavy smokers also prefer more heavily caffeinated beverages, such as coffee rather than tea. In addition to caffeine, other drugs shown to increase nicotine consumption in animals include pentobarbital, amphetamines, methadone, and heroin.



dopamine a chemical in the brain associated with pleasure and well-being. Nicotine raises dopamine levels and intensifies addiction to cigarette smoking.

depressant a substance that depresses the central nervous system. The most common depressant is alcohol.

Health Consequences

While the combined use of tobacco and other drugs can increase their pleasurable effects, it can also have grave health consequences. Individuals who smoke and drink heavily are 38 times more likely to develop oropharyngeal (mouth–throat) cancer. By comparison, those who just drink have 6 times the risk, those who just smoke, 7 times. The risk of combined use is closer to being multiplicative than merely additive. One clue lies in studies showing that long-term alcohol consumption increases levels of cytochrome P450, a metabolic enzyme responsible for converting the **tar** in cigarettes to cancer-causing chemicals.

Smokers who regularly use tobacco in combination with marijuana or crack cocaine likewise run an increased risk of cancer when compared to single-substance users. Many of the carcinogenic chemicals present in tobacco are found in marijuana, some at substantially higher levels. Individuals who smoke both drugs receive double doses of carcinogens.

Not all combinatory effects are unhealthful. By normalizing levels of vasopressin, a neurochemical messenger, nicotine can help counteract alcohol-induced memory impairment. Nicotine can also mitigate alcohol-related motor and coordination difficulties—hence the drinker who lights up to “steady his nerves.” On balance, though, the use of tobacco with other drugs is plainly unhealthful, both because of the tendency to consume more of the combined substances and because of specific interactive effects like multiplied cancer risk.

See Also Addiction; Chemistry of Tobacco and Tobacco Smoke; Hallucinogens; Slavery and Slave Trade; Social and Cultural Uses; Therapeutic Uses; Youth Tobacco Use.

■ ANDREW M. COURTWRIGHT
■ DAVID T. COURTWRIGHT

BIBLIOGRAPHY

- Bedi, R., and P. Jones, eds. *Betel-Quid and Tobacco Chewing among the Bangladeshi Community in the United Kingdom*. London: Center for Transcultural Oral Health, 1995.
- Courtwright, David T. *Forces of Habit: Drugs and the Making of the Modern World*. Cambridge: Harvard University Press, 2001.
- Joseph, Roger. “The Economic Significance of *Cannabis Sativa* in the Moroccan Rif.” In *Cannabis and Culture*. Edited by Vera Rubin. The Hague: Mouton, 1975.
- Kandel, Denise B., ed. *Stages and Pathways of Drug Involvement: Examining the Gateway Hypothesis*. Cambridge, U.K.: Cambridge University Press, 2002.
- National Center on Addiction and Substance Abuse at Columbia University. *Cigarettes, Alcohol, Marijuana: Gateways to Illicit Drug Use*, October 1994.
- National Institute on Alcohol Abuse and Alcoholism. *Alcohol Alerts: Alcohol and Tobacco*, no. 39, 1998. Quarterly bulletin published by the NIAAA.
- Rush, Benjamin. “Observations upon the Influence of the Habitual Use of Tobacco upon Health, Morals, and Prosperity.” In *Essays, Literary, Moral and Philosophical*. Philadelphia: Thomas and Samuel F. Branford, 1798.



tar a residue of tobacco smoke, composed of many chemical substances that are collectively known by this term.

Substance Abuse and Mental Health Services Administration, U.S. Department of Health and Human Services. *Summary of Findings from the 1998 National Household Survey on Drug Abuse*, August 1999.

Tate, Cassandra. *Cigarette Wars: The Triumph of "The Little White Slaver."* New York: Oxford University Press, 1999.

Towns, Charles B. *Habits That Handicap*. New York: Century, 1915.



American Tobacco Company




James Buchanan Duke, founder of American Tobacco Company, New Jersey, 1890, and pioneer in the era of mass consumption in the United States.
© BETTMANN/CORBIS

The formation of the American Tobacco Company in New Jersey in 1890 and its forced dissolution by legal decree in 1911 stand as landmark events in the business history of the United States. During this twenty-one year period, the company created by James Buchanan (Buck) Duke utterly dominated the American tobacco market. The company's manufacturing methods, its system of distribution, and its brand promotion campaigns helped pioneer the era of mass consumption in the United States. Ironically, however, American Tobacco's ultimate legacy has proved to be the London-based British-American Tobacco Company (now British American Tobacco), a joint venture that it formed in conjunction with the Imperial Tobacco Company in 1902, which eventually bought out its American founder for \$1 billion in 1994.

Origins

The mechanization of cigarette production during the 1880s facilitated tremendous advances in the volume of output, and by the end of the decade cigarette manufacturing in America had become concentrated into the hands of a small group of enterprises. The firm that emerged as the industry leader during this period was the Durham-based company of W. Duke, Sons & Co. Under the leadership of the dynamic Buck Duke, by 1889 this firm had moved ahead of the more established cigarette manufacturers through a combination of cost-effective production and astute marketing.

As in other industries where mechanization encouraged a move toward large-scale production, Duke's firm collaborated with its four leading competitors to bid down the price of leaf. Informal **cartel** arrangements of this kind drew a hostile political response and led Congress to enact legislation designed to prevent such interfirm cooperation through the Sherman Act of 1890. However, at about the same time the state of New Jersey enacted a set of laws that allowed the formation of holding companies. This latter development enabled a single holding company to be formed that effectively merged the operations of a group of previously independent firms. Taking advantage of this new company legislation, Duke was able to persuade his leading competitors to pool operations and rationalize their production facilities to gain maximum benefits from the new form of cigarette production.



cartel a group of related business that join together to limit competition and fix prices of a certain product.

The Sherman Antitrust Act

President Benjamin Harrison and Congress enacted the Sherman Antitrust Act in 1890 in response to public concern over the dominance of monopolies, or trusts, in American business. Written by Senator John Sherman, the law stipulates that “every contract, combination, or conspiracy, in restraint of trade or commerce among the several states, or with foreign nations, is hereby declared illegal.” The law was not enforced until the administration of President Theodore Roosevelt, which began in 1901.

On 19 July 1907 the Justice Department filed a petition against the tobacco trust American Tobacco Company for

violating the Sherman Act. In *United States v. American Tobacco Co.* the company was found guilty under the Sherman Antitrust Act of 1890 of monopolizing the cigarette industry through “unreasonable” business practices, among them buying out competitors, excluding competitors from access to wholesalers, and rapacious pricing. The decision was finalized on 29 May 1911, and American Tobacco was split into sixteen successor companies.

The victory of the U.S. government in this case forever changed American business and the development of antitrust law. Further, it demonstrated the government’s interest in promoting competition in U.S. markets.

Growth and Dissolution

The American Tobacco Company was thus a five-firm merger—W. Duke, Sons & Co., Allen & Ginter, Kinney Tobacco Co., William S. Kimball & Co., and Goodwin & Co.—that created a manufacturing concern with a virtual monopoly of production over machine-made cigarettes. Duke used American Tobacco’s strength in the cigarette segment to extend its control across the market for tobacco goods as a whole, setting up a network of distribution facilities under the company’s own management. A modern corporate enterprise was created in which specialized divisions managed the various functions of sales, production, finance, and procurement. In the mid-1890s the American Tobacco Company made substantial inroads into the market for chewing tobacco (**plug**), acquiring in the process control of firms such as R.J. Reynolds and Liggett & Myers. The company also expanded rapidly abroad, initially through the development of an export trade but later through a strategy of mergers and **acquisition**.

After 1900, however, American Tobacco began to experience a number of difficulties. Duke’s pioneering use of acquisitions to develop the company’s foreign markets ran into serious opposition. In Germany its products were boycotted. In Japan, where its purchase of a controlling interest in the Kyoto-based Murai Brothers Tobacco Company was the first-ever case of a foreign takeover, the government introduced legislation that culminated in American Tobacco’s expulsion in 1904. And in Britain, where its export trade was supplemented through the purchase of the Ogden Tobacco Company in 1901, the leading British tobacco manufacturers banded together to oppose the American invader. The Imperial Tobacco Company, formed as an alliance of thirteen leading British tobacco firms, waged a commercial war with American Tobacco that ended with the formation of the London-registered British-American Tobacco Company in September 1902. This new company was handed control of all the foreign-related assets and trademarks of both the American Tobacco Company and Imperial and, under Duke’s chairmanship, developed into a vast multinational enterprise.



plug a small, compressed cake of flavored tobacco usually cut into pieces for chewing.

acquisition the purchase—sometimes called a merger—of a smaller company by a larger one. During the late twentieth century, major tobacco companies diversified their holdings through acquisition of non-tobacco products.

In fact, Duke's attention was soon shifted back to domestic affairs as antitrust pressures began to gain increasing political momentum following the successful prosecution of the Northern Securities holding company in 1904 under the Sherman Act. In 1907 the American Justice Department convened a grand jury to investigate charges of trade restraint leveled against American Tobacco and its executives. In November 1911 the Supreme Court ordered the company to be broken up into a number of independent, competing concerns. The company was also forced to sell its majority holding in British American Tobacco. Under the terms of the dissolution, the majority of the company's cigarette manufacturing capacity was divided up between three successor firms: Liggett & Myers, Lorillard, and a reconstituted American Tobacco Company.



market share the fraction, usually expressed as a percentage, of total commerce for a given product controlled by a single brand; the consumer patronage for a given brand or style of product.

Loss of Leadership and Diversification

The subdivision of assets between the successor companies left the reformed American Tobacco Company with a substantial **market share**, for it retained many of its successful cigarette brands, notably Pall Mall. Duke stepped down as chairman and was replaced by Percival S. Hill, a longtime accomplice from Durham. In the competitive melee that followed the dissolution, however, it was the newly independent R.J. Reynolds that emerged as the leading cigarette manufacturer in the United States. Focussing their entire marketing effort on a single brand, Reynolds in 1913 launched Camel cigarettes, which quickly captured one-third of the market. American Tobacco countered with the brand Lucky Strike and gradually clawed back market leadership under the more progressive management of Percival Hill's son George Washington Hill.

By the time the younger Hill died in 1946, American Tobacco had consolidated its position of market leader. However, the failure of the company under his long-term successor, Paul Hahn, to deliver a successful filter-tipped brand during the 1950s in response to the stimulus of the health scares fatally weakened its brand portfolio. Despite the fact that the unfiltered Pall Mall remained the leading individual cigarette brand until 1966, American Tobacco's **hegemony** in the U.S. cigarette market was drawing to a close. Hahn's successor, Robert Walker, failed to rectify the problem despite numerous brand launches during the 1960s.



hegemony control or superior influence over.

Although the company acquired a significant interest in the successful U.K. cigarette manufacturer Gallaher during the late 1960s, under Walker's management American Tobacco ultimately began to look for investment opportunities outside the tobacco industry. By the end of the 1960s the firm's non-cigarette business—consisting mainly of wine and spirits (Jim Beam whiskey), office equipment (Acco office products), and golf equipment (Titleist brand)—amounted to 23 percent of its sales volume, and in 1969 it formed American Brands as a new diversified holding company. Continuing this strategy, American Brands sold American Tobacco to British American in 1994 and exited from the tobacco industry completely by spinning off its shareholding in Gallaher in 1997, assuming the new corporate title of Fortune Brands.

See Also Antismoking Movement From 1950; British American Tobacco; Globalization; Lucky Strike.

■ HOWARD COX

BIBLIOGRAPHY

- Cox, Reavies. *Competition in the American Tobacco Industry, 1911–1932*. New York: Columbia University Press, 1933.
- Durden, Robert F. *The Dukes of Durham, 1865–1929*. Durham, N.C.: Duke University Press, 1975.
- Kluger, Richard. *Ashes to Ashes: America's Hundred-Year Cigarette War, the Public Health, and the Unabashed Triumph of Philip Morris*. New York, Alfred Knopf, 1996.
- Porter, P. G. "Origins of the American Tobacco Company." *Business History Review* 43, no. 1 (1969): 59–76.
- Sobel, Robert. *They Satisfy: The Cigarette in American Life*. New York: Anchor Press/Doubleday, 1978.
- Tennant, Richard B. *The American Cigarette Industry: A Study in Economic Analysis and Public Policy*. New Haven, Conn.: Yale University Press, 1950.



Antismoking Movement Before 1950

Antismoking activism in the late nineteenth and early twentieth centuries was especially influential in the United States compared with other parts of the world, and focused on cigarettes in particular rather than other forms of tobacco, such as cigars and pipe smoking.

The rapid expansion of the American cigarette industry in the late 1880s alarmed many people in the United States, including temperance workers, religious leaders, health reformers, businesspeople, educators, eugenicists, and even a few manufacturers of pipe tobacco and cigars, who resented the competition. These people shared the conviction that cigarette smoking was a dangerous new habit, particularly seductive to the young, and likely to lead to the use of alcohol and other drugs. They also believed that cigarettes were addictive and unhealthy; that second-hand smoke could harm the health of nonsmokers; and that exposure to parental smoke was harmful to children, including unborn children.

These sentiments gave rise to an anticigarette movement that enjoyed a surprising degree of legislative and judicial success during the Progressive era (roughly the first two decades of the twentieth century). A total of fifteen states, beginning with Washington in 1893 and ending with Utah in 1921, banned the sale, manufacture, possession, or use of cigarettes altogether (see sidebar). At least twenty-two other states and territories considered such legislation. Many municipalities imposed further restrictions, including making it illegal for women to smoke in public, outlawing smoking in or around school buildings, and outlawing certain kinds of advertising.

Congress rejected several petitions to prohibit the sale, manufacture, and importation of cigarettes at the federal level, but at least one congressional committee was sympathetic to the idea. Responding to a

State Cigarette Prohibition Laws (in Order of Adoption)

- Washington: enacted 1893, repealed 1895, reenacted 1907, repealed 1911
- North Dakota: enacted 1895, repealed 1925
- Iowa: enacted 1896, repealed 1921
- Tennessee: enacted 1897, repealed 1919
- Oklahoma: enacted 1901, repealed 1919
- Indiana: enacted 1905, repealed 1909
- Wisconsin: enacted 1905, repealed 1915
- Arkansas: enacted 1907, repealed 1921
- Illinois: enacted 1907, law declared unconstitutional six months later, formally repealed 1967
- Nebraska: enacted 1909, repealed 1919
- Kansas: enacted 1909, repealed 1927
- Minnesota: enacted 1909, repealed 1913
- South Dakota: enacted 1909, repealed 1917
- Idaho: enacted 1921, repealed by same session of legislature, 1921
- Utah: enacted 1921, repealed 1923

petition from the Woman's Christian Temperance Union (WCTU) in 1892, the Senate Committee on Epidemic Diseases agreed that cigarettes were a public health hazard and urged the petitioners to seek remedies from the states. Although a number of lower courts ruled that states did not have the constitutional authority to restrict cigarettes, the U.S. Supreme Court upheld the validity of such laws in an important decision (*Austin v. Tennessee*) announced in 1901.

A New Threat

Cigarettes attracted opposition partly because they were new to the American market and thus less entrenched than other forms of tobacco. Americans chewed more tobacco than they smoked, and when they smoked, they overwhelmingly preferred pipes or cigars. Some of the most vociferous opponents of cigarettes were themselves users of other kinds of tobacco. For example, the inventor Thomas Edison puffed his way through ten to twenty cigars a day, yet he believed cigarettes were "poison" and refused to hire anyone who smoked them.

Cigarettes were targeted because of their cultural connections. The first significant groups to smoke machine-made cigarettes in the United States were immigrants from southern and eastern Europe, where cigarette smoking was common. Daring members of the upper classes smoked expensive hand-rolled brands. Middle-class reformers in the American heartland deeply distrusted the habits of both the avant-garde and the foreign born. Even the *New York Times*, usually a voice of urbane opinion, warned that "the decadence of Spain began when the Spaniards adopted cigarettes, and if this pernicious practice obtains among adult Americans the ruin of the Republic is close at hand" in a 29 January 1884 article.

The case against cigarettes included the charge that they were unhealthy, even fatal. Newspapers published stories with headlines such as "Cigarettes Killed Him" and "Cigarette Fiend Dies." Although organized medicine took little interest in the subject until the 1950s, health reformers such as John Harvey Kellogg (the breakfast cereal entrepreneur) identified cigarettes as a cause of heart disease, emphysema, and most of the other health problems associated with smoking in the twenty-first century. The major exception was lung cancer, which was relatively rare until the 1930s. Cigarettes became known as "coffin nails" in the late nineteenth century because of their association with disease.

A Gateway Drug

The people who launched the first war against cigarettes were not primarily concerned about the impact of smoking on health. They gave much more attention to the role of cigarettes as a gateway to alcohol and drug use and from there to gambling, prostitution, and crime. As one writer warned, "The boy who smokes at seven, will drink whiskey at fourteen, take to morphine at 20 or 25, and wind up with cocaine and the rest of the narcotics, at 30 and later on" (Bremer 1892).

The reformers disagreed about exactly how smoking led to drinking. Some thought a particular component in cigarette smoke somehow blunted the nervous system, making smokers more susceptible to the allure of alcohol. Edison blamed acrolein, which he thought was produced by the combustion of cigarette paper. The substance, he said,



Postcard warning against smoking, features skull smoking and caption, "Still Smoking," c. 1909. Early antismoking campaigns focused largely on cigarettes as opposed to pipe or cigar smoking. Although health effects had not yet been confirmed by the medical establishment, early detractors predicted that smoking was associated with lung cancer, emphysema, and heart disease. © RYKOFF COLLECTION/CORBIS

caused "permanent and uncontrollable" degeneration of the brain cells, leaving the smoker at the mercy of baser instincts (Ford 1914). In any case, of all the charges against cigarettes during the Progressive era, the one that was most influential was the one that linked them to alcohol. At that time many people believed that the abuse of alcohol was a serious social problem; they were receptive to any effort to curb it.

Because cigarettes became more available to American consumers at a time of heightened concern about narcotics, they also came under suspicion as agents of drug use, either directly or indirectly. Cigarettes were often called "dope sticks" or "paper pills" (pill was a common term for **opium** after it was prepared for smoking); people who smoked them were "cigarette fiends"; people who manufactured and sold them were engaged in "the cigarette traffic." These pejoratives implied that cigarettes were part of a web of vice that included prostitution and drug abuse.

"Race Poison"

The tenets of Social Darwinism provided another part of the framework for the antismoking movement. Using Charles Darwin's theory of evolution as a starting point, writers such as Josiah Strong, a Congregationalist minister and author of the best-selling *Our Country* (1885),



opium an addictive narcotic drug produced from poppies. Derivatives include heroin, morphine, and codeine.

concluded that Americans of white, Anglo-Saxon, Protestant heritage were destined to rule the world. However, this destiny could be thwarted by the devitalizing influence of alcohol and tobacco.

Although Strong himself did not single out cigarettes as being any more debilitating than other forms of tobacco, many of his followers did. As proof, they pointed to Spain, which had embraced cigarettes earlier and with more enthusiasm than any other country. In an era of rapid industrial growth and imperial expansion, Spain was being eclipsed by nations that favored pipes or cigars. The outcome of the Spanish-American War in 1898 (which Spain lost) seemed to offer further evidence of the negative effects of cigarette smoking.

Social Darwinism led to eugenics, an effort to encourage the reproduction of people with supposedly superior genetic characteristics (and to discourage reproduction among people with “inferior” characteristics). Eugenecists attacked tobacco as a “race poison” that caused infertility in adults and infirmity in any children born to tobacco-smoking parents. Cigarettes were considered particularly dangerous because their smoke was more likely to be inhaled, and thus could cause greater damage to internal organs, including those involved in reproduction. Adolf Hitler would use similar arguments as a rationale for enacting a strong anti-tobacco program in Nazi Germany in the 1930s and early 1940s.

The Anti-Cigarette League

The anticigarette campaign gained momentum in December 1899, when Lucy Page Gaston, an alumna of the Woman’s Christian Temperance Union (a group that advocated laws to restrict the sale of alcohol and drugs in the United States), founded the Anti-Cigarette League of America. The League was endorsed by a broad range of prominent Americans, including David Starr Jordan, the first president of Stanford University; Harvey W. Wiley, the first administrator of the U.S. Food and Drug Administration; Benjamin B. Lindsey, a famous juvenile court judge; Irving Fisher, a leading economist; and automaker Henry Ford, whose interests ranged from prohibition to peace. By 1901, the League claimed a membership of 300,000 (mostly schoolchildren), with a paid staff overseeing chapters throughout the United States and Canada.

The League’s primary support came from groups advocating the prohibition of alcohol, including the WCTU; and temperance-oriented Protestant service organizations, such as the Young Men’s Christian Association (YMCA) and the Salvation Army. (Advocates of temperance sought to discourage the use of alcohol but did not necessarily campaign for prohibitory laws.) William Booth, founder of the Salvation Army, condemned all smoking as unclean, injurious to health, wasteful, disagreeable to others, unnatural, and self-indulgent. Officials of the YMCA disapproved of smoking in general but particularly objected to cigarettes. The organization provided a forum for anticigarette activists in the United States, and published their writings, publicized their activities, and invited them to lecture in YMCA facilities.

The League’s activities included demonstrations for schools and churches, temperance and business groups. For example, the field secretary for Michigan reported that he had lectured in eighty-five churches during one four-month period in 1912. These efforts brought in little money, but they kept the League’s name and its cause before the public.



Lucy Page Gaston

Lucy Page Gaston, a schoolteacher and later a journalist in Illinois, was a key figure in the first anticigarette campaign.

Gaston was born on 19 May 1860, in Delaware, Ohio, and raised in Lacon, Illinois, near Chicago. She grew up in a family that was strongly committed to the principles of moral reform. Her father, Alexander Hugh Gaston, was a nonsmoking, nondrinking abolitionist. Her mother, Henrietta Page Gaston, was active in the Woman's Christian Temperance Union (WCTU). A younger brother, Edward Page Gaston, was a prominent prohibitionist in the United States and Great Britain. (Prohibitionists sought laws to ban the sale, manufacture, and use of beverage alcohol.)

As a student at the Illinois State Normal School in Bloomington in 1881, Gaston led raids on local saloons and gambling halls. She later became friends with American prohibitionist Carry Nation, who became famous for smashing fixtures in bars with a hatchet; and with Frances Willard, president of the WCTU.

Gaston became interested in cigarettes as a social issue while working as a schoolteacher in the early 1880s. She was disturbed by the boys she saw sneaking behind the schoolhouse to smoke cigarettes. She believed cigarette smokers were more likely to drink, use other drugs, gamble, visit prostitutes, and otherwise slide into moral decay.

By the early 1890s, she was working as a journalist for reform-oriented newspapers and magazines near Chicago but devoting more and more time to the campaign against

cigarettes. After founding the Anti-Cigarette League of America in 1899, she spent the rest of her life in a quest to rid the world of what she called the "evil" or the "curse" of cigarettes. Her slogan was "A Smokeless America by 1925."

Gaston and the League played a role in the adoption of anticigarette legislation in a dozen states, including Illinois, in the years before the United States entered World War I. The League also operated stop-smoking clinics, distributed antismoking materials to schoolchildren, and sent lecturers to schools, churches, and civic groups around the country.

However, Gaston's impolitic statements against the distribution of cigarettes to soldiers during the war cost her the leadership of the anticigarette movement. In a letter to Secretary of War Newton D. Baker, she said it was "the greatest folly" to "dope up" soldiers with cigarettes (Tate). She remained committed to legislating cigarettes out of existence long after most of her earlier supporters had changed their minds about the value of such laws. She was forced to resign as superintendent of the League in 1918.

Gaston made several attempts to set up rival organizations, but these all failed. With no regular salary, she was forced to rely on handouts from relatives and charities. Even in these reduced circumstances, she continued to campaign for the prohibition of cigarettes. She kept up the battle until January 1924, when she was run over by a streetcar after leaving an anticigarette rally in Chicago. She died six months later, at age sixty-four. Ironically, the cause of death was throat cancer, a disease often linked to the use of tobacco.

The League also promoted a stop-smoking "cure" that involved painting the smoker's throat with silver nitrate. The chemical reacted with elements in cigarette smoke to produce extreme nausea. The League featured the cure at three stop-smoking clinics (at its headquarters in Chicago, Illinois; and in Detroit, Michigan, and Cincinnati, Ohio). Other antismoking activists opened similar clinics in New Jersey, California, and Washington State. Several were administered by juvenile court judges, who offered young offenders a choice between taking the cure or going to detention, on the theory that cigarettes encouraged criminal behavior.

"Smokes for Soldiers"

On the eve of the U.S. entry into World War I in 1917, the sale of cigarettes to adults as well as minors was illegal in eight states and

anticigarette bills were pending in nearly two dozen other states. By the end of the war, however, the first anticigarette movement had begun to collapse.

The war undercut the opposition to cigarettes in several ways. It diverted the attention of reformers who had previously supported the cause. At the same time, the war elevated the image of cigarettes, turning them into icons of manliness and virtue. Congress ordered the War Department to include cigarettes in the rations issued to soldiers overseas and to make them available at low prices to soldiers at home and abroad. Americans from all walks of life supported private “Smokes for Soldiers” campaigns to augment these supplies. Many groups that had once been hostile to cigarettes—including the YMCA and the Salvation Army—helped provide them to servicemen.

A primary rationale for distribution was that cigarettes could help soldiers avoid the temptations of what one newspaper editor called “bad liquor and worse women” (Tate 1999). The reformers were determined to “make the world safe for democracy” with an army that was chaste and sober. Cigarettes were both a distraction from and a compensation for the deprivations of military life. One YMCA report quoted a soldier as saying that the troops could “keep sober a long time” if they had enough cigarettes (Tate).

After the war, the only groups with the potential power to mount an effective campaign against cigarettes in the United States were preoccupied with ratifying and then enforcing the Eighteenth Amendment to the U.S. Constitution, which prohibited the sale of alcohol. There was a brief flurry of proposed anticigarette legislation in the early 1920s, much of it prompted by increased smoking by women, but little of it passed. By mid-decade, adults could legally buy and smoke cigarettes in every state but Kansas, which finally capitulated in 1927. Only those laws intended to protect minors (by setting minimum age limits for buying cigarettes) survived the decade.

Representatives of the tobacco industry lobbied for the repeal of anticigarette laws but a more significant factor was the need to replace revenue lost to prohibition. With states no longer able to collect money by licensing and taxing the sale of alcohol, many turned to cigarettes as a substitute. North Dakota, Iowa, and Kansas imposed state taxes and license fees when they legalized cigarettes. Legislators also were sympathetic to lobbyists from the American Legion and the Veterans of Foreign Wars, who argued that anticigarette laws were unpatriotic.

The Next Generation

Yet even as the first anticigarette movement was dying out in the United States, the groundwork was being laid for its successor. After largely ignoring the issue for decades, the medical profession began giving more attention to the impact of smoking on health. The *New England Journal of Medicine* published the first of a new generation of studies showing a statistical link between smoking and disease in 1928. Researchers H. L. Lombard and C. R. Doering studied 217 cancer victims in Massachusetts and found that most of those with site-specific cancers (lung, lips, cheeks, and jaw) were heavy smokers. The next year an article in the *Journal of the American Medical Association* suggested that **sidestream smoke** might be harmful to nonsmokers. German scientists working



sidestream smoke the smoke that rises from a burning cigarette.

under Hitler conducted studies that suggested a link between smoking and lung cancer. By 1940, more than forty studies identifying cigarettes as a health risk had been published. Three important **epidemiological** studies provided even more powerful evidence of the link between smoking and lung cancer in 1950. These reports, carrying the authority of modern science, provided the basis for an anticigarette campaign that began in the 1960s.

The first generation of anticigarette activists differed from their modern counterparts primarily in the matter of emphasis. These activists gave more attention to saving individual smokers than to protecting nonsmokers; they sought to prohibit the sale of cigarettes altogether rather than simply limit their use in public; and their rhetoric was focused on morality more than health. Like present-day reformers, they attempted to use the power of government to institutionalize their objections to cigarettes; to a limited degree, they succeeded.

The early activists had the advantage of challenging a product that was just beginning to establish a foothold in American culture. Their successors had to confront a product that had gained wide acceptance. However, medical science has handed today's reformers potent new weapons, including the argument that secondhand smoke is dangerous to the health of nonsmokers. Even many smokers consider the act of lighting a cigarette in public—once considered a social act—to be antisocial.

■ CASSANDRA TATE

BIBLIOGRAPHY

- Bremer, L. *Tobacco, Insanity and Nervousness*. St. Louis, Mo.: Nixon-Jones Printing Co., 1892.
- Ford, Henry. *The Case Against the Little White Slaver*. Detroit, Mich.: Author, 1914.
- Proctor, Robert N. *The Nazi War on Cancer*. Princeton, N.J.: Princeton University Press, 1999.
- Strong, Josiah. *Our Country: Its Possible Future and Its Present Crisis*. New York: Baker & Taylor for the American Home Missionary Society, 1885.
- Tate, Cassandra. *Cigarette Wars: The Triumph of "The Little White Slaver."* New York: Oxford University Press, 1999.
- Warfield, Frances. "Lost Cause: A Portrait of Lucy Page Gaston." *Outlook and Independent*, 12 February 1930.



Antismoking Movement From 1950

The modern-era antismoking movement (1950s to present) developed out of a direct link to earlier efforts to control tobacco use and prohibit cigarette sales. Specifically, the common links between the work of such organizations as the Anti-Cigarette League of America (1899–1930s) and later efforts beginning in the 1950s were the temperance movement

epidemiological pertaining to epidemiology, that is, to seeking the causes of disease.

and strategies developed out of Christian-based morality. While understanding the similarities to earlier crusades is an important part of the examination of the emergence of present-day antismoking activism, more important is an understanding of the differences—namely that the moral campaign (and campaigners) against smoking that emerged in the post-war era were now fueled with scientific evidence to back claims made about the association (and later causation) between tobacco use and adverse health effects.

Morality Meets Science

By 1950, the cigarette-smoking population in the United States (and most other developed countries) was well on its way to reaching its peak (more than 42% of the U.S. population smoked in 1964), despite the fact that the worldwide scientific community for nearly two full decades already had been asserting the link between cigarette smoking as a major cause of cancer (especially lung cancer) and other diseases. The scientific inquiry between 1910 and 1950 was largely a combination of retrospective epidemiological studies, clinical observation, and autopsy review. During this period, a few prominent researchers emerged as activists, most notably Dr. Alton Ochsner, a surgeon from New Orleans who provided one of the first scientific voices to the antismoking movement by campaigning publicly against cigarette smoking, basing his claims on his own and others' research findings.

The early 1950s was a pivotal period in the history of the anti-smoking movement in that important studies appearing in the medical literature resulted in widespread publicity through the media. Perhaps the best summary (for a lay audience) of the scientific literature at that time was written by Isroy (Roy) M. Norr, a former public relations consultant to the soap industry and to the Radio Corporation of America. In the October 1952 issue of the *Christian Herald*, Norr's article, "Smokers Are Getting Scared" became the basis for his own national campaign against smoking, after a condensed version of the article was published a few months later by *Reader's Digest* under the title "Cancer by the Carton" (Norr 1952). Norr went on to work closely with the American Temperance Society (supported by the Seventh Day Adventist Church) in developing educational films about the health hazards of smoking and launched his own national newsletter (published between 1955 and 1963), the *Norr Newsletter about Smoking and Health*, which was devoted to providing a layperson's review of the mounting scientific literature on smoking and health issues. The *Norr Newsletter* also covered legislative and congressional proceedings, excerpts from media coverage of smoking and health issues, and formal statements and announcements made by other organizations, such as the American Cancer Society. But the *Norr Newsletter* also focused on the need for challenging the tobacco industry and its hired allies. In nearly every issue, Roy Norr challenged cigarette manufacturers, or what he called "the cigarette cartel," "the cigarette pushers," and "tobacco propagandists."

As much as the 1950s was a decade of continued discovery and mounting scientific evidence against cigarette smoking, it was also a period of trial and error for an emerging antismoking movement. While the case against cigarettes was building, this scientific knowledge was not immediately translated into a coordinated, decisive plan of action by the

public health community. It wasn't until October 1957 that the American Cancer Society (ACS) formally accepted the cause-and-effect relationship between smoking and lung cancer. The resolution adopted (unanimously) at the forty-fourth annual meeting of the ACS called on the Public Health Service (PHS) and other agencies to "proceed with such measures as present knowledge indicates are needed for the protection of the health of people in this respect." U.S. Surgeon General Leroy Burney also released a statement on 12 July 1957 declaring the official position of the Public Health Service to be that "the weight of the evidence is increasingly pointing in one direction: that excessive cigarette smoking is one of the causative factors in lung cancer." A copy of Burney's statement and supporting evidence was sent to state medical societies and all state superintendents of education. However, Burney maintained that the agency would limit its action to disseminating new scientific information to state health departments and would not initiate an antismoking campaign or national health education effort aimed at the general public.

Verdict: Guilty; A Call for Action

On 1 June 1961, the American Cancer Society, the American Heart Association, the National Tuberculosis Association, and the American Public Health Association sent a joint letter to President John Kennedy pressing for the appointment of a special commission to examine the responsibilities of government and business in relation to smoking and health. After much discussion, President Kennedy announced that he was assigning the responsibility of a study on smoking and health to then-Surgeon General Dr. Luther Terry, who established the Advisory Committee on Smoking and Health. The committee's report, *Smoking and Health: A Report of the Surgeon General's Advisory Committee*, was released on Saturday 11 January 1964 to substantial media attention. The report concluded that smoking caused lung cancer and chronic bronchitis and "is a health hazard of sufficient importance in the United States to warrant appropriate remedial action." The first major policy response to the 1964 surgeon general's report was the 1965 Cigarette Labeling and Advertising Act, which mandated warning labels on all cigarette packages.

Within days of the release of the 1964 surgeon general's report, the American Medical Association (AMA) struck a deal with six of the nation's leading tobacco manufacturers and formed its own committee to conduct research. Three of the members of the AMA's committee also had served on the surgeon general's advisory committee, while two others also served on the industry's Council for Tobacco Research. The AMA had rebuffed previous requests to get involved in the issue. It would be fully 14 years (and nearly \$18 million from the tobacco industry) later before the AMA, the leading medical professional society in the country, would finally endorse the 1964 report of the surgeon general.

One of the first major nongovernmental antismoking initiatives was launched in 1967 by John Banzhaf, at the time a young attorney who successfully petitioned the Federal Communication Commission (FCC) to apply the Fairness Doctrine (an FCC regulation that required broadcasters to allot time to contrasting points of view on controversial topics) to cigarette advertising, thus requiring broadcasters to air anti-smoking commercials. The effect (an initial, significant reduction in cigarette consumption) was short-lived. In response, tobacco companies

removed their advertisements from the airwaves (thereby removing the antismoking commercials at the same time as the fairness doctrine would no longer apply), a policy that was made law by the 1969 Public Health Cigarette Smoking Act. However, a limited form of cigarette advertising on television continued indirectly through the sponsorship of televised sport and sporting events. In 1968, Banzhaf founded the organization Action on Smoking and Health (ASH), which has remained a force in the antismoking movement, especially in the area of clean indoor air legislation.

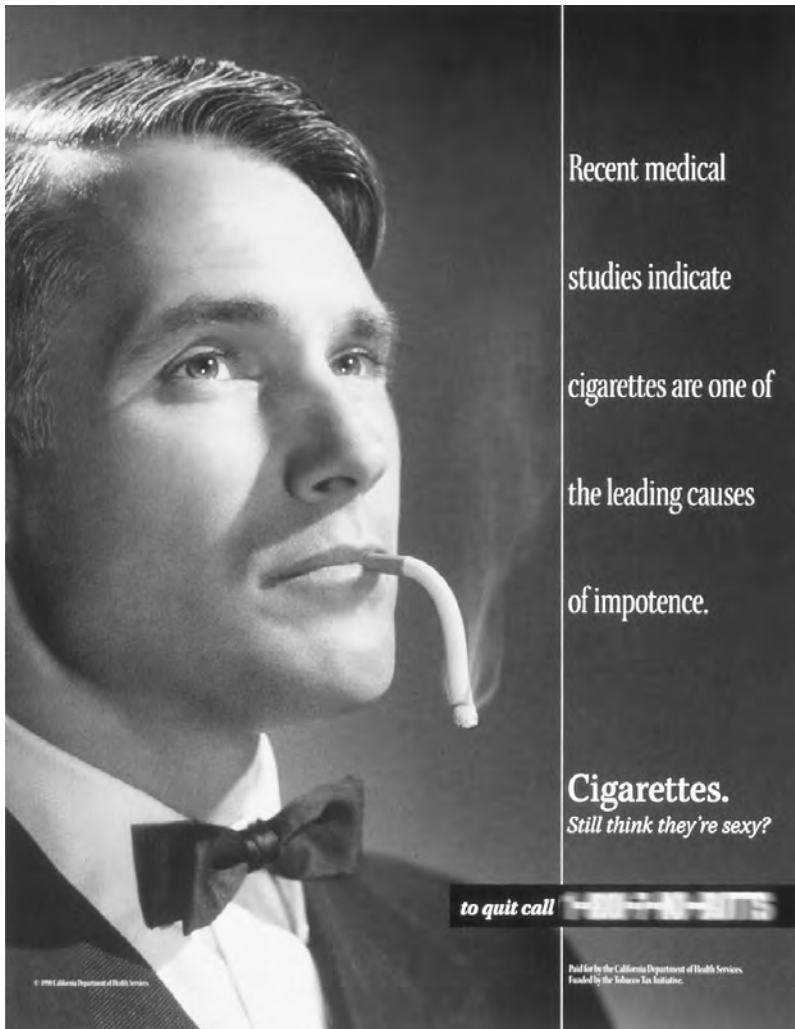
Emerging Activism

Beginning in the 1960s and into the 1970s and 1980s, antismoking efforts in the U.S. began to develop into a more diverse movement, with a broad constituency consisting of traditional public health organizations (i.e., governmental, voluntary and professional health, medical and scientific agencies) and the formation of collaborative efforts. This trend included the priority of advocating for new policy and regulation at all levels, such as cigarette advertising restrictions, warning labels on cigarette packs and in cigarette advertising, increases in cigarette excise taxes, and clean indoor air legislation.

This was also a period where activism emerged in the form of independent organizations and individuals with a focus on restricting and eliminating smoking in public places. Local and statewide grassroots organizations, such as GASP (Group Against Smoking Pollution), were formed in the early 1970s in order to address both the nuisance and public health threats posed by the inhalation of secondhand smoke. Such grassroots efforts had begun in the 1960s by individuals, most notably flight attendants who fought to ban smoking on U.S. commercial airlines (something that would not happen until the 1990s). In 1971, in conjunction with the release of an updated report on smoking and health, U.S. Surgeon General Dr. Jesse Steinfeld called for a non-smokers' rights movement, citing the accumulating evidence of adverse health effects caused by secondhand smoke. Dr. Steinfeld called for a ban on smoking in all confined public places including restaurants, theaters, airplanes, trains, and buses. This call was later echoed by succeeding Surgeons General Drs. Julius Richmond (1977–1981) and C. Everett Koop (1981–1990), which helped to fuel the already-growing public sentiment for smoke-free public places.

Shifting the Focus: Tobacco Industry Becomes Target

During the 1970s, however, the action by government agencies did not match the priorities advocated by outspoken public health individuals and grassroots organizations. The National Cancer Institute (NCI), the federal government's leading cancer research arm, focused its research efforts primarily on studying potentially "less hazardous cigarettes" rather than studying methods for preventing youth smoking or helping adult smokers to quit. It was not until 1978, after lawyer Joseph Califano became Secretary of the Department of Health, Education, and Welfare under the incoming Carter Administration, that a strong antismoking campaign became a priority for the federal government.



Poster from antitobacco campaign of the California Department of Health Services. Medical studies indicate cigarettes are one of the leading causes of impotence. CALIFORNIA DEPARTMENT OF HEALTH SERVICES

In January 1978 Califano outlined his battle plan in a public speech in which he called cigarette smoking “Public Health Enemy Number One” and “slow motion suicide.” However, Califano was fired by President Carter the following year, allegedly because of his outspoken stand against tobacco.

During the late 1970s and throughout the 1980s, the antismoking movement realized a primary shift of focus—away from the behavior of people who smoke and toward the behavior of the tobacco industry. In 1977, a family physician, Dr. Alan Blum, founded DOC (Doctors Ought to Care). Drawing from the grassroots successes of GASP organizations, DOC organized physicians and other health professionals to take action on smoking in the clinic, classroom, and community. In the late 1970s and early 1980s, DOC became best known for its “housecalls” made at tobacco-sponsored sports and cultural events. These orchestrated protests were designed to call public attention to and ridicule such events as the nationwide circuit of Virginia Slims Tennis Tournaments, the Benson and Hedges Film Festival, and the KOOL Jazz Festival. The organization used humor and satire in its efforts and pioneered the strategy of paid counteradvertising in the mass media. Many of

DOC's concepts and strategies were born from the frustration of failed government and voluntary health agency efforts, and the feeling that such organizations were simply providing lip service to tobacco problems (i.e., the benefactor of the 1976 Virginia Slims Tennis Tournament in Miami was the local division of the American Cancer Society).

The efforts of DOC sparked a nationwide effort to reform the anti-smoking movement (at its peak in the late 1980s DOC had established more than 150 local chapters in nearly every state). Other grassroots organizations were formed with a focus on developing new viewpoints and strategies to counteract tobacco use and promotion. In 1985, STAT (Stop Teenage Addiction to Tobacco) was formed by Joe Tye, a hospital administrator, to draw attention to cigarette manufacturers' targeting of children with advertising and promotion, and to advocate for policies restricting the sale of cigarettes to children. Several organizations, with missions similar to the GASP groups formed in the 1970s, began popping up around the country. One of the earlier groups, Arizonans Concerned About Smoking (ACAS), and its director Don Morris relied on the leadership and support from former Public Health Service leaders, including Dr. and Mrs. Luther Terry and Dr. Leland Fairbanks. In the late-1980s, the organization SmokeFree Educational Services was founded by Joe Cherner in New York to work for clean indoor air legislation, as was SmokeFree Pennsylvania established by Bill Godshall. While many of these organizations were originally formed to strengthen clean indoor air laws at the local and state levels, most evolved into multi-focus groups, developing collaborative strategies with other activist organizations.

Meanwhile, during this period, the voluntary health organizations were working to develop federal policy initiatives (including, among others, to increase the federal excise tax, ban cigarette advertising, and improve the language of mandated health warnings on cigarette packs and in advertisements). The Coalition on Smoking OR Health, initially established by the American Cancer Society, American Lung Association, and American Heart Association (other organizations would join as sponsors later), set out to serve as a national leader for advocating policies to govern and regulate the tobacco industry at the federal level. For much of the 1980s and into the 1990s, this was the major national anti-smoking initiative of these organizations. The demise of the Coalition on Smoking OR Health in the mid-1990s came after the announcement of the formation of the Campaign for Tobacco-Free Kids, a new national organization based in Washington, D.C., and funded by the Robert Wood Johnson Foundation, the nation's largest health foundation and a newcomer to the tobacco issue.

The 1990s also witnessed a dramatic expansion in litigation as a major antitobacco strategy involving major political players—state attorneys general, well-financed plaintiffs lawyers, former tobacco company employees testifying for plaintiffs (so-called whistle-blowers), class action status among some suits, and the efforts on behalf of a host of third-party plaintiffs (the states, health insurance companies, pension funds). The State of Mississippi and its Attorney General Mike Moore are credited with the first major success in tobacco litigation, having brought suit against the major U.S. cigarette manufacturers in 1994 (stating claims for reimbursements the state made for Medicare costs due to smoking-related illnesses) and settling before trial for nearly

\$4 billion in 1997—to be paid out to the state over 25 years. It was the first suit of its kind, and other states began to follow this legal model shortly after Mississippi filed its claim. The end result (but not the end of tobacco litigation) was the development and ratification of a Master Settlement Agreement in 1998 between six major U.S. cigarette manufacturers (other, smaller tobacco companies have joined the settlement) and 46 states in the U.S. (the tobacco industry had settled separately with Mississippi, Florida, Texas, and Minnesota). The total sum to be paid by the tobacco industry to the states over 25 years was \$206 billion (the total, including the four states that settled separately, was \$246 billion).

Success or Failure?

During the 1990s, the National Cancer Institute conducted a large nationwide intervention study—the American Stop Smoking Intervention Study, known as Project ASSIST. With a budget of approximately \$120 million over seven years (two years for planning and five years for the actual intervention), the overall goal of Project ASSIST was to reduce smoking in the U.S. by 50% by the year 2000. This reduction was to be accomplished through the implementation of a public health model for what was by 1991 being called “tobacco control.” Specifically, Project ASSIST provided funding to seventeen states for the development and support of coalitions at the state and local levels to plan a multi-layered approach for implementing antismoking messages in an effort to change social norms. The goal of ASSIST was to change the social, cultural, economic, and environmental factors that promote smoking by utilizing four policy strategies: promoting smoke-free environments; countering tobacco advertising and promotion; limiting youths’ access to tobacco products; and raising excise taxes to increase the price of tobacco products. The interventions were developed and implemented by networks of state and local tobacco control coalitions. The most recent analyses of data from the impact of ASSIST have showed a greater reduction in smoking prevalence (the number of people who smoke) in states participating in the ASSIST program than in non-ASSIST states, but the effect seen has been modest.

The 1990s also realized a major political move by antismoking forces through successful ballot and legislative initiatives in several states designed to increase the cigarette excise tax and earmark funds for antismoking programs. California (which actually passed its ballot measure, Proposition 99, in 1988) was followed by similar initiatives in Massachusetts, Arizona, Florida, Alaska, and Oregon, where tax increase initiatives ranged from 25 cents per pack to over \$1 per pack. But controversy and debate also arose in each state when the money became available for antismoking programs over how the funds should be spent. The funds in most states were, among other purposes, supposed to buy the best minds in advertising to counteract smoking through paid advertising campaigns. While some ad campaigns won awards (most notably in California and later in Florida), they lacked the frequency needed to make a more significant impact.

More recently, the Master Settlement Agreement (MSA) has been considered a landmark development in the antismoking movement, primarily for two reasons: 1) It established several restrictions of cigarette



advertising and promotion to be phased in over several years; and 2) it provided substantial funding (\$1.7 billion) for the establishment of a national foundation (later named the American Legacy Foundation) to develop a major antismoking initiative. There was also the promise by attorneys general and the private lawyers handling the state cases (also serving as settlement negotiators) that states receiving settlement funds would earmark an annual percent to fund state antismoking programs. However, state legislatures in a number of states have not stuck by their promises and have redirected money from the windfall settlement into programs other than antismoking efforts. The states, some activist charge, have become “addicted” to the cash flow from the settlements to close their budget deficits (the tobacco companies raised the price per pack to cover the expense). Meanwhile, some antitobacco advocates have warned that the dependence of public health programs on tobacco industry payments may divert organizations away from their primary public health mission.

See Also Advertising Restrictions; Air Travel; Litigation; Politics; Prohibition; Smoking Restrictions.

■ ALAN BLUM
■ ERIC SOLBERG

BIBLIOGRAPHY

- Advisory Committee to the Surgeon General. *Smoking and Health: A Report of the Surgeon General's Advisory Committee*. U.S. Department of Health, Education and Welfare. Public Health Service. No. 1103, 1964.
- Blum, Alan. “Medicine vs. Madison Avenue: Fighting Smoke with Smoke.” *Journal of the American Medical Association* 242 (1980): 739–740.
- . “The Marlboro Grand Prix: Circumvention of the Television Ad Ban on Tobacco Advertising.” *New England Journal of Medicine* 324 (1991): 913–916.
- . “Role of the Health Professional in Ending the Tobacco Pandemic: Clinic, Classroom and Community.” *Journal of the National Cancer Institute*. Monograph No. 12. (1992): 37–43.
- Blum, Alan, ed. “The World Cigarette Pandemic.” *New York State Journal of Medicine* 83, no. 13 (December 1983): 1225–1381.
- . “The World Cigarette Pandemic, Part II.” *New York State Journal of Medicine* 85, no. 7 (July 1985): 278–477.
- Blum, Alan, Eric Solberg, and Howard Wolinsky. “The Surgeon General’s Report on Smoking and Health 40 Years Later: Still Wandering in the Desert.” *The Lancet* 363 (2004): 97–98.
- Neuberger, Maureen. *Smokescreen: Tobacco and the Public Welfare*. Englewood Cliffs, N.J.: Prentice Hall, 1963.
- Norr, Roy. “Cancer by the Carton.” *Reader’s Digest* (December 1952): 7–8.
- Norr, Roy, ed. *Norr Newsletter about Smoking and Health* 1, no. 1– vol. 6, no. 3 (1955–1961). Available at the New York Academy of Medicine Library.
- Smoking and Health. Report of the Royal College of Physicians of London*. London: Pitman Medical, 1962.
- Wolinsky, Howard, and Tom Brune. *The Serpent on the Staff: The Unhealthy Politics of the American Medical Association*. New York: G. P. Putnam’s Sons, 1995.



Antismoking Movement in France

There has been an antitobacco movement in France ever since tobacco was first introduced into the country in the middle of the sixteenth century. Among those individuals who opposed its use were Louis XIV, his personal doctor Fagon, the prelate Bishop Jacques-Bénigne Bossuet, the writer Balzac, and the statesman Charles-Maurice de Talleyrand, all of whom spoke out against its dangers. Their point of view was, in turn or simultaneously, moralistic, religious, or social. Balzac claimed that tobacco “infests the social state” (1839); a journalist from the period wrote that it is “a fashion that nicely darkens your teeth, perfumes and softens your breath, and makes your mouth look like a chimney” (*Journal* 1807). Despite such strong objections to the substance, tobacco use continued to be popular.

At the time, however, there was little scientific understanding of the effects of tobacco, so the warnings did not carry much weight. In the early 1800s, the French chemist Louis-Nicolas Vauquelin extracted a “potent, volatile, and colorless substance” from tobacco which he named “essence de tabac.” The substance was later named “nicotine” after Jean Nicot, the French ambassador to Portugal who first brought tobacco into France. Nonetheless, tobacco continued to be popular among the French people in the form of pipes, cigars, and, soon after, cigarettes. This democratization of use began to worry those interested in public health.

The first antitobacco association dates back to the Second Empire (1852–1870). It brought together some one hundred people, all aiming to prove that tobacco abuse played a role in weakening family ties and harming the moral interests of society. Among these hundred or so pioneers were not only important figures in the world of science, such as the French chemist and microbiologist Louis Pasteur, but also ordinary doctors and teachers. In fact, the antitobacco movement must be seen as part of a larger trend, that of promoting healthy living to regenerate the French population. At the end of the nineteenth century, the association supported a law that would protect minors and ban smoking in army barracks, on public transportation, and in post offices. But the State, which received close to 10 percent of its revenue from tobacco sales, did not respond to their demands.

It was not until the 1950s, after revelations from America and Britain about the harmful effects of cigarette smoke on human lungs, that a new movement took off. The Right to Clean Air National Committee, a nongovernmental organization, was founded in 1959; it became the National Anti-Tobacco Committee in 1968, and in 1977 the group was formally recognized by the government, allowing it to receive state subsidies and have legal standing. The State finally acknowledged tobacco’s risk to public health by passing a law proposed by Health Minister Simone Veil in 1976. This new law limited the amount of tobacco advertising and required disclosure of tar and nicotine levels on cigarette packs. Additionally, the National Committee for Health and Education launched national antismoking multimedia campaigns via newspapers, posters, radio, and television.

Antitobacco Pioneer Émile Decroix (1821–1901)

An ardent and original mind anxious about social progress, Émile Decroix, who served as a veterinarian in the Imperial Army, made the double commitment during the campaign of Morocco in 1859 to propagate the use of horse meat for human consumption and to fight the use of tobacco. Appointed to the National Guard upon his return to Paris and honored with the Knight’s Cross of the Legion of Honor, Decroix enjoyed sufficient authority to found a committee for the propagation of the consumption of horse meat. Then, in 1868, he convinced his colleagues on the committee to take on a new mission, this time against tobacco. In both of these endeavors, Decroix believed that he was both enlightening the people about health and morality and giving them the means to satisfy their basic needs.

Prior to his death Decroix wrote many books and articles against tobacco use. To give more momentum to his cause, in 1877 he founded the French Association Against Tobacco Abuse, which attempted to promote instructional campaigns, especially for the youth in schools, and also lobbied with the authorities. Due to lack of funding, the association shut down at the beginning of the twentieth century.



Cigarette packs with new labels were seen in Paris on Thursday 26 June 2003. New regulations required much larger labels, some with the message “Smoking kills” (left) or “Smoking can reduce blood flow and causes impotence” (center).

AP/WIDE WORLD PHOTOS

Finally, in 1991, the Evin law was passed. It outlawed all pro-tobacco propaganda in all forms of media—press, radio, and television; restricted considerably the smoking sections in public areas; and triggered a huge rise in cigarette prices when the State raised taxes and the manufacturers raised prices accordingly. The Evin Law is one of the most restrictive in Europe. However, the law has not been strictly enforced. Many lawsuits have been brought against violators and cigarette manufacturers in recent years, with limited success.

See Also Antismoking Movement Before 1950; Antismoking Movement From 1950; French Empire; Tobacco Control in Australia; Tobacco Control in the United Kingdom.

■ DIDIER NOURRISSON

BIBLIOGRAPHY

- Balzac. *Traité des excitants modernes*. Paris, 1839.
- De Pracontal, Michel, *La guerre du tabac*. Paris: Fayard, 1998.
- Journal du département de la Loire*. (7 December 1807): 5.
- Nourrisson, Didier. *Le tabac en son temps: De la séduction à la répulsion*. Rennes, France: Ecole nationale de santé publique, 1999.
- . *Histoire sociale du tabac*. Paris: Christian, 2000.
- . “Naissance du tabagisme.” In *Education à la santé. XIXe-XXe siècle*. Rennes, France: Ecole nationale de santé publique, 2002.



Appetite

Among the many reasons people give for smoking today, one is that they believe smoking helps them lose weight or maintain a lower weight, either because smoking acts as a substitute for food, or because it suppresses hunger. This belief is particularly common among women and young girls in countries that place a high cultural value on thinness, such as the United States, equating it with success and desirability. Women are also more likely to be worried about putting on weight after quitting smoking. Although in reality the average weight gain upon stopping is only about 5 pounds (2.3kg), the perception is that it will be much greater.

The Historical Context of Smoking and Appetite

The association of smoking, particularly cigarette smoking, with slenderness is one that has been promoted by advertising throughout the twentieth century, but its roots lie in the earliest recordings of tobacco use. European visitors to the Americas from the late fifteenth century onward heard tales of the indigenous population smoking an herb that was both intoxicating and an appetite suppressant. One of the earliest writings to mention tobacco, *Joyful News of Our Newfound World*, written in 1565 by a Spanish physician, Nicolás Monardes, records that chewing tobacco mixed with lime suppressed hunger and thirst. He suggested it was the juices of tobacco that eased hunger. A French physician, Edme Baillard, writing a century later about **snuff**, also noted that it reduced hunger and thirst.

Historians have suggested that one reason tobacco became popular in Europe from the sixteenth century onward, particularly among poorer people, was because it alleviated hunger. In the sixteenth century, tobacco smoking was known as “tobacco drinking” or “fog-drinking,” language that implies that smoking is a form of nourishment, an idea further reinforced by the practice of swallowing (inhaling) tobacco smoke or chewing tobacco. These ideas persisted. For example, a medical treatise on tobacco published in 1839 describes how Native Americans used tobacco to allay hunger when food was scarce, while several journals noted the inverse relationship between smoking and body weight in the nineteenth century. However, this was also seen as a negative consequence of smoking, as antismoking campaigners were concerned that men were spending money on tobacco instead of nutritious food for their families. By the early twentieth century, a common concern in antismoking literature was that juvenile smoking stunted the physical growth of young boys.

Although not much was known about exactly how tobacco worked to reduce the appetite, it was a concept that became important in the 1920s when cigarette manufacturers were seeking to expand their market to include more women smokers. With the fashionable new slim silhouette of the 1920s, diet, exercise, and weight became a concern among girls and young women anxious to fit in with new trends.



snuff a form of powdered tobacco, usually flavored, either sniffed into the nose or “dipped,” packed between cheek and gum. Snuff was popular in the eighteenth century but had faded to obscurity by the twentieth century.



Research shows that some people, particularly girls and women, use smoking as a way of controlling their weight.

© CORBIS

Cigarette manufacturers picked up on this with images of young, fit, fashionable, thin, and attractive women in their advertising. In the United States, the manufacturers of Lucky Strike cigarettes, American Tobacco, went one step further. According to the story, the president of the company, George Hill, was driving to work one day when he saw a large woman chewing on gum or a sweet. On the same journey, he saw a slender woman in a taxi, smoking a cigarette. From these two images, his new advertising campaign was born with the slogan, "Reach for a Lucky instead of a sweet." Although the confectionary industry complained, the campaign was enormously successful.

However, the Federal Trade Commission recommended that American Tobacco tone it down, removing the implicit claim that smoking

was a way to diet. The subsequent campaign placed slim people inside fat silhouettes and exhorted people to “avoid the future shadow” by choosing Lucky Strike. The British manufacturers of Kensitas cigarettes duplicated this approach in their advertising. Using images of both sexes, the company warned people not only against eating too much, but also against “harsh reducing,” in other words, dieting. Instead, they advocated moderation in both nourishment and smoking.

Tobacco advertising also indirectly suggested that smoking could be used as a food substitute by promoting the “taste” of the cigarette and the fact that it was kind “on the palate.” The use of **menthol** in particular was one way in that the taste of cigarettes was enhanced, and the marketing—images of freshness and coolness—led some smokers to think that these cigarettes were actually healthier. However, research has shown that women who smoke menthol cigarettes actually inhale more deeply and could be more nicotine-dependent than those who smoke nonmenthol cigarettes.

From the early Lucky Strike advertisements onward, the tobacco industry has continued to exploit the idea that smoking helps prevent weight gain, a message particularly aimed at women. In the 1950s, one firm developed a cigarette called Trim, which they sought to market as a weight-reducing product. In the 1960s, manufacturers developed so-called “slim” cigarettes, which were longer and slimmer than normal cigarettes. Of these, Virginia Slims has been one of the most enduringly popular brands. Over the years its advertising has combined ideas of independence and success (“You’ve come a long way, baby”) with ideas of thinness (“Slimmer than the fat cigarettes men smoke”). As the health risks of smoking became known, cigarette manufacturers turned toward lower **tar**, lower nicotine cigarettes. The subtle message that cigarettes can be used to help stay thin was reinforced with terms such as “light,” “thin,” and “ultralight.” One brand, Kim, launched in the 1980s, was described as “a light tasting, low nicotine cigarette with a small circumference.” These products were aimed at young women in the 20 to 28 age group.

The Scientific Context of Smoking and Appetite

Exactly how and why smoking has an effect on body weight has been a focus of research since the mid-twentieth century, both within the tobacco industry and outside it. Tobacco industry documents dating from the 1950s suggest that industry was researching the relationship between smoking and appetite and looking for ways of exploiting and enhancing the apparent appetite-suppressing qualities of cigarettes. In 1956, for example, a patent application filed by Philip Morris related to the development of an appetite satient, a product designed to suppress the appetite without supplying calories and to be smoked in a cigarette. The application acknowledged that people who smoked generally ate less and were thinner, explaining this as the psychological effect of sucking at the cigarette. The product sought to combine this psychological effect with a **physiological** one, by creating a sense of dryness in the mouth, and thus increasing the sucking reflex of the smoker. Other research suggested that appetite was a result of the stomach contracting when it was empty. Researchers thought that smoking a cigarette could stop these contractions for up to an hour.



menthol a form of alcohol imparting a mint flavor to some cigarettes.



tar a residue of tobacco smoke, composed of many chemical substances that are collectively known by this term.



physiology the study of the functions and processes of the body.



The perception that tobacco use can suppress appetite has existed since the sixteenth century. In the 1920s the American Tobacco Company found great success with the ad campaign encouraging women to “Reach for a Lucky instead of a sweet.” © KELLY A. QUIN. REPRODUCED BY PERMISSION

Most research on smoking and appetite has explored the way in which the inverse relationship between smoking and body weight works. Until the 1990s, this originally centered around the assumption that smoking led to a change in energy balance, for example, by increasing expenditure of calories, either through exercise or increasing the metabolic rate, or by reducing the number of calories consumed (by suppressing appetite or influencing the type of food eaten). There is no evidence that suggests that smoking makes people more physically active, but there is evidence that suggests that smoking and nicotine intake increases the metabolic rate. One way this works is by stimulating the nervous system to produce catecholamines, or hormones that cause the heart to beat faster and therefore make the body burn more calories. Catecholamines help explain some, but not all, of the change in body weight found by smokers when they change smoking status.

Another physiological effect of smoking is that it lowers the insulin level in the body, which accounts for the decreased consumption of sweet foods observed in smokers. However, research has found that smokers do not eat less overall than nonsmokers. Indeed, a number of studies conducted in the late 1980s and early 1990s suggested that smokers actually eat more, and their choices are less healthy (more caffeine and alcohol in particular and less fruit, vegetables, and minerals) than nonsmokers, although this may be due to education and personality differences rather than smoking alone.

However, research has also shown that smokers tend to eat more when they quit smoking. There are a number of possible explanations for this phenomenon. Smoking reduces anxiety and other negative feelings and eating, particularly sweets and chocolate, may serve the same purpose, as carbohydrates increase the levels of serotonin in the brain. In one study, smokers who were given a serotonin reuptake inhibitor, fluoxetine, did not put on as much weight when they gave up smoking as would have been expected (Gilbert). However, other studies have shown that changes in diet after giving up smoking to include more fat and carbohydrates were transient, often lasting only a few weeks. If eating helped to allay negative feelings in the same way as cigarettes, increased consumption of sweet foods would be expected to continue. Another explanation is that smoking adversely affects taste and smell, and this is reversed when smokers give up; thus they enjoy food more.

One current theory (late 1990s to early 2000s) about the relationship between smoking and body weight is that appetite and the amount of food consumed is not directly related to smoking or not smoking, but is a result of the effect of nicotine itself on the brain. Nutritionists argue that body weight, like body temperature and the amount of body water, is physiologically regulated for each individual. The body adjusts both the intake and expenditure of calories to stabilize the weight of an individual at this set level, known as the body weight set-point. Nutritionists believe that the body weight set-point is controlled by hypothalamic mechanisms (from the part of the brain that controls hunger, thirst, and satiety). Researchers have suggested that nicotine affects the regulation of food intake in the hypothalamus. This lowers the body weight set-point, and therefore the weight gained on stopping smoking is merely a return to the body's natural weight set-point. Nicotine replacement therapy may delay any weight gain when stopping smoking.

However, there is no effective way of countering the weight gained when stopping smoking and antismoking groups tend to focus their efforts on dealing with the perception of weight gain. The amount of weight gained is relatively small and the health effects minimal in relation to the substantial benefits from giving up smoking.

See Also Body; Psychology and Smoking Behavior; Women.

■ ROSEMARY ELLIOT


BIBLIOGRAPHY

American Heart Association and Others Before the Food and Drug Administration. *Petition of the American Heart Association, the American Lung Association and the American Cancer Society, Acting as the Coalition on Smoking and Health Requesting Classification of Cigarettes Which Make Implied or Direct Weight Loss Claims as "Drugs" under the Food, Drug and Cosmetic Act. Citizen's Petition.* Online. 1991. Available: <<http://tobaccodocuments.org/rjr/512687305-7345.html>>.

Cabanc, M., and P. Frankham. "Evidence that Transient Nicotine Lowers the Body Weight Set Point." *Physiology and Behaviour* 65 (2002): 539-542.

Ferguson, E. A. United States Patent Office 2 773 785, *Appetite Satiating Composition.* 1956. Available: <<http://tobaccodocuments.org/pm/2026479779-9780.html>>.

Gilbert, David G. *Smoking: Individual Differences, Psychopathology and Emotion.* Washington, D.C.: Taylor and Francis, 1995.



"When I did stop smoking, I had put on so much weight. I was on a diet to try and lose weight. I started smoking again when I had just two pounds to lose. Then it was OK because I smoked to keep my weight down."—Female oral history respondent, aged 54, interview with author, 27 March 2000.

"Last week I smoked quite a bit because I was trying to diet again . . . if not I'd have eaten."—Female oral history respondent, aged 53, interview with author, 9 November 2000.

- Goodman, Jordan. *Tobacco in History: The Cultures of Dependence*. London: Routledge, 1993.
- Grunberg, N. E. "The Inverse Relationship Between Tobacco Use and Body Weight." 1990. Available: <<http://tobaccodocuments.org/rjr/509757154-7197.html>>.
- Jacobson, Bobbie. *Beating the Ladykillers: Women and Smoking*. London: Pluto Press, 1986.
- Kessey, R. E., and M. D. Hirvonen. "Body Weight Set-Points: Determination and Adjustment." *Journal of Nutrition* 127 (1997): 1875S–1883S.
- Perkins, K. A. "Effects of Tobacco Smoking on Caloric Intake." *British Journal of Addiction* 87 (1992): 193–205.
- Thornton, R. E. *The Smoking Behaviour of Women*. Report no. RD1410. British American Tobacco Archive, Guildford, B31383–6, 1976.



Archaeology

Tobacco has an extensive prehistoric past. Archaeologists have investigated several aspects of the prehistory of tobacco. Much of this research focuses on North and South American contexts, where evidence of the earliest documented use of tobacco can be found.

Methods

Archaeology depends upon material evidence left behind by past societies. Material evidence for tobacco can be divided into two types: direct and indirect. Direct evidence refers to physical remains of the tobacco plant in association with evidence of prehistoric human activity. Indirect evidence refers to material remains that are commonly associated with tobacco use in the absence of direct material evidence of the plant. While direct evidence is preferable, as it presents a much stronger case for past tobacco use, it is much rarer in the archaeological record. Accordingly, many archaeological studies have focused on indirect evidence.

The most common type of direct evidence archaeologists use to study tobacco use is macrobotanical remains, especially seeds. Tobacco seeds are distinctive and can be identified to species. Tobacco seeds are also extremely small in size and therefore difficult to recover archaeologically. Palynological analyses (the identification of plant pollen), while able to identify the presence of ancient tobacco, often cannot make a direct connection between tobacco and human use of the plant, since plants disperse pollen over a wide area. Phytolith analysis (the identification of mineral inclusions in plant cells) may have potential to identify prehistoric tobacco use, but this has been disputed (Adair 2000; Piperno 1988), and a systematic analysis of tobacco phytoliths from archaeological contexts has not yet been published. A final type of direct evidence with a high degree of accuracy in detecting ancient tobacco use is residue analysis, where techniques derived from analytical chemistry are used to detect the residues of compounds known to be present in tobacco but not in other plants, such as nicotine.



Indirect evidence consists of the material culture of tobacco use, the most common of which is the smoking pipe. Pipes have a long history and are commonly made of durable materials. There is, however, a wide variety of plants that could have been smoked prehistorically, even within societies known to have also smoked tobacco. The use of smoking pipes as indirect evidence of tobacco use is greatly strengthened when it proceeds in conjunction with residue analysis or other direct evidence. While other artifacts, such as tobacco pouches or **snuff** boxes, may also contribute to archaeological knowledge of tobacco use, these artifacts are generally of organic material and do not preserve in archaeological contexts in most situations.

Two other types of indirect evidence have been used by archaeologists. Iconographic representations of smoking, or of smoking pipes, can also provide circumstantial evidence for tobacco use; this type of evidence has been used for Mayan sites. A final type of indirect evidence is early **ethnohistorical** accounts of smoking. This is placed in the category of indirect evidence since, for the earliest accounts of tobacco use especially, it is often unclear exactly what plant the society being observed was using, as some observers were confused by what was to them a strange practice.

Selection of pipes and tobacco from the Civil War. Cigars, pipes, tobacco, and match safes from the Civil War were popular trade commodities. © TRIA GIOVAN/CORBIS

snuff a form of powdered tobacco, usually flavored, either sniffed into the nose or “dipped,” packed between cheek and gum. Snuff was popular in the eighteenth century but had faded to obscurity by the twentieth century.

ethnohistory the study of the past or background of a particular ethnic group



radiocarbon dating a method of discovering the age of dead organic matter by measuring the presence of the carbon-14 isotope, which decays at a known rate. For example, scientists can date an ancient campsite by radiocarbon dating the charred firewood.

North and South America

Current evidence indicates an origin for tobacco use in South America. The oldest **radiocarbon dates** for tobacco seeds from that region are from Peru and range from 2500 to 1800 B.C.E. (Pearsall 1992). There is a substantial gap in both time and space between the earliest South American evidence and the earliest North American evidence. Early evidence from Mexico is generally lacking, and the geographic route by which tobacco smoking diffused northward is unknown. Small amounts of tobacco from Arizona date to as early as the fourth century B.C.E. (Adams and Toll; Winter 2000). Early evidence from Plains sites date to as early as 450 C.E. (Adair; Benn 1981). The earliest direct evidence from eastern North America comes from sites in the Midwest, dating to approximately 200 C.E.. Recent residue analysis shows that tobacco may have a longer history in eastern North America, as a small sample of pipes dating between 500 and 300 B.C.E. have tested positive for nicotine (Rafferty 2002).

Beyond North and South America

Old World dates for tobacco use post-date the European Age of Exploration during the sixteenth and seventeenth centuries. Evidence purported to indicate a pre-Columbian diffusion of tobacco into the Old World is unsubstantiated. This evidence is based on residue of nicotine from Old World mummies (probably a result of contamination) and has been posited to prove that tobacco was brought to the Old World through early transatlantic trade, no other evidence of which has been substantiated. Tobacco was one of many New World plants that spread during the European expansion, and smoking pipes are material correlates of this spread. Initially it was common to find European-manufactured clay elbow pipes, but native-made pipes incorporating indigenous raw materials and iconography were soon developed wherever tobacco was used.

Large-scale importation of tobacco into Europe did not occur until the early 1600s. Old World direct evidence in the form of clay smoking pipes is found in a wide variety of European contexts dating to that period. First arriving in Africa with sixteenth-century Portuguese traders, tobacco soon spread throughout much of the continent, especially in East, West, and South Africa. Pottery smoking pipes have been found in post-Medieval contexts at the West African trade city of Timbuktu. Smoking pipes are common artifacts in late precolonial West Africa, such as eighteenth- and nineteenth-century examples from Ghana. Tobacco has been demonstrated by residue analysis to be at least one plant smoked in these West African examples. Tobacco also had a secondary introduction to Asia, by means of contact from Europeans. Tobacco was introduced into China via Japan and the Philippines during the later sixteenth century, and into Japan earlier that century through shipwrecks. While numerous indigenous Australian tobacco species indicate possible pre-seventeenth-century use by aboriginal populations, evidence for this is currently circumstantial.

Pipes

Archaeologists trace indirect evidence for tobacco back farthest in eastern North America. Tubular stone pipes from the Late Archaic Period (3000 B.C.E.–1000 B.C.E.) date to as early as 2000 B.C.E. (Lewis and Lewis



Inuit ash and quid boxes. Archeologists use such items, known as indirect evidence of tobacco use, to study the prehistory of tobacco use. © PETER HARHOLDT/CORBIS

1961; Walthall 1980). Tubular smoking pipes, straight stone or clay tubes with the distal end open and proximal end constricted, were used throughout prehistory, but are most commonly associated with the Ohio River Valley from approximately 1000 B.C.E. to 200 C.E. The period from 200 to 1000 C.E. is dominated by platform pipes. These pipes feature a flat platform that contains the pipe bore, with a cylindrical bowl located in the center and perpendicular to the platform. Rarer and more elaborate were effigy forms where the bowl was replaced by an animal figure; bird of prey effigies dominated, but other woodland animals (wolf, bear, reptiles) were found. Prey animals (such as deer) are generally lacking.

Late prehistory, from approximately 1000 to 1500, in North America is characterized by elbow pipes. While elbow pipes had existed as minority styles in preceding eras, they became the most common form of smoking implement from the eleventh century onward. Disk-shaped elbow pipes are included in this characterization. Figurine pipes are also important during later prehistory, especially during the Mississippian Period (c. 900–1500 C.E.). Mississippian pipes often include stylistic elements that relate to the constellation of motifs known as the Southeastern Ceremonial Complex. Evidence of tobacco's association with **psychoactive** plant remains and ceremonial artifacts points to its ritual importance during this period.

During the Contact Period (c. 1500–1600), some areas preferentially used native pipes rather than the increasingly available Euroamerican clay or pewter trade pipes. Other areas show a hiatus in native pipes followed by a resurgence (especially in effigy forms) during the 1600s, possibly some form of nativistic response to empower indigenous populations in the face of domination by European colonization. In addition, some areas saw a decrease in the use of durable materials, with perishable wooden pipes replacing clay or stone pipes.

The best-known Native American prehistoric pipes relate to the historically documented calumet ritual (Hart 1980). The calumet ritual



psychoactive having an effect on the mind of the user.



was a widespread practice in the Plains and Eastern Woodlands where tobacco, smoked in stemmed pipes, was used to facilitate intergroup interactions through references to a shared cosmology. Calumet rituals may have arisen out of mourning rituals and adoption ceremonies in the Plains region, and the practice's ability to maintain peaceful interaction between potential enemies may have been in large part responsible for its spread in the early first millennium C.E.

Historic archaeology primarily deals with clay smoking pipes of European manufacture, or local versions thereof. Most archaeological discussions of historic smoking pipes are typological or chronological in focus. The use of pipe bore diameters as a chronological measure is a prime example. There have been regular and predictable changes in the size of historic pipe bores, and measuring a sample pipe stem's bore and comparing it to known and dated samples can provide a probable time period for that pipe's construction. Notable exceptions are recent studies of Middle Eastern and Australian contexts, which place pipes in an interpretive social context. Tobacco pipe studies in North America and in Europe have studied social class (e.g., use of pipes by lower versus upper classes), ethnicity (e.g., pipes incorporating ethnic symbols used in immigrant populations), cultural contact (e.g., smoking of tobacco during trade between Native Americans and Europeans to foster positive relations), working class ideology (e.g., pipes including labor slogans), and gender relations (e.g., traditionally male-made pipes made by women).

See Also Africa; Calumets; Middle East; Native Americans; Pipes; South and Central America; South Asia; South East Asia.

■ SEAN M. RAFFERTY

BIBLIOGRAPHY

- Binford, Lewis R. "A New Method of Calculating Dates from Kaolin Pipe Stem Samples." In *Historical Archaeology: A Guide to Substantive and Theoretical Contributions*. Edited by Robert L. Schuyler. Farmingdale, N.Y.: Baywood Publishing Company, 1978. Pp. 66–67.
- Brown, Ian W. "The Calumet Ceremony in the Southeast and its Archaeological Manifestations." *American Antiquity* 54, no. 2 (1989): 311–333.
- Goodman, Jordan. *Tobacco in History: The Cultures of Dependence*. London: Routledge, 1993.
- Haberman, Thomas W. "Evidence of Aboriginal Tobaccos in Eastern North America." *American Antiquity* 49, no. 2 (1984): 268–287.
- Hall, Robert L. "Calumet Ceremonialism, Mourning Ritual, and Mechanisms of Intertribal Trade." In *Mirror and Metaphor: Material and Social Constructions of Reality*. Edited by Daniel W. Ingersoll Jr. and Gordon Bronitsky. Lanham, Md.: University Press of America, 1987. Pp. 29–43.
- Hays, Charles F. III. *Proceedings of the 1989 Smoking Pipe Conference: Selected Papers*. Rochester, N.Y.: Research Division of the Rochester Museum and Science Center, 1992.
- Higgins, David A. "Clay Tobacco Pipes: A Valuable Commodity." *International Journal of Nautical Archaeology* 24, no. 1 (1995): 47–52.
- Rafferty, Sean M. "Chemical Analysis of Early Woodland Period Smoking Pipe Residue." *Journal of Archaeological Science* 29, no. 8 (2002): 897–907.

Springer, James W. "An Ethnohistoric Study of the Smoking Complex in Eastern North America." *Ethnohistory* 28, no. 3 (1981): 217–235.

Winter, Joseph C., ed. *Tobacco Use by Native North Americans: Sacred Smoke and Silent Killer*. Norman: University of Oklahoma Press, 2000.



Architecture

In the United States the landscape of the southern countryside was vitally influenced by tobacco. Consequently, the very buildings that supported the industry became integral components of the American landscape. While many of these buildings have long ago disappeared as tobacco's economic clout has waned, remnants of this unique architecture still remain.

Landscape

The fundamental architecture of tobacco, of course, is the natural landscape, which contains the tobacco crop itself. Usually no more than an acre, these fields see the greenish leaf mature throughout the summer before **stripping** in the fall.

Beyond the natural borders were a series of buildings that together constituted a common staple to those involved in tobacco production. Because of the labor-intensive nature of tobacco production, and the fact that so many growers were **tenant farmers**, the houses of growers were little more than hastily constructed shacks. These small houses were simple, square and rectangular homes with pitched roofs and minimal adornment and saw little in the way of paint or modern conveniences. Families came and went in these houses, which almost always rested on the plot of tobacco they raised, and the houses were often in need of extensive repair. They were excessively hot and humid in the summer, while the poor construction of the homes allowed for cold drafts to penetrate the walls throughout the winter. While not normally associated with the acres of tobacco that dotted the southern landscape, the houses of countless farmers served as a certain respite from their daily toils.

Barns

Much better known than landscape features are the tobacco barns, which were central to the curing and storing of the crop before taking it to market. Barns were built with function in mind; since so many Burley barns were air-cooled, ample ventilation was essential. In many cases, barns were built by farmers and their neighbors, adding to the sense of community in the tobacco fields. Since the design was rather simple, they could be constructed by experienced farm hands within days.

Barns had considerable interior room for hanging and curing tobacco. With a sturdy foundation, the rectangular barns were almost always finished with wooden planks with shutters and ventilators.



stripping in the Burley and fire-cured tobacco cultures, cured leaves must be separated from the dead stalk. This is called "stripping."

tenant farmers landless farmers who rented acreage from landowners. The tenant family usually moved to a house on the rented land where they lived and worked. The rental was payable in cash or sometimes a specified amount of produce. The tenant often owned draft animals and implements and had established credit. Tenants were typically more independent than sharecroppers and occupied a higher place in the hierarchy of rural America.



Rows of tobacco dry in a barn near Cahors, Dordogne, France. The tobacco barn remains an easily recognizable structure in tobacco-growing regions worldwide.
© MICHAEL BUSSELLE/CORBIS



tar a residue of tobacco smoke, composed of many chemical substances that are collectively known by this term.

The planks were rarely painted, but in some Burley areas they were stained with a durable black **tar** mixture. Roofing was often tin, although asphalt was used in the more modern barns. Surrounding the barns were sheds or other buildings used to house tools or to strip tobacco as it came from the fields. These outlying sheds could also be used to store the seedlings in the early spring before transplanting. The tobacco barn was nonetheless the central aspect of the local farm community, and when not used for curing tobacco it could also be used as a dance hall or as a place where neighbors might come together for a variety of functions.

Since a good deal of tobacco was fire-cured, the barns that contained the small fires with the hanging crop were veritable tinderboxes, and without constant supervision, were likely to catch on fire at a moment's notice. Burned-out barns, unfortunately, also became a relic of the tobacco culture.

Warehouses

Tobacco warehouses were vast colorless and windowless edifices located in the cities and towns along the tobacco market. These structures were often large enough to house a football field or two and were no more than a single story tall. Many surviving warehouses have aluminum siding, with no windows and slightly pitched roofs. In order to generate some ventilation, large fans would sometimes be placed in the upper reaches of the building. Inside, the creaky wooden floors were broken

only by the timbers supporting the roof. Throughout the year, the constant aroma of loose-leaf tobacco would waft throughout the buildings and the surrounding areas.

Today, many warehouses are vacant and in disrepair. In some areas, such as Durham, North Carolina, the old warehouses have been remodeled to house modern shopping centers and restaurants. In other areas, these empty dinosaurs sometimes see tobacco come in the late fall, but are often used for flea markets, or by antique dealers, wholesale distributors, and building suppliers.

The architecture associated with tobacco thus stands as a certain symbol of what the crop meant for countless people in the industry—a world of constant work and worry, with the ever-present dread of bad weather or bad prices always present.

See Also Plantations; Processing.

■ TRACY CAMPBELL

BIBLIOGRAPHY

- Raitz, Karl B. "Tobacco Barns and Sheds." In Allan G. Noble and Hubert G. H. Wilhelm, eds., *Barns of the Midwest*. Athens: Ohio University Press, 1995.
- Willigan, John van, and Susan C. Eastwood. *Tobacco Culture: Farming Kentucky's Burley Belt*. Lexington, Ky.: University Press of Kentucky, 1998.



Arents Collection

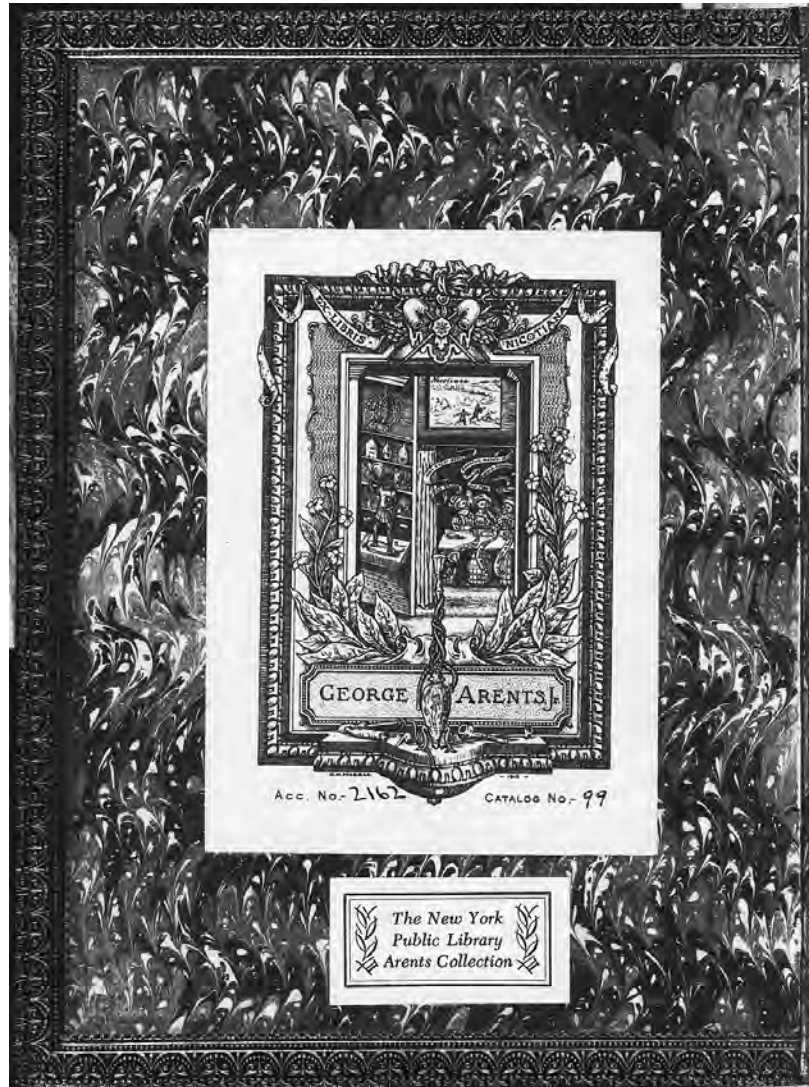
"It is impossible to print on tobacco leaves," George Arents Jr. (1875–1960) told his fellow book collectors at the Grolier Club in 1941, although he found that the plant occupied many of the leaves of literature (Arents 1942). The pursuit of literary and artistic tobacco leaves was for Arents a lifelong endeavor.

Beginnings

Taking the lead from his uncle, Major Lewis Ginter, a man who "knew the art of living," Arents began his collection of rare books on tobacco in 1898. Major Ginter was an important figure in the history of tobacco in America, and his name lives on in the Lewis Ginter Botanical Gardens that were established on the grounds of his distinguished Richmond home, Bloemendaal Farm. In 1875 he became a partner in Allen and Ginter, a Richmond tobacco firm. Allen and Ginter pioneered the use of Virginia tobacco in their cigarettes at a time when other manufacturers used more expensive imported tobacco and they were one of the first tobacco firms to distribute collectible **cigarette cards** with their products. In 1890 the firm was incorporated into the American Tobacco Company. In 1896, during the summer between his junior and senior years at Columbia University, Arents followed the family tradition and joined



cigarette cards paper trading cards sometimes featuring sports personalities or movie stars packaged with cigarettes and offered as an incentive for purchase.



Print of George Arents' bookplate taken from the frontispiece of Matthias de L'Obel's *Perfuming of Tobacco* (London, 1611) ARENTS COLLECTION, THE NEW YORK PUBLIC LIBRARY, ASTOR, LENOX, AND TILDEN FOUNDATIONS



subsidiary in commerce, a branch or affiliate of a larger unit that provides components or support services.

the American Tobacco Company. In 1900 he became a founding member of the board of directors of the American Machine & Foundry Company (AMF) and its **subsidiary** the International Cigar Machinery Company. Arents served on the board of AMF for over fifty years, during which time the company emerged as the world's largest manufacturer of cigar- and cigarette-making equipment.

By his own account, his uncle had encouraged the young Arents to develop a hobby that would engage his interest beyond work and family. A casual dinner conversation with William Evarts Benjamin, a family friend and a dealer of rare books and manuscripts, provided the stimulus, and the following day Arents purchased his first book on tobacco. In his autobiographical account on book collecting Arents noted that the first book he purchased was the 1840 edition of *A Pinch of Snuff* by Benson Earle Hill.

When he began collecting, Arents acquired items that described the plant and its products, manufacture, and trade from the European's first

encounter with the plant in the early sixteenth century through the twentieth century. Soon the scope of the collection widened to include texts that made incidental references to tobacco or smoking. Any book, manuscript, image, or object related to tobacco met the criteria to be included in the collection, although Arents pursued only the most rare and interesting items. He was partial to acquiring previously unpublished manuscripts of poetry and prose by important English authors. He also had a penchant for association copies—those copies of important items owned by individuals who were influential in their own right. He took his collecting to extreme lengths, at one point making the transatlantic crossing to London solely to acquire Sir Francis Bacon's own copy of *Counterblaste to Tobacco* by King James I.

The Collection

Like most book collectors Arents evaluated his own collection in terms of its high spots. It is easier to describe the important books that are not in the collection, chiefly because they do not mention tobacco or smoking, than it is to list the many works of important authors, artists, statesmen, and scientists that are represented. The list ranges from Martin Waldseemüller's account of the second voyage of Amerigo Vespucci in *Cosmographiae introductio* (1507), where the first published reference to tobacco is found, to the American author George Ade's wistful letter to Victor Richard Rubens, on 27 May 1928, in which he blames an illness for robbing him of the pleasure of smoking. As for the missing items, the first folio edition of *Mr. William Shakespeares Comedies, Histories, & Tragedies* (1623) is not in the collection. Arents was fond of pointing out that he wished that it were, although Shakespeare's works contain not a single reference to tobacco or smoking. Even so, the collection is inspiring in its diversity and depth.

The collection was exhibited at the Library of Congress in 1938, and the press reported that the exhibit contained 360 different titles in seventeen languages. The books were arranged into fourteen different categories, including illustrated botanical books; the history of tobacco in the Americas; ceremonials, rituals, and the mythology of tobacco; the European discovery of tobacco; therapeutic medical texts; the tobacco controversy; treatises on the legislation, importation, and taxation of tobacco; the manufacture and commerce of tobacco products; and books relating to smoking and snuffing with descriptions and depictions of all the required equipment and devices. The George Arents Collection also includes selected examples of containers and the devices designed to hold or burn tobacco products. The turn-of-the-century tobacconist's trade sign, the cigar store Indian, is also represented.

In 1942 Arents agreed to give his collection to the New York Public Library. During the years that followed, his books, accompanied by their librarian Sarah Augusta Dickson, moved from the library at Hillcrest, his home in Rye, New York, to the specially prepared George Arents Tobacco Room in the library's building on Fifth Avenue. Upon his death in 1960, he willed the collection to the library with funds sufficient to purchase books, manuscripts, literary material, objects, and rarities of a character appropriate to its development and improvement. Comprised of works from Arents's own collection as well as materials subsequently acquired by the library's curators, the collection is available

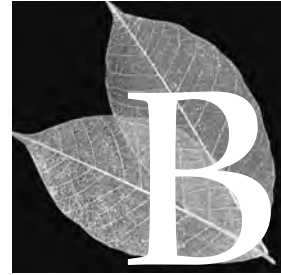
to researchers in the Special Collections of the Humanities and Social Sciences Library.

See Also American Tobacco Company; Connoisseurship.

■ VIRGINIA BARTOW

BIBLIOGRAPHY

- Arents, George, Jr. *Books, Manuscripts and Drawings Relating to Tobacco from the Collection of George Arents, Jr.: On Exhibition at the Library of Congress, Washington, D.C., April 1938*. Washington, D.C.: U.S. Government Printing Office, 1938.
- . *Early Literature of Tobacco*. Washington, D.C.: Private printing for distribution at the Library of Congress, 1938. Published in conjunction with an exhibition at the Library of Congress of books from the author's library.
- . *Tobacco Leaves*. New York?: G. Arents, 1942. An address made at the Grolier Club, New York City, on 27 November 1941.
- . *Book Collecting as I Have Found It*. New York: New York Public Library, 1954.
- Bain, John, comp. *Tobacco in Song and Story*. New York: New York Public Library, 1953. Reproduced from an extra-illustrated volume in the George Arents Collection that includes more than 200 original pen and ink sketches by various artists, including Rube Goldberg.
- Crowquill, Alfred [Alfred Henry Forrester]. *A Few Words about Pipes, Smoking & Tobacco*. New York: New York Public Library, 1947. Now in the Arents Tobacco Collection, this work was edited from an unpublished manuscript (c. 1840) written and illustrated by Alfred Henry Forrester.
- Dickson, Sarah. *Panacea or Precious Bane: Tobacco in Sixteenth Century Literature*. New York: New York Public Library, 1954. Reprinted from the *Bulletin of the New York Public Library*, 1953–1954.
- Rossetti, Dante Gabriel. *Jan Van Hunks: Edited from the Original Manuscripts by John Robert Wahl*. New York: New York Public Library, 1952. Comprises a facsimile and a transcription of the author's manuscript draft of *The Ballad of Jan Van Hunks*, transcriptions of an early draft of the first part in the Duke University Library, and of the final fair hand copy in the British Library.
- Spinden, Herbert Joseph. *Tobacco Is American: The Story of Tobacco before the Coming of the White Man*. New York: New York Public Library, 1950.
- Tobacco: A Catalogue of the Books, Manuscripts, and Engravings Acquired since 1942 in the Arents Tobacco Collection at the New York Public Library, from 1507 to the Present*. New York: New York Public Library, 1958–1969. Incomplete in 10 parts, the cataloging is continued in the New York Public Library's online catalog at <<http://catnyp.nypl.org>>.
- Tobacco: Its History Illustrated by the Books, Manuscripts, and Engravings in the Library of George Arents, Jr.* New York: Rosenbach Company, 1937–1952.
- Wilde, Oscar. *The Importance of Being Earnest: A Trivial Comedy for Serious People, in Four Acts, as Originally Written*. New York: New York Public Library, 1956. Comprises a transcription of the first draft of the play from the author's manuscript of Acts I–II in the George Arents Collection and Acts III–IV in the British Library. Also includes facsimiles of several typescripts (with the author's manuscript emendations, deletions, and so forth) in the George Arents Collection.



Bad Habits in America

In the early twentieth century, using tobacco was one of the minor vices. Chewing and smoking tobacco were generally viewed as part of a larger group of social practices, along with drinking, gambling, sexual misbehavior, and other bad habits that were rebellious and naughty, but on some level attractive. Over time, popular attitudes about tobacco use have evolved and become more complex.

Beginnings as a Stereotypical Behavior

In sixteenth-century Europe, tobacco was used primarily as a medicine, later metamorphosing into a recreational drug in which rituals of use became more important than the substance itself. With increasing use came criticism of tobacco, but the moral condemnation of **snuff**, cigars, pipes, and chews focused primarily on the social impact of tobacco use (the mess, fumes, and spit) rather than alleged health effects.

Nevertheless, before 1950, tobacco producers and marketers were not aware that their industry was perceived as antisocial. Indeed, they were proud of their business and its tradition, and they viewed themselves as benign figures in their communities. At the same time, antitobacco efforts and laws regulating the sale of tobacco products were aimed primarily at underage consumers, typically “bad boys,” rather than adult smokers.

During the nineteenth century, tobacco had different connotations for different users. For example, “respectable” women did not smoke or chew while men did. Male cigar and pipe smoking was both respectable and middle class, but tobacco use by marginal men could take on rebellious connotations. Ruffians and toughs, attempting to be supermasculine, used tobacco as part of their public image. Thus, the pleasurable act of smoking took on an element of rebellious defiance, especially in the presence of ladies or upper-class nonindulgents.

In the nineteenth century, tobacco use often occurred in disreputable, or at least questionable, public spaces; no saloon, gambling place,



snuff a form of powdered tobacco, usually flavored, either sniffed into the nose or “dipped,” packed between cheek and gum. Snuff was popular in the eighteenth century but had faded to obscurity by the twentieth century.



Tobacco advertising in the 1800s often used sexually suggestive images, as illustrated by this cigar box label for Good Shot cigars.

The contrast of respectability and social transgression is evident by the impish, derby-hatted, cigar-smoking angel sitting on a reclining lady's knee. The setting appears to be either a saloon, a gambling hall, or a bordello. © BETTMANN/CORBIS

or bordello would have been without the use of tobacco. This association with the Victorian era underworld of saloons, red light districts, gambling, and brutal games was publicly resisted by tobacco manufacturers and retailers. As late as 1919, the Independent Retail Tobacconists organization resolved, "We are doing all we can to show that the tobacco industry is a legitimate occupation and is not conducted by thugs, gamblers or men who are not good members of society."

◆ See "Youth Tobacco Use" for a 1906 photograph of boys smoking cigars.

Taking on a Special Relationship to Vice

In the decades before World War I and with the introduction of the cigarette, tobacco use came to be further associated with the unrespectable minor vices. The first clear sign of this was the sizable social fuss about boys, always naughty boys, who used tobacco. ◆ The cigarette-smoking boy of the late nineteenth century represented defiance of social norms based on common wisdom that smoking was bad for children. Cigarette-smoking boys were more likely to swear and be otherwise mischievous and disrespectful. Additionally, soft pornographic images typically showed a partially clad woman smoking a cigarette. Another marginal user of cigarettes was the dubious bohemian. Respectable men generally used cigars and pipes, but not cigarettes.

As new technology allowed for the mass production of cigarettes at a marginal cost, they came into much wider use, and as a result, cigarettes came to be identified with the lower social classes. Cigarettes were frequently sold individually, making them affordable to just about everyone, while pipes and cigars remained out of financial reach

for the poor. Moreover, in the attempt to market the large output of cigarettes, tobacco makers offered premiums, particularly illustrated cards that came with each package of cigarettes. Often these cards carried pictures of “actresses” who were scantily clad. James B. Duke of the American Tobacco Company shocked his father, who had founded the company, with the offensive cards his company was using. But the tactic foreshadowed the way in which cigarette advertising would evolve to tie tobacco more firmly to drinking, gambling, and sexual naughtiness.

During World War I increased use of cigarettes further enhanced their image as a cheap thrill. In the war trenches, both British and American troops took to the quick, convenient smoke one could get with a cigarette. Soldiers received free smokes, or they pooled their money to buy a plentiful supply to enjoy in the rough atmosphere of the barracks.

Another development of this period was that smoking was identified as part of the new cabaret ideal being introduced from continental Europe. The old male-oriented saloon was already, before Prohibition, giving way in big cities to a new public space for drinking and casual mixing of the sexes. The cigarette advertisers saw their chance to upgrade the cigarette to appeal to people of a higher social class who might patronize cabarets.

Associations in a Consumer Culture

In the 1920s, the main taboo to be broken was that women—specifically middle-class women—did not smoke. At first, cigarette ads that depicted fashionable women in the act of smoking shocked people, but through movies and advertising smoking among both men and women began to take on a more glamorous image. Movies and other media of the 1920s and 1930s pictured high-status people smoking and drinking in cabarets or aboard luxurious gambling ships that sailed out of Los Angeles and other cities. Advertisers used conventions about gender roles in their advertisements to persuade women to adopt what had been primarily a male behavior. A witness at the time described what he saw: “First the woman appears in the advertisement—merely a pretty girl who becomes part of the pictures; then she is offering the man a **fag**; next she asks him to blow the smoke her way; finally she lights hers by his.”

While smoking occurred as part of a pattern of vices and bad behaviors, it was viewed in a manner different from the use of alcohol or narcotics. More important, although smoking could be habit forming, it did not cause people to lose control of their senses. Thus, throughout the first half of the twentieth century, cigarette smoking, when compared with excessive alcohol use, which frequently led to car accidents and bar brawls, appeared relatively harmless. In the late twentieth century, social scientists as well as popular opinion and the media tied smoking not only to rebelliousness, but specifically to illegal drug use and other addictive and ritualistic social transgressions.

See Also Advertising; Class; Film; Visual Arts; Youth Tobacco Use.

■ JOHN C. BURNHAM



fag (archaic) a slang term for a hand-rolled cigarette.

BIBLIOGRAPHY

Burnham, John C. *Bad Habits: Drinking, Smoking, Taking Drugs, Gambling, Sexual Misbehavior, and Swearing in American History*. New York: New York University Press, 1993.



Black Patch War



snuff a form of powdered tobacco, usually flavored, either sniffed into the nose or “dipped,” packed between cheek and gum. Snuff was popular in the eighteenth century but had faded to obscurity by the twentieth century.

monopoly a marketing environment in which one vendor has exclusive control of a product. Monopolies suppress competition and fix prices.

cooperative a member-owned organization for buying or selling as a group rather than as individuals. In the early twentieth century, tobacco growers in several states attempted to form cooperatives to raise prices of leaf tobacco.



guerilla warfare usually small groups of volunteer soldiers, often operating behind enemy lines, who carry out small-scale raids and surprise attacks.

authoritarian demanding unconditional obedience; dictatorial.

The Black Patch War began in 1904 in the western regions of Kentucky and Tennessee. This area was known as the Black Patch because it produced so much dark-fired tobacco, which was used primarily in the production of **snuff** and chewing tobacco. Confronted by the dual specter of prices below the cost of production and the **monopolistic** American Tobacco Company (ATC), growers in the region organized into the Planters’ Protective Association (PPA), led by the attorney John Foster, the wealthy grower Felix Ewing, and Joel and Charles Fort. The PPA’s goal, taking its cues from the earlier Farmers’ Alliance efforts, was to organize growers into marketing **cooperatives**, enabling growers to sell their crops in bulk and affording them greater leverage when confronting the ATC. Beginning in 1904, PPA recruiters attempted to enlist area growers and found their task formidable.

The PPA was successful in enlisting nearly one-third of the area growers in their cooperative, but the ATC responded by offering higher prices to those who refused to join. Frustrated and desperate farmers took matters in their own hands and began a vigilante campaign against the company and those growers who refused to join the PPA. From 1905 to 1909, armed bands of so-called night riders plagued the region, burning tobacco barns and warehouses and shooting into the homes of noncompliant farmers and African Americans in an attempt to scare them away, a tactic known as whitecapping. Company buyers and warehousemen also were targets in an effort to persuade them to purchase from the cooperative. Livelihoods and lives were destroyed in the process.

In 1907 one of the most dramatic moments of the conflict occurred when armed riders invaded Hopkinsville, Kentucky, setting fire to major tobacco warehouses. The governor of Kentucky and even President Theodore Roosevelt became involved. State militia brought to the region to restore order could do little to stop what amounted to **guerilla warfare** by local growers who felt they were defending their way of life against corporate encroachment.

Leaders of the PPA, meanwhile, disavowed the growing violence, but knew that their cause actually benefited from the actions of the night riders. Yet PPA members soon grew angry with Ewing and the PPA itself, which they regarded as too **authoritarian**. When growers learned that Ewing broke a PPA charter and paid himself a lucrative salary from the pool’s proceeds, the PPA ceased being a democratic alternative to the designs of the ATC, and its popularity faded. The night riders, too, faded from view after 1909. By this time, dark tobacco had become primarily an export crop. Yet when World War I commenced and major foreign shipping lanes suddenly closed, the growers of the Black Patch had no markets left to which to ship their goods. Consequently, the PPA soon collapsed.

Besides burned barns and warehouses, broken tools, and some deaths, the remnants of the Black Patch War were felt for generations. Rifts between neighbors on opposite sides of the conflict remained. Perhaps more significantly, the position of farmers in 1904 had only worsened a decade later, and farmers saw their cooperative efforts fail. For succeeding generations, poverty and despair came to mark the life of the growers in the Black Patch. The war from 1904 to 1909 had been only a temporary interlude.

See Also American Tobacco Company; Kentucky.

■ TRACY CAMPBELL

BIBLIOGRAPHY

Campbell, Tracy. *The Politics of Despair: Power and Resistance in the Tobacco Wars*. Lexington: University Press of Kentucky, 1993.

Warren, Robert Penn. *Night Rider*. Boston: Houghton Mifflin Company, 1939.

Wright, George. "Racial Violence in Kentucky." Baton Rouge: Louisiana State University Press, 1990.



Body

The consumption of tobacco is related to the human understanding and view of the body, in terms of health and illness, as well as aesthetics and social and political connotations.

Tobacco as a Healing Commodity

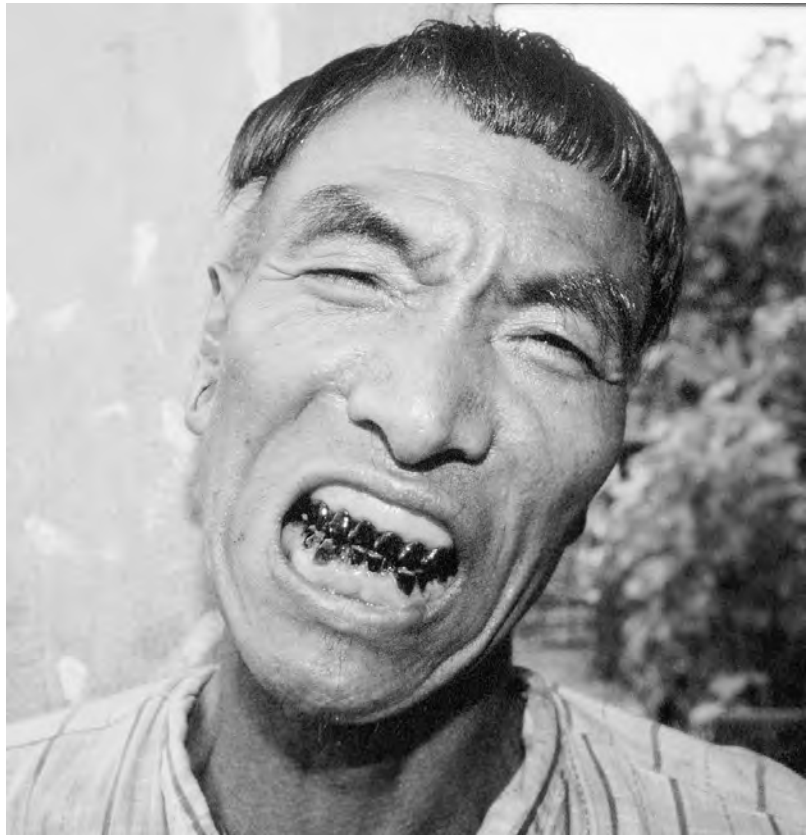
When tobacco was introduced to Europe in the sixteenth century, it was hailed as an addition to the pharmacopoeia and incorporated into the medical practice of the time, based on the Galenic four-humors system. According to this methodology, tobacco was believed to be hot and dry, and as such good for removing phlegm and mucous from the body. Health practitioners of the era believed that smoking tobacco was a prophylactic against epidemic diseases such as the plague, while tobacco was used to treat a variety of bodily problems including headache when taken as **snuff**, asthma when smoked, and topical pain and ulceration when supplied as a poultice of tobacco leaves. Tobacco was also believed to allay hunger and thirst, to steady the nerves, and to improve judgment. However, tobacco use was also known to have an intoxicating effect on the body and by the seventeenth century the populace was using it for recreational and social purposes.



snuff a form of powdered tobacco, usually flavored, either sniffed into the nose or "dipped," packed between cheek and gum. Snuff was popular in the eighteenth century but had faded to obscurity by the twentieth century.

Changing Ways of Consuming Tobacco

Tobacco was initially smoked in pipes, but by the eighteenth century taking snuff had replaced pipe smoking among the aristocracy. There was an art to taking snuff, as laid out in instruction manuals: The snuff,



A Konyak man displays his teeth, blackened by tobacco, opium smoking, and pann chewing, Nagaland, India. © EARL AND NAZIMA KOWALL/CORBIS

a fine tobacco powder, was to be neatly laid out, pinched between the fingers of the right hand, brought up to the nose, and then taken in evenly through both nostrils. This would cause sneezing, coughing, and expectoration, all of which were believed to be healthy as the mucous was being removed. By the mid-nineteenth century, smoking again became the fashionable way of consuming tobacco, this time in the form of cigars, and by the late nineteenth century the cigarette began growing in popularity. With the advent of the cigarette, women also began to smoke more frequently. This phenomenon can be attributed to the fact that cigarettes were milder to smoke, as well as to social changes that saw women enter educational establishments and the workplace in greater numbers, gaining economic and social independence. The growing popularity of cigarettes among men and women coincided with more aggressive advertising and images of young, fit, attractive bodies of both sexes have been a staple image of marketing material ever since.

Of all the ways of consuming tobacco, the cigarette has proved the most enduring. It is the most efficient way of getting nicotine into the body, as the smoke from cigarettes is inhaled deeply into the lungs, rather than into the mouth as with smoking pipes and cigars. Small blood vessels lining the lungs absorb the nicotine present in the smoke and from there it is pumped around the body. In cigar and pipe smokers, nicotine is primarily absorbed through the lining of the mouth. Nicotine affects neurotransmitter systems in the brain, affecting the emotional state of the smoker in different ways, as a stimulant or **depressant** depending on other factors. Smokers also gain pleasure from



depressant a substance that depresses the central nervous system. The most common depressant is alcohol.



Cigarette ad from the “Up in Smoke” exhibit in New York City, 29 November 2000. The exhibit featured ads praising and attacking cigarette smoking opposite each other in the same room, illustrating how advertising can manipulate public opinion.
© SCOTT HOUSTON/CORBIS SYGMA

the act of smoking; the sight, smell, and taste of a lighted cigarette, pipe, or cigar; and the psychological aspects of smoking, including the simple act of handling a cigarette.

Critics of Tobacco Use

The spread of tobacco use was also criticized. Critics focused on the effect of tobacco on the body, arguing that tobacco use physically corrupted the individual and the social body. One of the most famous critics was James I of England [VI of Scotland] who, in *A Counterblaste to Tobacco* in 1604, described the way in which smokers’ bodies were “soil[ed] and infect[ed] with an unctuous and oily kind of soote” (Rait 1900). This description referred to the blackened internal organs of smokers found at autopsy. Physical contamination of smokers’ bodies was paralleled by the contamination they caused to those around them: “the filthy smoke and stinke thereof” (Rait 1900) that was breathed over food and through the air.

Other texts warned of the violent purgative effects of tobacco and the fact that it was poisonous in large quantities. The fact that it was “hot” and “dry” was thought to lead to sterility. Satirical writers referred to the fumes that surrounded smokers and compared them to chimneys and furnaces. Smokers were criticized on moral grounds, as



epidemiological pertaining to epidemiology, that is, to seeking the causes of disease.

tobacco use was thought to increase the sins of drunkenness and lust. James I responded to the increasing popularity of tobacco by taxing its use; in other countries, actions against smokers were more serious. In seventeenth-century Turkey, for example, those who defied a prohibition on smoking could be faced with summary execution.

Criticism on medical and moral grounds continued in the nineteenth century when smoking regained popularity. Opponents of smoking argued that it caused diseases and health conditions ranging from lunacy to cancer to diarrhea, that it impaired the mind and the senses, and that it induced dependency, wasted money, and led to excessive alcohol consumption. Among women, smoking was believed to harm reproductive function. Where medical evidence was provided for such arguments, it tended to be based on single case studies and clinical impressions until the large-scale **epidemiological** studies of the mid-twentieth century.

The Effects of Smoking on the Body

In the 2000s, the most well-known risks of smoking are lung cancer and heart disease, but prolonged smoking increases the risk of getting cancer in practically every other part of the body. As well as lung cancer, smoking can lead to respiratory conditions such as emphysema and chronic bronchitis. Moreover, there are other, less publicized, effects of smoking on almost every other body part. Smoking weakens the immune system, leaving the body vulnerable to disease. It prematurely ages the skin, causing wrinkles, and can increase the risk of getting psoriasis. It interferes with the mouth's chemistry, contributing to tooth decay, and reduces the levels of oxygen in smokers' blood, leading to problems such as osteoporosis. Smoking raises blood pressure, leading to heart conditions, and can damage the blood vessel walls, making it harder for the heart to pump blood around the body. It can impair fertility in both men and women and lead to problems in pregnancy and birth among women.

Among women in particular, fear of weight gain is one of the reasons smokers give for continuing smoking. There is conflicting evidence as to whether this is the case and the consensus among researchers seems to be that the weight gained will be a small amount (approximately 5 pounds or 2.3 kg). However, research has shown that smoking affects the distribution of weight on the body. Smokers are more likely to store fat on the waist and torso, rather than the hips, which puts them more at risk of developing diabetes, heart disease, and other problems. Smoking also has an aesthetic impact on the body, particularly among heavy smokers, as nicotine can cause discolored fingers and teeth, and many people object to the smell.

The risks of passive smoking are well documented as environmental tobacco smoke has a negative effect on the health of those around smokers, making tobacco smoking a social as well as an individual problem. It is this fact more than any other that has arguably proved most effective in regulating tobacco use in Western societies.

See Also Appetite; Fitness.

■ ROSEMARY ELLIOT

BIBLIOGRAPHY

- Arents, George. *Tobacco: Its History Illustrated by the Books, Manuscripts, and Engravings in the Library of George Arents, Jr., Together with an Introductory Essay, a Glossary, and Bibliographic Notes by Jerome E. Brooks*. New York: The Rosenbach Company, 1937.
- Ashton, Heather, and Rob Stepney. *Smoking: Psychology and Pharmacology*. London and New York: Tavistock Publications, 1982.
- Harley, David. "The Beginnings of the Tobacco Controversy: Puritanism, James I, and the Royal Physicians." *Bulletin of the History of Medicine* 67 (1993): 28–50.
- Rait, Robert S., ed. *A Royal Rhetorician: A Treatise on Scottis Poesie; A Counterblast to Tobacco, by King James VI, and I*. London: A. Constable, 1900.
- Royal College of Physicians. *Nicotine Addiction: A Report of the Tobacco Advisory Group of the Royal College of Physicians*. London: Author, 2000.



Botany (History)

Twenty-first-century botanical classifications include more than 240 denominations for the various species, subspecies, and varieties of the genus *Nicotiana*, which belongs to the family Solanaceae, subclass Asteridae, class Magnoliopsida (Dicotyledoneae). In spite of divergences in the formal nomenclature (system of naming) and in the eponyms (name of person, often abbreviated, linked to scientific name of species) used to identify its various species, botanists generally consider the genus *Nicotiana* to include more than 60 distinct species.

Origination of *Nicotiana*

Majority opinion among botanists holds that the genus originated in the Andean region, from which it spread throughout most of the American continent and adjacent islands before European colonizers settled the New World. Through the colonizers, it spread to the rest of the world, becoming established in wide areas of Europe, Asia, Africa, and Oceania. Of all the species of *Nicotiana*, two—*N. tabacum* L. and *N. rustica* L.—predominate in the world. Most other species have remained wild or have returned to the wild along the borders of agricultural regions.

Early European Classifications

European scientists' acquaintance with tobacco predates the **consolidation** of botany as a science, a process that began in the second half of the eighteenth century and has traditionally been associated with the generalized acceptance of the Linnaean system of taxonomy and nomenclature, as outlined by the Swedish botanist Carl Linnaeus. As occurred with many other botanical species, the classification, denomination, and technical description of the tobacco plant was well underway in European botany before Linnaeus identified this genus of plants in his *Species Plantarum* (1753).

Divergences in the specific denominations should not negate the practical unanimity achieved among botanists by the end of the



consolidation when numerous smaller units are combined into a larger one. In agriculture, consolidating small farms into one large farm usually makes operations more efficient and profitable.



Tobacco Plant by Elizabeth Blackwell, 1782.
 The genus *Nicotiana* belongs to the family
 Solanaceae, subclass Asteridae, class
 Magnoliopsida (Dicotyledoneae).
 © STAPLETON COLLECTION/CORBIS

sixteenth century in classifying the various species of tobacco as belonging to a distinct genus, associated with other similar genii, grouped within the family Solanaceae. These included plants of both European (henbane, belladonna, mandrake) and American (pepper, potato, tomato) origin. Initially, some European authors considered tobacco a species of henbane (*hyoscyamus* in the Latin form of the Greek term *hyoskyamos*), which, owing to the medicinal uses stemming from its analgesic and narcotic properties, had already appeared in the medicinal plants treatise of the Greek medical practitioner Dioscorides in the first century C.E.

Nonetheless, from the time Gonzalo Fernández de Oviedo provided a precise botanical description (in his *Historia general y natural de las Indias occidentals* (The General and Natural History of West Indies, 1535), it was clear that the similarities with henbane were circumstantial and not decisive insofar as the plant's classification as a species within the same genus was concerned. The European dissemination of the plant's image and pharmacological description via the work of Nicolás Monardes, *Historia medicinal de las cosas que se traen*

de nostras Indias Occidentales (History of Medical Things Brought from Our West Indies, 1571), gave further credibility to separation of tobacco and henbane.

Despite the two sources, confusion of tobacco with henbane continued for some time in peripheral scientific circles. In the English-speaking world, for instance, the denomination “Henbane of Peru” gathered considerable strength because of its utilization by the English botanist John Gerard in his influential *The Herball, or generall historie of plantes* (1597).

When Monardes’ work achieved wide circulation by way of several Latin versions by Charles de l’Écluse (Carolus Clusius) and numerous translations into Italian (Annibale Briganti), French (Jacques Gohory), and English (John Frampton), the classification of tobacco as a species of *Hyoscyamus* was definitively rejected. Thus, the Swiss botanist Caspar Bauhin’s *Pinax theatri Botanica* (1623)—the seventeenth century’s key reference work on botanical systematization, taxonomy, and nomenclature—definitively established the view of *Nicotiana* as a separate genus, although linked by family to *Solanum*, *Hyoscyamus*, *Mondragora*, and *Papaver*, among others.

From that point on, the botanical classification of tobacco would not undergo major changes. Thus, at the beginning of the second half of the seventeenth century, when the English and French took on the task of advancing the botanical systemization that the Italians, the Dutch, and the Swiss had developed in previous generations, the systemization did not change markedly. Both Robert Morison (*Hortus regius blesensis*, 1669) and John Ray (*Historia Plantarum*, 1704) viewed tobacco as a separate genus. Morison identified three separate species within the genus *Nicotiana* (*N. major latifolia*, *N. major angustifolia*, and *N. minor*), while Ray identified two species within a genus called *Tabacco* (*T. latifolium* and *T. angustifolium*) and two more within *Nicotiana* (*N. minima* and *N. minor*). Joseph Pitton de Tournefort’s influential classification (*Institutiones rei herbariae*, 1700–1703) established the genus *Nicotiana* with more than six different species. Practically, these were the same species that Linnaeus would adopt in his proposal, though he would reduce their names to his definitive binomial notation, which used two Latin names: the first one for the genus, the second one for the species.

Linnaeus’s Classification

In spite of the fact that almost all Western languages have adopted the common name “tobacco,” whose origin lies in the extinct Taino language spoken by the first inhabitants of the Greater Antilles, the denomination *Nicotiana* has been definitively established in botanical science since its selection by Carl Linnaeus in his *Species Plantarum*. This work provided a complete account of specific plant names, and is considered the foundation for the modern system of botanical nomenclature.

Linnaeus chose one of the denominations that had circulated among European botanists through the nearly two centuries that had elapsed since the first contact of the Spanish colonizers with tobacco. Concretely, the denomination *Nicotiana* was the Latinization—an indispensable process for the science of that era when internationalizing any proposal of this type—of the surname of Jean Nicot, French ambassador to the court of Lisbon, where he had become acquainted with the plant around 1559 and sent it to France. The proposal to dedicate the plant’s



Latin name to Nicot first arose in a French manual of agricultural techniques published by Jean Liébault in 1567, but for nearly two hundred years it had to compete with other proposals that appeared in numerous works by European botanists, including “herba sancta” and “herba di Santa Croce” (both used in several Italian treatises), “picietl” (from the nahuatl name of the Mexican Indians, reported by Francisco Hernández after his expedition in 1570–1577), and “herba petum” (from the name of the Brazilian Indians, reported by Portuguese navigators and made well known in Europe thanks to Clusius’ work).

Linnaeus’s work, moreover, established the scientific names for the two most common species—*N. tabacum* L. and *N. rustica* L.—that have remained definitive ever since, and proposed the names of five other species: *N. fruticosa*, *N. glutinosa*, *N. paniculata*, *N. pusilla*, and *N. urens*. Over the course of the succeeding two centuries, this initial classification has been the object of various challenges, culminating in the proposal of Thomas H. Goodspeed (1954) for the entire genus, which is the scheme most commonly accepted by taxonomists today.

See Also Tobacco as an Ornamental Plant.

■ JOSÉ PARDO-TOMÁS

BIBLIOGRAPHY

- Goodspeed, Thomas H. *The Genus Nicotiana: Origins, Relationships, and Evolution of Its Species in the Light of Their Distribution, Morphology, and Cytogenetics*. Vol. 16, *Chronica Botanica*. Waltham, Mass.: Chronica Botanica Co., 1954.
- International Plant Names Index. Available: <http://www.ipni.org/ipni/plantsearch?find_wholeName=Nicotiana&find_query_ipni.html>.
- Japan Tobacco Inc. *The Genus Nicotiana Illustrated*. Tokyo: Author, 1994.
- López-Piñero, J. M., and M. L. López-Terrada. *La influencia española en la introducción en Europa de las plantas americanas (1493–1623)* (The Spanish Influence on the Introduction in Europe of American Plants [1493–1623]). Valencia: Instituto de Estudios Documentales e Históricos sobre la Ciencia, 1997.
- Pardo-Tomás, J., and M. L. López-Terrada. *Las primeras noticias sobre plantas americanas en las relaciones de viajes y crónicas de Indias (1493–1553)* (First News on American Plants in Travels’ Accounts and Chronicles of Indies [1493–1553]). Valencia: Instituto de Estudios Documentales e Históricos sobre la Ciencia, 1993.
- Royal Botanic Gardens, Kew. Available: <<http://www.rbgekew.org.uk/uhtbin/cgiisirs/yNHxuGAAOI/123880017/123>>.



Brazil

Tobacco was an important commodity to the colonial Portuguese Empire of the seventeenth and eighteenth centuries. It played a crucial role in the Portuguese slave trade. The Portuguese were eager to acquire slaves for the sugar industry that they had established in northeastern Brazil. They found that there was a high demand in West Africa for

fumo de corda—tobacco sweetened with honey and twisted into rolls—and therefore used this commodity to purchase slaves.

At this time most of the tobacco was produced on relatively small rural dwellings, usually called *fazendas*, where agricultural activities were carried out by both family and slave labor. In the eighteenth century it was reported that “Everyone within the family is involved, adults and children, the elderly and youngsters, white and black, free men and slaves, and only the work of twisting and rolling is left to the slaves” (“Discurso”).

The Portuguese Crown’s **monopolistic** trade practices and excessive taxation contributed to a movement for independence in Brazil, which was declared on 7 September 1822. The British prohibition of the slave trade in 1807 and growing pressure to abolish slavery in the country, which eventually transpired in 1888, led to a decrease in the exportation of *fumo de corda*. Tobacco leaves (or *fumo em folha*) were then exported to Europe, where Bahian tobacco was especially popular among German cigar aficionados.

Bahian Tobacco

Prior to the late nineteenth and early twentieth centuries, sugar was the most important crop in Bahia, a state in eastern Brazil on the Atlantic. Sugar planters allowed their slaves to dedicate small parcels of land to the cultivation of tobacco, resulting in a steady growth of its production. The abolition of slavery and a worldwide economic crisis led to a dramatic decline of labor-intensive sugar production. The freed slaves switched to small-scale peasant agriculture and tobacco became their most important commercial crop. The harvesting of the tobacco leaves depended on thousands of small-scale cultivators who dried and cured the tobacco in (and often outside) their sheds.

After the tobacco was harvested, the peasants brought it to warehouses in São Felix and Cruz das Almas, cities in Bahia’s central tobacco region, the Recôncavo. There, local merchants (called *enfardadores*) selected, repacked, and labeled the tobacco in preparation for sale to European tobacco companies. Because of its specific neutral taste that allowed it to be mixed easily with other kinds of tobacco, European consumers considered Bahian tobacco indispensable for their cigars.

The popularity of Bahian tobacco in Europe gave rise to a number of important tobacco-processing companies in the region that both processed tobacco for export and produced cigars of their own. While the first cigar factory in the region, Juventude, was founded in São Felix in 1842 by the Portuguese businessman Francisco José Cardoso, the two most notable cigar producers in the region’s history, Dannemann and Suerdieck, were not established until the 1880s. Both companies were founded by German entrepreneurs, Gerhard (later: Geraldo) Dannemann and August Suerdieck, who settled in the region in 1872 and 1888 respectively. In their heyday these companies employed hundreds of local laborers. They maintained great local and regional political influence in the first decades of the twentieth century. Their owners were central figures in the regional German community and they maintained good relations with local and national politicians.

In the twentieth century, tobacco was an important source of revenue for the state. Between 1900 and 1910 it even was the single



monopoly a marketing environment in which one vendor has exclusive control of a product. Monopolies suppress competition and fix prices.



Brazilian cigarette packs depicting hard-hitting pictures and health warnings about the possible damage caused by smoking. Brazilian Ministry of Health's captions warn that "smoking causes heart attacks" (top), "smoking causes sexual impotence" (bottom, left), and "in the case of pregnant women cigarette may cause premature childbirth, newborns with weight below the normal and increased probability of contracting asthma" (bottom, right).

most important source of tax income for the government. The export taxes on tobacco provided between 20 and 30 percent of the state finances in that period. In 1900 it was almost 50 percent. The crop retained its regional importance well into the twentieth century. From the 1900s until the beginning of World War I in 1914 the German cities of Hamburg and Bremen were the chief destinations of Bahian tobacco. When Bahia was cut off from the German markets during the war, U.S. companies became more essential to the tobacco trade. Representatives of the British-American Tobacco Company started to buy tobacco in that period. When the war was over, the German monopoly had been broken. From then on, the market became much more competitive. As Overbeck noted in 1923, "an end has come to the dominant position [of Germany] and its capacity of decisively influencing the market."

Companies from the Netherlands, Spain, and the United States started to buy tobacco and posed a formidable competition to the German interests. When Brazil entered World War II in 1942, the German companies were placed under state control. They lost their close connections with their partners in Germany and had to survive on their own. They were never able to recuperate after the end of the war. Suerdieck eventually disappeared. The brand name Dannemann was

sold to a Swiss company in 1954. In this way the company survived and it exists into the 2000s as a producer of high-quality cigars.

Tobacco Production in the South

Around 1920 planters in the southern states of Rio Grande do Sul and Santa Catarina began farming Virginia tobacco. This resulted from a large immigration of German farmers to the region. Helped by an improved infrastructure (roads and railroads), these farmers established a prosperous and quite sophisticated sector of production, mainly geared toward the production of cigarettes. The cultivation of these types of tobacco required considerable investment, which was too great for small family farms. Consequently, the southern tobacco environment was vastly different from that of the Bahian region. It was not a peasant sector, but rather a sector of large-scale farms often owned by limited liability companies.

Southern Brazil also came to host large-scale industrial cigarette production facilities, although traditional tobacco cultivation in rural areas that often produced *fumo de corda* continued to be important in the interior, especially in the states of Minas Gerais, Goiás, and São Paulo. The cigarette industry was concentrated in the larger cities of the states of São Paulo, Rio de Janeiro, and Rio Grande do Sul.

Over time, the cigarette industry became dominated by foreign interests. Filling the niche left by the German importers during World War I, British American Tobacco (BAT) entered the Brazilian scene in the early twentieth century. It rapidly increased its financial interests. In 1914 the company allied itself with the firm of Souza Cruz, which was established in 1903 by the Portuguese immigrant Albino Souza Cruz. Rapidly the firm developed a market based on its own brands of cigarettes. It also used American-trained experts to support the local farmers. In the 1980s Souza Cruz controlled approximately 80 percent of the Brazilian cigarette market. As a result, the weight of the Brazilian tobacco industry shifted from the north to the south.

These developments led to a considerable increase in Brazilian tobacco production in the twentieth century. In 1939 the country produced 90,000 metric tons. Tobacco production in 1980 had grown to over 400,000 metric tons and in 2000 reached approximately 700,000 metric tons. In the twentieth century only approximately 30 to 40 percent of this tobacco was exported; the remainder was processed in Brazil for the country's large internal market of more than 30 percent of the Brazilian adult population. From the late 1990s onward, the Brazilian cigarette industry has been boosted by the opening of the regional markets. The establishment of Mercosur, a free trade agreement with a number of Latin American countries, opened Latin American markets for Brazilian cigarettes.

Brazilian Tobacco Today

Today Brazil may rightly be called a tobacco superpower. Its leaf exports more than doubled between 1975 and 1997, making Brazil the world's leading exporter. Furthermore, its production of cigarettes increased by 1,000 percent between 1981 and 1996, making Brazil the tenth largest cigarette producer in the world at the end of the twentieth century.

The cigar industry in Bahia has shown some signs of revitalization. Increased demand for high-quality cigars, especially in the United States, has resulted in a modernization of the sector. The firm Dannemann has become involved in the cultivation of tobacco by closely supervising tobacco agriculture from the 1990s onward. In the process it implemented sophisticated technology, such as computer-controlled barns and strictly controlled fertilizing. It used tobacco to better position itself in the increasingly profitable international cigar market. While Bahian tobacco will always constitute a very small component of the Brazilian tobacco industry, the fact that its producers are continuously adapting to new national and international developments demonstrates that it will continue to be important to the nation in the years to come.

See Also Portuguese Empire.

■ MICHIEL BAUD

BIBLIOGRAPHY

- Barickman, B. J. *A Bahian Counterpoint: Sugar, Tobacco, Cassava, and Slavery in the Recôncavo, 1780–1860*. Stanford, Calif.: Stanford University Press, 1999.
- Baud, Michiel, and Kees Koonings. "A *lavoura dos pobres*: Tobacco Farming and the Development of Commercial Agriculture in Bahia, 1870–1930." *Journal of Latin American Studies* 31 (1999): 287–329.
- . "Germans and Tobacco in Bahia (Brazil), 1870–1940." *Jahrbuch für Geschichte Lateinamerikas* 37 (2000): 149–175.
- Cox, Howard. *The Global Cigarette: Origins and Evolution of British American Tobacco, 1880–1945*. Oxford and New York: Oxford University Press, 2000.
- De Tabaksplant* 32, no. 1640 (1 November 1904). Dutch tobacco journal.
- "Discurso preliminar, historico, introductivo, com natureza de descrição economica da comarca da Bahia." In *Annaes da Biblioteca Nacional de Rio de Janeiro* 27 (1905): 323.
- Overbeck, William. *Fünfzig Jahre Deutscher Verein Germania und Deutschtum in Bahia*. Berlin, 1923.



British American Tobacco

British American Tobacco (BAT) boasts the relatively unusual distinction of being born as a fully fledged multinational enterprise. The company was created in 1902 as a jointly owned **subsidiary** of the leading tobacco companies of the United States (James Duke's American Tobacco Company, which owned two-thirds of BAT's share capital) and Great Britain (the Imperial Tobacco Company). Its initial productive assets comprised the brand rights, export factories, and overseas operations of the two founders, which included cigarette production plants in Germany, Canada, Australia, Japan, and South Africa. BAT can claim that, between the two world wars, it was the world's most geographically extensive



subsidiary in commerce, a branch or affiliate of a larger unit that provides components or support services.



multinational company, pioneering techniques of international marketing and human resource management. Heavily criticized for its role in promoting smoking in the Third World and recently subject to numerous cases of litigation in the United States, in the era of globalization the company has nevertheless consolidated its position as the producer of many of the world's leading cigarette brands, with factories in over sixty countries and operations in 180 distinct markets.

Detlef Zimmermann, chair of the German section of British American Tobacco (BAT), poses prior to a results press conference Thursday, 5 June 2003, in Hamburg, northern Germany. BAT announced that Lucky Strike, HB, Gauloises Blondes, Pall Mall, and Lord were the most successful brands at the German market. AP/WIDE WORLD PHOTOS

Formation and Early Growth

The agreement that created BAT in 1902 formed part of a global market-sharing arrangement between American Tobacco and the Imperial Tobacco Company through which the new company would become the jointly owned overseas arm of the two founders. Although initially BAT's main business lay in the export trade, the company increasingly expanded its production capacity via direct investments abroad. Its main focus for expansion during the first ten years was China, where both American Tobacco and Imperial had already developed a market based around Shanghai. Under the supervision of Duke's master salesman, James Thomas, BAT created a sales network for its cigarettes in China that transcended even the legendary scope of Standard Oil's kerosene



boycott an economic sanction imposed by an interest group to influence policy. In the 1900s, tobacco growers in Tennessee and Kentucky refused to sell leaf to the American Tobacco Company until prices were raised.

distribution process there. Many Chinese merchants were integrated into the BAT selling system, and cigarette brands were created and marketed that appealed to local tastes. In spite of intermittent political obstruction and **boycotts** of its products, BAT's investments in China provided the firm with a platform for growth and a blueprint that could be adopted for other, similar markets as it expanded into India, South East Asia, Latin America, and the Middle East in the years preceding and following World War I.

A particular hallmark of this early phase of international growth was the encouragement given to the local cultivation of tobacco leaf suitable for use in cigarettes. Allying local production of raw materials to their own cigarette factories meant that in many markets BAT's operations became largely independent, although invariably before World War II these affiliated companies were managed by expatriates from the United States and, increasingly, Britain. With its headquarters based in London, management of the company from the outset inclined more toward the United Kingdom than America, but this was given a decisive tilt after the dissolution of American Tobacco in 1911 forced that company to sell off its holding in BAT, thus making Imperial the largest shareholder. Duke's active interest in the company effectively ended in 1914, and his position as the company's leading figure was assumed by the autocratic Englishman Hugo Cunliffe-Owen.

The Cunliffe-Owen Era

Under Cunliffe-Owen's tutelage the company continued to expand into Asia, Africa, and Latin America, but also made important investments in Germany and the United States, where it purchased the Brown & Williamson Corporation in 1927. The company developed an international management system between the wars in which accounting practices were harmonized globally but where the local "Number One" expatriate director was given a good deal of managerial latitude. The London-based directors, meanwhile, maintained a watching brief that required them to spend six months each year on tour. This system of international management was especially well suited to the conditions that prevailed during the 1930s and 1940s when the dislocation of the world economy and the rise of nationalism meant that autonomy of operations and a strong local presence paid dividends. Although the company's earning power dropped after 1929, BAT nevertheless was able to consolidate its position as the world's only true international tobacco firm.

Postwar Difficulties and Diversification

The postwar years saw BAT grappling with problems both internally and externally. Cunliffe-Owen's death in 1947 created a crisis of succession that was only resolved during the chairmanship of Duncan Oppenheim between 1953 and 1966. In this period the company's top management became more internationally diverse, and human resource management and training was systematically developed. The 1949 communist revolution in China, meanwhile, led to the loss of the company's largest market, and other major setbacks were experienced in Egypt, Indonesia, and India. Furthermore, while firms such

as R.J. Reynolds, Philip Morris, and Rothmans International experienced growth during the 1960s and 1970s, when the market for international king-size filter tipped cigarettes and American blends expanded, BAT's **hegemony** of the international cigarette market was eroded because it lacked an international brand to compete with Winston, Marlboro, and Rothmans King Size. Accession of the United Kingdom to the European Economic Community in 1973 also led Imperial to sell off its shareholding in BAT during the course of the 1970s. Allied with the emerging evidence of the health consequences of smoking, BAT made concerted efforts under the successive leadership of Denzil Clarke, Richard Dobson, and Peter Macadam to diversify from tobacco into industries such as paper, cosmetics, and retailing, culminating in the formation of BAT Industries as a general holding company in 1976.

A Modern Tobacco Giant

During the 1980s, under the chairmanship of Patrick Sheehy, BAT successfully expanded into financial services. In 1989 the company repulsed an audacious takeover bid by Hoylake Investments, a consortium of financiers led by James Goldsmith, but the event signaled the end of BAT's almost thirty-year campaign of diversification. Tobacco and financial services became the core of BAT's business in the 1990s, and Sheehy's successor, Martin Broughton, oversaw the **acquisition** in 1994 of American Tobacco, an important move that brought the company global ownership of brands such as Pall Mall and Lucky Strike that could be used to combat Philip Morris's phenomenal success with Marlboro. The fall of Soviet communism boosted tobacco sales, and in 1998 BAT decided to sell its financial services to Allied Zurich and revert to being a purely tobacco-based company. In 1999 BAT merged with Rothmans International, the world's fourth-largest tobacco company, raising at a stroke its share of the premium international brands segment of the market from 11.3 percent to 17.6 percent through the addition of brands such as Rothmans King Size, Peter Stuyvesant, and Dunhill International.

See Also American Tobacco Company; Globalization.

■ HOWARD COX

BIBLIOGRAPHY

- Cochran, Sherman. *Big Business in China: Sino-Foreign Rivalry in the Cigarette Industry, 1890–1930*. Cambridge, Mass.: Harvard University Press, 1980.
- Corina, Maurice. *Trust in Tobacco: The Anglo-American Struggle for Power*. London: Michael Joseph, 1975.
- Cox, Howard. *The Global Cigarette: Origins and Evolution of British American Tobacco, 1880–1945*. New York: Oxford University Press, 2000.
- Glantz, Stanton A., et al. *The Cigarette Papers*. Berkeley: University of California Press, 1996.
- Nath, Uma Ram. *Smoking: Third World Alert*. Oxford: Oxford University Press, 1986.
- United Nations Conference on Trade and Development. *Marketing and Distribution of Tobacco*. New York: United Nations, 1978.



hegemony to exert control or superior influence over; to hold dominion over.



acquisition the purchase—sometimes called a merger—of a smaller company by a larger one. During the late twentieth century, major tobacco companies diversified their holdings through acquisition of nontobacco products.



British Empire



Navigation Acts laws passed by the British Parliament that forced the American colonies to sell only to Britain, buy only from Britain, and ship only in British vessels. The Navigation Acts were one of the background causes of the American Revolution.

Tobacco was the first great commercial success of England's empire in America. Indeed, if we date the creation of a formal imperial structure to the passage of the **Navigation Acts** in the mid-seventeenth century, then it was tobacco that called the empire into existence.

Before the middle of the seventeenth century, the British Empire in America had been an informal structure, bound together by the subordination of the several colonies to the crown, by the common culture and identities of the colonists, and, most important, by the activities of London merchants involved in colonial trades, who linked the relatively distinct enterprises scattered along the Atlantic from New England to the Caribbean into a coherent commercial whole. In this period the tobacco trade was already a major part of England's external trade, employing hundreds of ships and thousands of seamen while attracting the interest of some of the most prominent and richest merchants involved in colonial trades. By 1650, England imported roughly 10 million pounds of American tobacco, worth roughly 12 million pounds sterling in the colonies but worth several times that sum once safely delivered to markets in England.

Navigation Acts

The first navigation laws in 1650 were written in part by tobacco merchants determined to prevent the Dutch from wresting that valuable trade from their control. Although it is likely that evidence of Dutch inroads into the American tobacco trade has been greatly exaggerated, the English merchants had good reason to worry. During the Dutch revolt against the Hapsburgs, English merchants had been able to take advantage of Dutch distractions to seize control of trade to the Levant and in the Baltic. Once their issue with Spain was settled, the Dutch were able to use their commercial superiority and more efficient shipping to take back control of the trades previously lost to the English. English colonial merchants feared that the American trades might be next, so they turned to the state and wrote the Navigation Acts to protect their interests.

The navigation laws laid down only a few simple rules to regulate colonial commerce. First, all trade with the colonies had to be conducted in ships that were English-built, English-owned, and English-crewed. Although colonials were considered English for the purposes of the Navigation Acts, this rule effectively excluded foreigners from American trades. Second, certain commodities, tobacco among them, were designated as enumerated, which meant that they had to be shipped first to England no matter what their destination.

Expansion and Settlement

The tobacco trade continued to grow under the new system: By the early 1680s, England was annually importing from its American colonies about 20 million pounds of tobacco worth roughly 80 million sterling at the farm and much more at English markets. Most of this

crop came from the Chesapeake colonies Maryland and Virginia. Tobacco, however, was a good small man's crop, and as such it played an important role in creating the opportunities that attracted so many to the colonies. A profitable crop could be grown by a man working alone or with the help of a few family members and perhaps an **indentured servant** or two on a small patch of ground, using only simple tools. Tobacco played an important role in the settlement stage of several colonies. Before the 1640s, several of the Caribbean islands had also shipped substantial quantities of tobacco to England, but with the sugar boom of that decade, Caribbean tobacco production soon faded to insignificance.

Taxes and Smuggling

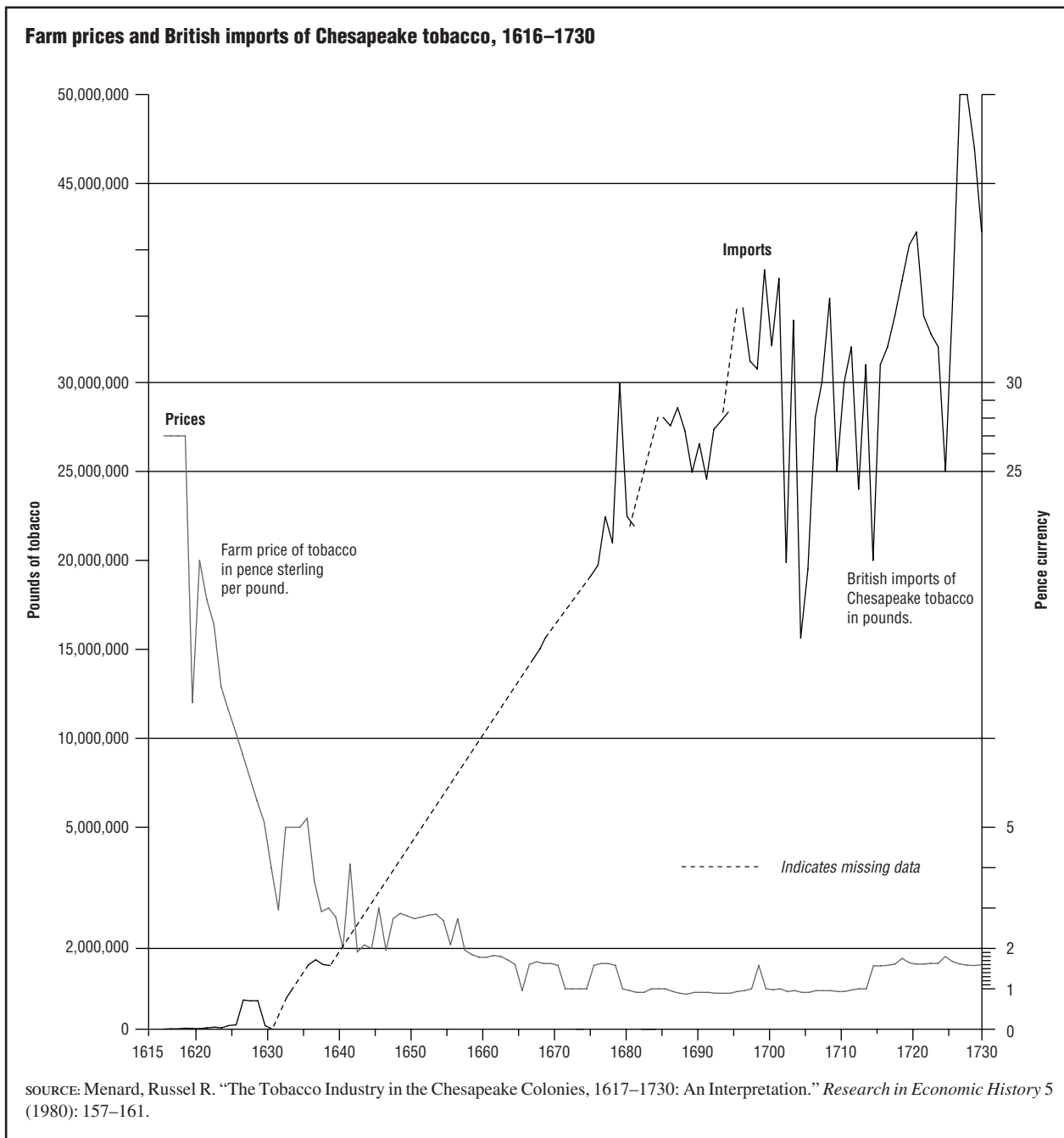
Planters insisted that the restrictions of the navigation system and the high taxes that system placed on tobacco brought hard times to producers. Because tobacco paid a basic customs levy that boosted its price several times over its price at the farm in Virginia, one might think the planters had a case. Total British customs on Chesapeake tobacco fell from 12 pence per pound in 1619 to 2 pence in 1657. There they remained until 1685, when they increased sharply. In 1685, Parliament raised the nominal duties on tobacco from 2 pence to 5 pence per pound. Subsequent increases raised the charges to 6 pence in 1697, 6.3 pence in 1703, and 7.3 pence in 1748 (the effective rates were slightly lower, depending on the method of payment). Duties on re-exported tobacco declined at about the same rate. After 1723, all customs on re-exported tobacco were rebated, so the tobacco of English colonial producers would be competitive in the markets of Europe. Since farm prices for Chesapeake tobacco in this period hovered between 2 and 3 pence per pound and occasionally fell below a penny, one can understand why planters often complained that customs charges were too high. However, tobacco from other parts of the Americas paid a much higher tax, while farmers in England were not allowed to raise tobacco. These policies gave English colonial producers a near monopoly of the large English home market. Further, customs charges fell over the seventeenth century, so they can hardly be said to have forced the price down.

Such high customs charges, often more than 10 times the price of the crop at the farm, raise the question of smuggling. Certainly such high taxes created an incentive to violate the navigation laws, for if one could avoid the tax and sell tobacco at market prices, one's profits would be substantial. Unfortunately, it is impossible to measure the extent of smuggling with any certainty; successful smuggling does not leave extensive tracks in the records. Despite the potential profits, smuggling does not seem to have been a major problem in the colonial tobacco trade, although there may have been a flurry of illegal activity just after the customs charges were raised in 1685. If caught, smugglers would lose not only their cargo but also their ship and face a substantial fine. Most merchants apparently concluded that the risks were too high and worked within the law. Smuggling, then, seems not to have been a major problem in the tobacco trade once metropolitan officials put an effective enforcement structure in place, something that had happened by the end of the seventeenth century. Smugglers apparently preferred low-volume, high-value commodities such as tea and brandy.



indentured servant a person who agreed to work for another for a specified term (usually a few years) to satisfy a financial obligation. During the American colonial period, immigrants sometimes paid their passage with indentured service.

TABLE 1



Planters and Merchants

As the data in Table 1 make clear, this seventeenth-century expansion of the tobacco industry took place within a context of rapidly falling prices. Falling prices for tobacco did not mean declining revenues for the state. Indeed, the revenues earned by the government from the tobacco trade climbed fairly steadily across the colonial period. As a consequence, the influence of the tobacco merchants over state policy remained substantial. A case in point is the Colonial Debts Act of 1732. Planters, to buy more land and slaves to expand operations, borrowed heavily from English merchants. When the loans came due, the planters

often resisted repayment. Colonial legislatures, usually dominated by planters heavily in debt, often aided the foot draggers in finding ways to frustrate the efforts of merchants to collect what was owed them. So difficult did collecting become that in 1744, Micajah Perry III, perhaps the leading tobacco merchant of his day, gave up his assets to his creditors in large part because of his inability to collect from planters.

Before his bankruptcy, however, Perry led a successful effort to have Parliament pass the Colonial Debts Act of 1732, despite the planters' fierce opposition. The act outlawed many of the obstacles colonial legislature had thrown up to make collection difficult. According to the act, all of a planter's property, including land and slaves, could be seized for debt, and a creditor could simply swear an oath before a British magistrate to prove his claim in court, which permitted creditors to bypass colonial judges and juries. This procedure could be counted on to protect local interests (the indebted planter) against grasping foreign creditors. Such demonstrations of their weakness within the empire and their inability to defend their interests against the merchants played no small part in the decision of many Chesapeake tobacco planters to join the revolutionary movement.

Productivity and Prices

While the planters were perhaps partially correct in blaming falling prices on overproduction and the restrictions of the navigation system, their complaints obscure a more complex and more interesting process. In a classic new-industry pattern, tobacco prices fell because planters and merchants discovered better and more efficient methods of raising and marketing the crop. These improvements in productivity permitted planters to lower prices. Lower prices meant that more people could afford their product. More customers required more tobacco. The argument that prices fell because planters produced more tobacco is backward. Falling prices expanded the market for colonial tobacco, which prompted increased production. It is not clear exactly how planters effected this change, but it is undeniable that productivity (output per each worker) increased. In seventeenth-century Maryland, the mean output crop per hand rose from about 900 pounds in the 1640s to over 1,500 pounds in the 1660s and to nearly 1,900 in the 1690s.

One major boost in productivity came from the late seventeenth-century shift from a work force dominated by British indentured servants to one dominated by African slaves. Since tobacco was widely cultivated in West Africa, slaves often possessed skills that servants did not have. Further, this transition in the labor force permitted planters to drive their workers harder and to ignore the conventions that protected English servants from overwork and other forms of abuse. In the Chesapeake colonies, these conventions included a rest period in the heat of the day, many traditional holidays, Saturday afternoons free of work, and conventions that governed the gender division of labor and the work. As long as English indentured servants dominated the work force, planters seem to have been reluctant to assign women to field work. With the shift to African slaves, that reluctance disappeared. Slaves could be made to work more hours per day and more days per year than could servants. Further, through liberal use of the whip they could be forced to work faster and harder. Productivity increase also reflected the cumulative impact of many small changes in technique as planters gradually discovered more efficient ways of growing tobacco.



The completion of the farm-building process also played a key role in productivity increases. Once planters had working farms in operation, they could ignore such tasks as land clearing, fence and barn making, and orchard planting and concentrate all their labor on making tobacco. The tobacco industry also benefited from innovations in commerce, which lowered interest rates and the commission fees that merchants charged for handling the business of planters in England. In addition, improvements in shipping lowered freight charges.

As a result of these improvements in productivity, prices fell. In 1618, Chesapeake tobacco brought 8 and 9 shillings per pound in London; by the 1620s it sold for as little as 2 shillings and by the 1630s for less than one shilling per pound. Prices continued to decline in the middle decades of the century, although at a slower rate than before: In the 1660s prices of 6 to 8 shillings per pound were common. By the 1680s, York River sweet-scented tobacco, generally regarded as the best made in the Chesapeake colonies, brought as little as 4 pence per pound. Prices at Amsterdam, the major European market for Chesapeake tobacco, also declined sharply: in the mid-1630s, Chesapeake tobacco sold for 2 shillings a pound in the Dutch port; by the early 1680s, it brought less than four pence.

As a result of falling prices, tobacco was made affordable to an increasing number of Englishmen. The market for tobacco widened, spreading from the major port cities to the countryside. Once a luxury used chiefly by the rich, it was becoming a product that a growing number of the working poor regarded as a necessity. The results of this expanding market are clear in figures on percapita consumption. In the 1620s, annual per-capita consumption of tobacco in England and Wales was only one-tenth of a pound; by the turn of the century, that figure had grown to 2.3 pounds. Tobacco, if not quite yet an article of mass consumption, had become a daily presence in the life of thousands of English men. One can also trace the increased consumption of tobacco in the growth of linked industries. The number of pipe makers in England rose from 7 in the 1630s to 66 by the 1690s.

It would be difficult to overstate the importance of this process for the impressive growth of the English Empire in the Atlantic during the seventeenth century. By 1700, when the population of the English colonies of America was roughly 400,000, about a quarter of whom lived in the Chesapeake region, England's Atlantic empire had become a colossus, in part because of the successes of tobacco. Had tobacco planters not found ways to lower prices by increasing their efficiency, tobacco would have remained a high-priced luxury item with a limited market; the impressive expansion of the English American Empire over the seventeenth century would not have occurred, for much of that empire rested on a foundation of smoke.

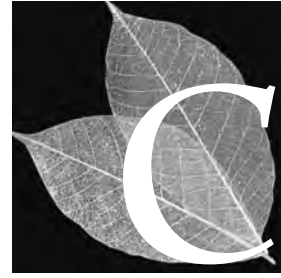
The great seventeenth-century expansion of the colonial tobacco industry led by productivity gains tended to slow as the century progressed. By the 1680s, it finally ground to a halt, and the industry began a thirty-year period of stagnation. By the 1680s, planters and merchants had exhausted the possibilities of improved efficiencies, and they faced rising prices for land and labor. Growth began again during the 1720s as the industry entered a second long expansion that lasted until the American Revolution. In contrast to the first period of growth, this eighteenth-century expansion was driven by increased demand as

population growth and rising incomes in Europe slowly pushed prices up and persuaded planters to make more tobacco to satisfy the rising demand.

■ RUSSELL R. MENARD

BIBLIOGRAPHY

- Carr, Lois Green, Russell R. Meard, and Lorena S. Walsh. *Robert Cole's World: Agriculture and Society in Early Maryland*. Chapel Hill: University of North Carolina Press, 1991.
- Goodman, Jordan. *Tobacco in History: The Cultures of Dependence*. London: Routledge, 1993.
- Harper, Lawrence A. *The English Navigation Laws: A Seventeenth-Century Experiment in Social Engineering*. New York: Columbia University Press, 1939.
- Main, Gloria L. *Tobacco Colony: Life in Early Maryland, 1650–1720*. Princeton, N. J.: Princeton University Press, 1982.
- McCusker, John J., and Russel R. Menard. *The Economy of British America, 1607–1789*. Chapel Hill: University of North Carolina Press, 1985.
- Morgan, Edmund S. *American Slavery, American Freedom: The Ordeal of Colonial Virginia*. New York: W. W. Norton, 1975.
- Price, Jacob M. *Perry of London: A Family Firm on the Seaborne Frontier, 1615–1753*. Cambridge, Mass.: Harvard University Press, 1992.

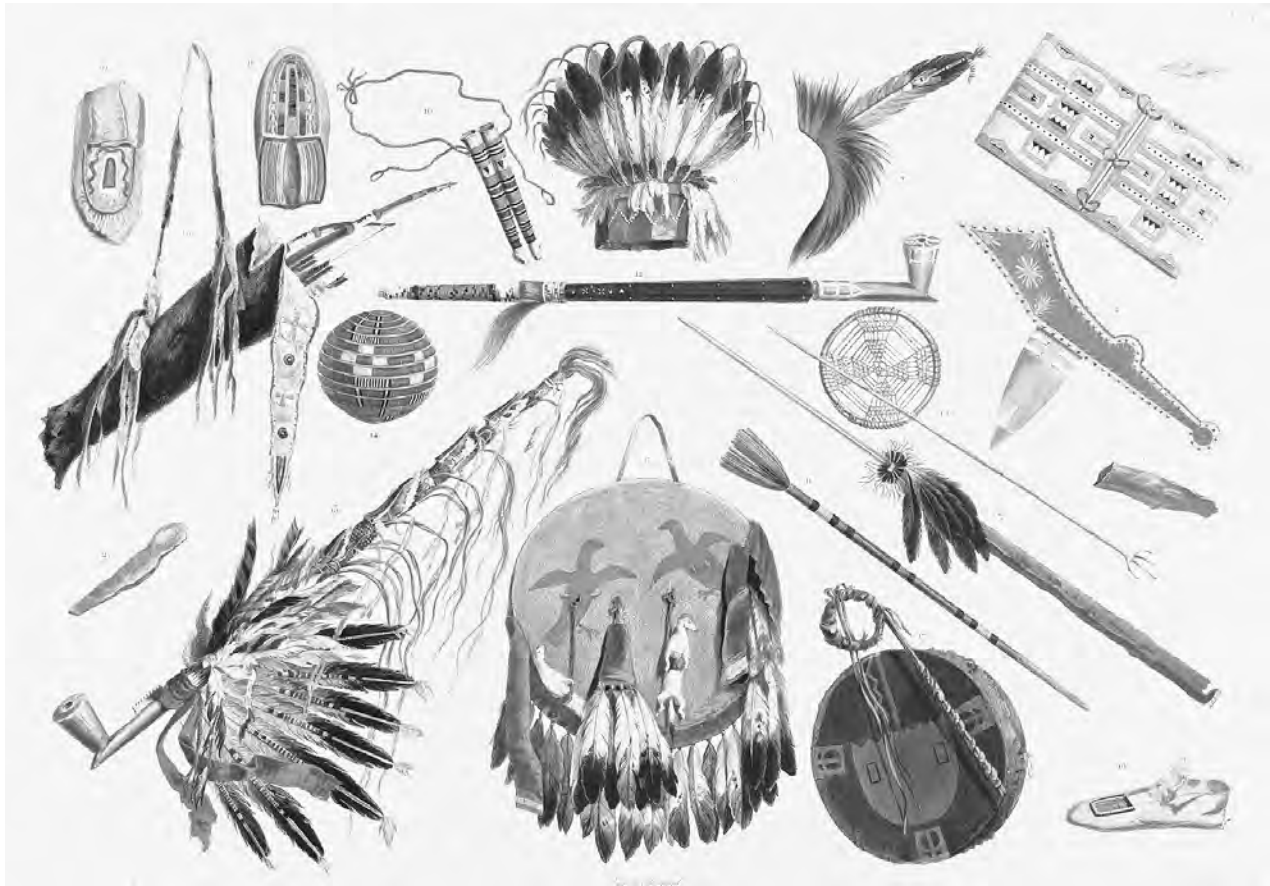


Calumets

The famous peace pipes of the Plains Indians are often referred to as calumets. The term is derived from *chalemel*, an Old French word for “reed.” French adventurers of the seventeenth century were some of the first Europeans to see and record calumets in use. Indeed, the early historical literature of the Great Lakes and Mississippi Valley is packed with descriptions of highly ornamented wands that were used by the Indians in their ceremonial dances. Because these wands sometimes doubled as stems for pipes, it was not always clear to the French whether the calumet was the stem or the bowl of the pipe, or perhaps both. Among Plains Indian tribes, however, the term *calumet* usually did signify the highly decorated stem, so it is probable that this also was the case in the Midwest.

In 1673 the French missionary and explorer Father Jacques Marquette noted two types of calumets. One was used for peace and the other for war. He described the stems for these calumets as being made out of hollow cane about two feet in length and decorated with long, colored feathers and the heads or necks of various birds. Le Page du Pratz, a French adventurer of the early eighteenth century, reported that Indians of the Lower Mississippi Valley often used eagle feathers and duck skin for their peace calumets. For the war variety, however, they adorned their calumets with flamingo feathers and buzzard skins. As Father Jacques Marquette wrote in his journal:

Every one, at the outset, takes the Calumet in a respectful manner, and, supporting it with both hands, causes it to dance in cadence, keeping good time with the air of the songs. He makes it execute many differing figures; sometimes he shows it to the whole assembly, turning himself from one side to the other. After that, he who is to begin the Dance appears in the middle of the assembly, and at once continues this. Sometimes he offers it to the sun, as if he wished the latter to smoke it; sometimes he inclines it toward the earth; again, he makes it spread its wings, as if about to fly; at



Indian Utensils and Arms by Karl Bodmer, c. 1830s. This illustration includes two examples of pipes of the Plains Indians, center and lower left. © GEOFFREY CLEMENTS/CORBIS

other times, he puts it near the mouths of those present, that they may smoke. The whole is done in cadence; and this is, as it were, the first Scene of the Ballet.

Calumets often had pipe bowls made out of a red stone. These are generally referred to as catlinite, named after the nineteenth-century artist and adventurer George Catlin. There is a famous pipestone quarry in southwest Minnesota, which was a primary source for many of these red stone pipes, but it should be stressed that this quarry was not the only source for pipe bowls used in calumet rituals. Pipestone is actually a form of **argillite**. It is fine-grained, dense, and carves easily. Prior to the introduction of iron implements, American Indians used flint or other hard minerals to cut and shape pipe bowls. They drilled holes by applying sand to the surface as an abrasive agent and then rotating hollow reeds between their hands.

Tobacco was the principal substance smoked in calumets. The only type of tobacco known to have been used in the Eastern Woodlands prior to European contact was *Nicotiana rustica* L. Interestingly enough, its prehistoric distribution in the eastern half of North America approximates the distribution of sacred pipes. This particular species of tobacco reaches a height of between 1.0 and 1.5 meters and has large fleshy leaves with small, pale yellow blossoms. Although tobacco can be chewed or snuffed, Native Americans in North America most commonly smoked it. Even today smoke is considered an offering to the spirits. As tobacco is an extremely potent species, particularly in terms

argillite a smooth, black sedimentary rock. American Indians sometimes carved tobacco pipes from argillite.

of nicotine content, in both prehistoric and historic times combining it with other plant products prior to smoking toned it down. The resulting substance is called *kinnikinnick*, after the Eastern Algonquian word meaning “mixture.”

The short-stemmed **calumet pipe** bowl form appeared in the eastern Plains after about 1200 C.E., but the anthropologist Robert Hall believes that the calumet pipe evolved over a period of 4,000 years, which is basically equivalent to when pipes first appeared on North American sites. He has argued that the calumet ceremony may have originated as an adoption ceremony that was closely associated with a mourning ritual. That may be true, but by historic times the chief purpose for presenting and smoking calumets in the Plains and Midwest seems to have been to preserve peace for periods of interaction. Under the umbrella of the calumet, groups that normally were mortal enemies were assured that they could complete their negotiations safely. Trade was often conducted at such times. One of the reasons why the famous Lewis and Clark Expedition of 1804–1806 was so free of hostilities is that these men wisely carried calumets with them and made great use of them whenever encountering new tribes. Admittedly, the calumet has always been more than just a peace pipe, but the Europeans who explored the territories between the Appalachians and the Rockies quickly learned that the smoking of such a pipe was a powerful tool of diplomacy and declining such an invitation was most unwise.

See Also Native Americans; Pipes; Religion; Shamanism.

■ IAN W. BROWN

BIBLIOGRAPHY

Hall, Robert L. *An Archaeology of the Soul: North American Indian Belief and Ritual*. Urbana: University of Illinois Press, 1997.

Paper, Jordan. *Offering Smoke: The Sacred Pipe and Native American Religion*. Moscow: University of Idaho Press, 1988.

Thwaites, Reuben Gold, ed. *The Jesuit Relations and Allied Documents: Travels and Explorations of the Jesuit Missionaries in New France, 1610–1791*. Vol. 59. Cleveland: Burrows Brothers, 1896–1901.



Camel

Late in 1913, the R.J. Reynolds Tobacco Company (RJRT) launched its new Camel Cigarettes. It was the first **American blend cigarette**, made largely from Burley and Bright tobaccos, and heavily sweetened, with just a smattering of **Turkish tobacco**. Reflecting the popularity of Turkish tobacco cigarettes, the Camel pack proclaimed that it contained “Turkish & Domestic Blend Cigarettes.” Listing Turkish first gave the cigarettes an exotic air of far greater importance than its actual presence justified. The Middle Eastern-sounding name, chosen in part because it



calumet pipe a highly ornamented ceremonial pipe used by American Indians.



American blend cigarette cigarette made from blend of various American tobaccos, for example, Bright (also called Virginia) and Burley. Can also refer to cigarette containing American tobaccos blended with similar Asian or African tobaccos.

Turkish tobacco a variety of mild, aromatic tobacco. Ironically, Turkish tobacco is not native to Turkey but was imported from North America. Turkish tobacco leaves are smaller and more delicate than American varieties. It is usually blended with Bright Leaf (Virginia) and Burley in cigarettes.

This early advertisement for Camel cigarettes reads: "Camel's exquisite mellow mildness and refreshing flavor have never been equalled by any cigarette in the world at any price. Their satisfying excellence is really a revelation to the most fastidious smoker. Appreciation of very unusual and very superior tobacco quality becomes keen after the enjoyment of smoking Camels and it will prove particularly gratifying to realize that Camels leave no unpleasant cigarettory odor." The traditional camel image later gave way to Joe Camel, R.J. Reynolds's modern cigarette advertising mascot who gained notoriety in the 1990s.

© BETTMANN/CORBIS



CAMELS exquisite mellow mildness and refreshing flavor have never been equalled by any cigarette in the world at any price. Their satisfying excellence is really a revelation to the most fastidious smoker.

Appreciation of very unusual and very superior tobacco quality becomes keen after the enjoyment of smoking Camels and it will prove particularly gratifying to realize that Camels leave no unpleasant cigarettory odor.

Camels are sold everywhere in scientifically sealed packages of 20 cigarettes for 20 cents

R. J. REYNOLDS TOBACCO CO., Winston-Salem, N. C.

Camel

CIGARETTES

would be easy to recall, and packaging displaying pyramids and palm trees further strengthened the cigarettes' appeal.

The marketing campaign for Camel was as innovative as the product. RJRT purchased large teaser newspaper advertisements over a four-week period. The first showed only the word Camel and the image of a camel. The second announced "The Camels are coming," and the third stated, "tomorrow there'll be more Camels in this town than in all Asia and Africa combined." Only in the fourth week did the ads identify Camel as a new cigarette brand.

Contrary to the then-contemporary practices of regional marketing, Camel was marketed nationally. Additionally, Camel was designed to make a profit at 10 cents a pack, while many other brands sold for 15 cents. To counteract any impression of tawdriness, RJRT placed notices, which still appear on Camel packs sold today, stating "Don't look for premiums or coupons, as the cost of the tobaccos blended in Camel Cigarettes prohibits the use of them."

Camels were an instant hit with the American public, aided by their popularity with soldiers during World War I as a quick, convenient smoke and by the fact that they appeared at about the time when more women were learning to smoke; sales were also assisted by the disruption of Turkish tobacco supplies. In the first year, 400 million Camels were manufactured. Two billion were produced in 1915 and 10 billion in 1916, as Camel became America's first truly national cigarette brand. By 1921, RJRT produced 18 billion Camels a year, capturing almost half of the American market. In 1921 cigarettes became the best-selling tobacco product for the first time in the United States, and, in that same year, one of the most famous advertising slogans of all-time was born: "I'd walk a mile for a Camel."

This cigarette was aimed at a mass market and it became a cigarette for the common people. As a result, the camel image became almost a cliché. During the 1920s and 1930s, graphics reminiscent of the Camel pack appeared on smokers' accessories, and table lighters were made in the shape of a camel.

From the mid-1940s through the end of the 1950s, Camel was the best-selling American cigarette. RJRT resisted making changes to its premier brand; indeed, public outcry over a minor packaging revision in 1958 caused RJRT to withdraw it. Despite the addition of Camel Filters in 1966 and Camel Lights somewhat later, the brand's **market share** steadily declined into the 1980s. Then the "Joe Camel" advertising campaign, introduced in 1987, rejuvenated the brand, giving it a more youthful image. ♦ By 1997, when RJRT discontinued the campaign amid pressure from antismoking groups, Camel's market share, especially among the youngest smokers, had increased dramatically. Since then, Camel marketing has sought to project a youthful image, particularly with the recent "Kamel" and "Camel Exotic" brand extensions.



market share the fraction, usually expressed as a percentage, of total commerce for a given product controlled by a single brand; the consumer patronage for a given brand or style of product.

See Also Gitanes/Gauloises; Lucky Strike; Marlboro; Virginia Slims.

■ JOSEPH PARKER

BIBLIOGRAPHY

- DeSmith, David. *A Camel Named Joe*. Boston: duCap Books, 1998.
- Kluger, Richard. *Ashes to Ashes: America's Hundred-Year Cigarette War, the Public Health, and the Unabashed Triumph of Philip Morris*. New York: Alfred A. Knopf, 1996.
- Tilley, Nannie M. *The R.J. Reynolds Tobacco Company*. Chapel Hill: University of North Carolina Press, 1985.

♦ See "Youth Marketing" for a photograph of a Joe Camel billboard.



Caribbean

Tobacco was the first American product to conquer Europe. Its rapid acceptance throughout the world made it a profitable commodity in a very short time. Before European contact, indigenous populations' consumption of tobacco had been restricted to the plant's magical and

religious purposes, and so it lacked a large market. Thus it was its European commercialization that brought about the expansion of tobacco into new production areas. From those early days until the twentieth century, at least, the Caribbean has been one of the preferred zones of tobacco production.

Small farmers, often of Spanish origin, turned to growing tobacco before the end of the sixteenth century in colonies such as Cuba, Santo Domingo, Puerto Rico, Caracas, and Veracruz, among others. The English, French, and Dutch soon imitated them, as they too began winning territories in America.

At the beginning of the seventeenth century, several European powers took possession of the Caribbean islands which not been effectively settled by Spain. All experimented with tobacco cultivation in their new territories, because it was a product with growing European demand and high value in the international market of the time. Tobacco production provided rival European powers a way to increase their participation in the Atlantic trade.

The Non-Hispanic Caribbean

At the end of the sixteenth century, the Spanish possessions in the region—especially Cuba, Santo Domingo, Puerto Rico, and Caracas—had built up important tobacco growing regions. Encouraged by tobacco's economic potential, the first settlers of the British and French colonies in the Caribbean also began cultivating it on small parcels of land. Thus, the new Caribbean colonies and also those in North America (especially Virginia) began to grow tobacco in significant quantities. As a result an overproduction crisis ensued in 1638, precipitating a drop in prices that undermined the enthusiasm and commercial potential for tobacco in the non-Hispanic Caribbean colonies. These last were most affected by the crisis because they had encountered problems with the quality of their products, which never reached a level acceptable to European consumers. Their tobacco suffered from problems related to the preparation, wrapping and packing of the leaves; it was said that the merchandise arrived at its destination without any aroma, dry, worm eaten, and sandy.

The decline in tobacco prices, together with the low quality that failed to satisfy the tastes of increasingly demanding European consumers, led to the abandonment of tobacco growing on the non-Spanish islands of the Caribbean. By the mid-seventeenth century, tobacco farms were displaced by large sugar cane **plantations** in these areas, with the exception of Haiti where this crop change took place a bit later. From then on, it was the Spanish Caribbean colonies that competed with Virginia for the benefits to be gained from exporting tobacco to Europe.

By this time, the Dutch, followed by the English and French, had demonstrated that the trade in tropical products, most notably sugar, could bring spectacular profits, and the weakness of the Spanish economy in this sector was evident. To counteract that tendency and become competitive in Atlantic commerce, Spain bet on Caribbean tobacco—especially the Cuban product—viewed as the world's best and sold for the highest prices as a result.



plantation historically, a large agricultural estate dedicated to producing a cash crop worked by laborers living on the property. Before 1865, plantations in the American South were usually worked by slaves.

Spanish and Cuban Tobacco

The only significant rival to Cuban tobacco was that grown in Virginia. But Virginia tobacco did not measure up to the Cuban tobacco, which was characterized by rich flavor and aroma, as well as excellent burning qualities. Its fame spread rapidly, and consumers were willing to pay its higher price, even though at times it was triple that of tobacco from other areas. Because Cuban tobacco had the cachet of a connoisseur item, it was relatively invulnerable to foreign competition. Cuban tobacco enjoyed steady demand that guaranteed good prices.

In sum, the non-Spanish islands of the Caribbean mounted an early effort in the tobacco trade, but their product did not achieve a level of quality acceptable to the European market. Spain, on the other hand, had Cuban tobacco, which enjoyed prestige and acceptance among consumers.

Spain sought to benefit from the exclusive cachet of Cuban tobacco. Accordingly, it adopted measures to stimulate Cuban production and preserve tobacco's privileged state in the market. During the eighteenth century, the Cuban tobacco trade received innumerable official stimuli and became the pride and joy of the Spanish monarchy, which elevated it at the expense of tobacco production and commerce in other regions of the empire.

From the beginning of the eighteenth century, the Crown sent Cuba annually large sums of Mexican silver with which to purchase tobacco for shipment to Spain. To protect Cuban production from competition from other Spanish colonies and the effects of contraband, the government restricted the tobacco trade in the rest of its possessions. Such policies benefited the Cuban tobacco business but were prejudicial to other colonies, especially Caribbean ones, which from the beginning of the conquest had invested significantly in this crop.

The Case of Santo Domingo

Santo Domingo, for example, on more than one occasion requested privileges comparable to those granted Cuba. The island colony saw an opportunity in 1762, when the English invaded Cuba. The English maintained control of Havana for a year, halting Cuban tobacco shipments destined for the metropolis. Dominican authorities responded by immediately sending a shipment of Hispaniola tobacco to demonstrate its quality that, they claimed, did not in any way lag behind the Cuban product. Although not to the extent they hoped, the Dominicans did receive a response that fed their hopes. Several royal officials were dispatched to Santo Domingo with the charge of buying all the tobacco harvested in the city and its environs, and of stimulating more planting. The viceroy of New Spain received orders to send money to Santo Domingo to finance that mission. Nonetheless, this effort dissolved when the situation in Havana was normalized.

In Santo Domingo, tobacco planting had achieved some importance since at least 1680, but the bulk of the harvest was illegally sold to the French in the neighboring colony of Saint Domingue (now Haiti). In response, the government in 1770 established a *Factoría* (tobacco agency) in its colony of Hispaniola, based in the city of Santiago. The purpose of this establishment was to buy the tobacco produced in the





contraband trade traffic in a banned or outlawed commodity. Smuggling.

region and ship it to the peninsula. As in Cuba, the purchases were financed with silver from New Spain. The Dominican *Factoría* lasted for twenty-six years, but its function as a provider of tobacco for the metropolis never compared with that of Cuba. Still, the *Factoría* guaranteed Dominican growers a secure market. This was a strategy to combat the **contraband trade** with the neighboring French by offering the growers a sure and attractive buyer. At the same time, it provided work and income for the population of this first Spanish colony, which had become one of the poorest.

During the nineteenth century, Santo Domingo went through long periods of political instability that affected and inhibited its economy, in particular tobacco production. As a result, it was not until the beginning of the twentieth century that the Dominicans managed to develop a more solid tobacco industry, characterized by the preeminence of peasant-based production.

The Cases of Caracas and Puerto Rico

Caracas and Puerto Rico were two other colonies that began to export tobacco in the seventeenth century and suffered from Spanish policies that favored the Cuban product. The tobacco of the Venezuelan region of Barinas, especially, had in early times enjoyed a level of prestige comparable to that of Cuba. In both colonies, smuggling of all types of goods—including tobacco—was intense and intolerable to the Spanish government. Good-quality tobacco arriving in Europe by way of illegal commerce threatened the competitiveness of the Cuban product and damaged the Spanish export trade.

In the case of Caracas, the Spanish government established a monopoly in 1779 in spite of opposition from colonial society. Under the monopoly, the state became not only the sole authorized buyer of tobacco produced in the colony, but also the exclusive seller, whether for internal or external consumption. The most distinctive feature of the Caracas monopoly was its Dutch export trade. Prior to the monopoly, the merchants of the Guipuzcoana Company controlled this trade, but with the implementation of the monopoly, several officials were dispatched to Amsterdam, Holland, to take charge of the trade in the name of the king. The Dutch government supported this arrangement and halved the duties charged on importation of Caracas tobacco if it arrived in Amsterdam through the offices of the Spanish government.

The Spanish representatives then received instructions to seek such privileges for Puerto Rican tobacco as well. From 1765 on, as part of the reform efforts that followed the invasion of Havana, the Spanish government tried to stimulate the Puerto Rican economy. It was generally accepted that one of the island's most serious problems was smuggling. The Spanish representatives in Holland reported that, according to Amsterdam merchants, around 1.5 million pounds of Puerto Rican tobacco had entered that port since 1775, suggesting that almost the entire Puerto Rican crop ended up in Holland. This helps explain why the Spanish monarchy authorized direct trade in tobacco between its Caracas and Puerto Rican colonies and Holland, channeling a longstanding practice into legal and official form. To carry out the purchases in Puerto Rico, the monarchy set up a *Factoría* that began functioning in 1784 and was active until the king suspended sales to Holland in 1792.

The Crisis of the Late Eighteenth Century

The end of tobacco exports to Holland coincided with a general crisis that afflicted the Spanish Empire's tobacco trade. Factors leading to this crisis include the outbreak of war with France in 1792 and the stimulus that sugar production in the Antilles received as a result of the Haitian Revolution. Tempted by the promising panorama of sugar, large planters sought to acquire as much land as possible to devote to that crop, displacing the tobacco growers onto marginal lands. Moreover, in these years the Cuban tobacco industry was in decline, despite the fact that Cuba had distinguished itself as the greatest and most prestigious tobacco producer. If that was the case in Cuba, the outlook in the other Spanish colonies was worse still.

The wars of independence of the early nineteenth century damaged the economies of the newborn nations, such as Venezuela and Santo Domingo, and they were slow to recover and to reinsert themselves into the flows of international commerce. Puerto Rico and Cuba did witness an improvement in tobacco production beginning with the 1840s, but it was always overshadowed by sugar.

The first decades of the twentieth century saw the unfolding of a new history for tobacco in the Hispanic Caribbean, under different political conditions and with different markets. The characteristics and problems of these industries have changed with the times, but the fame and prestige of their products continue to be recognized worldwide.

See Also British Empire; Cuba; Dutch Empire; French Empire; Spanish Empire.

■ LAURA NÁTER

BIBLIOGRAPHY

- Arcila Farías, Eduardo. *Historia de un monopolio: El estanco del tabaco en Venezuela, 1779–1833*. Caracas: Instituto de Estudios Hispanoamericanos, 1977.
- Céspedes del Castillo, Guillermo. *El tabaco en Nueva España*. Madrid: Real Academia de la Historia, 1992.
- Náter, Laura. *Integración imperial: El sistema de monopolios de tabaco en el Imperio español. Cuba y América en el siglo XVIII*. Ph.D. diss., El Colegio de México, 2000.
- Price, Jacob M. *France and the Chesapeake: A History of the French Tobacco Monopoly, 1674–1791, and of Its Relationship to the British and American Tobacco Trades*. Ann Arbor: University of Michigan Press, 1973.

Celebrities See Film; Visual Arts.



Chemistry of Tobacco and Tobacco Smoke

The chemistry of tobacco products and product delivery is extremely complex. To begin with, tobacco in its natural form is made up of more than 3,000 compounds. Cultivation, processing, and manufacture of



Dr. Edwin Wood of the American Heart Association stands near a clear plastic box over smoldering cigarettes, displaying the dangerous chemical contents of cigarettes, at antismoking demonstration, 9 March 1987, Harrisburg, Pennsylvania. © BETTMANN/CORBIS



bidis thin, hand-rolled cigarettes produced in India. Bidis are often flavored with strawberry or other fruits and are popular with teenagers.

kretek a clove cigarette, originally of Indonesian origin.



tar a residue of tobacco smoke, composed of many chemical substances that are collectively known by this term.

the tobacco may result in significant chemical variation. A wide variety of tobacco products have been developed, including cigarettes, cigars, **bidis**, **kreteks**, dry and moist snuffs, and chewing tobaccos. In addition to differences in their physical composition, these products differ in the form and route of delivery of tobacco constituents (orally or through inhalation), subsequent absorption into the body, and health and other effects.

In the case of smoked products, the burning of the tobacco produces further changes. Cigarette smoke consists of a dynamic mixture of more than 5,000 known chemical compounds. These include both highly volatile gaseous and vapor components (called the gas phase) and larger smoke particles (the particulate phase, often referred to as **tar**). Some of these compounds have cancer-causing, cardiovascular, respiratory, or other negative health effects. Others may increase the addictive properties of smoking, alter behavioral patterns, or produce additional effects in the brain and central nervous system. Efforts to control both product delivery and composition have resulted in important product changes with significant implications for health and smoking behaviors. However, the function, interaction, and effects of many tobacco-delivered components are still not well understood.

Tobacco Cultivation, Processing, and Product Manufacture

Tobacco is generally distinguished by the curing method used or by the geographic region in which it is grown, each of which may result in important differences in composition, including sugar, nicotine, and nitrogen content. In **flue-cured** tobaccos, high heat is used to speed the curing process, during which plant starches are converted to sugars and the concentration of acids is increased. The resulting tobacco has high sugar and medium nicotine content and produces smoke that is acidic (low pH) with a light aroma. **Air-cured** tobaccos include both Burley and Maryland tobaccos. These tobaccos have low sugar content and produce a fuller smoke (higher pH) with more nicotine. Maryland tobacco also continues to burn for a longer period when lit, so that it is less likely to self-extinguish. Sun-cured tobaccos (sometimes called Oriental tobacco) are generally produced in a Mediterranean climate and yield mild, aromatic smoke with low nicotine. Processed tobaccos, including reconstituted tobacco sheet (combined from stems, leaves, and other scraps, along with nontobacco additives) and expanded or puffed tobacco (in which the cellular structure of the leaf is artificially expanded), are also used in cigarette construction and may significantly alter smoke yields of tar and specific smoke components.

Typically, in manufacture of cigarettes and other tobacco products, different tobaccos are blended and used in combination with additives and other design components to determine product characteristics including nicotine content, taste, sensory effects, burn rate, and tobacco or smoke composition. For example, one important aspect of product chemistry is the pH (acidity or basic nature) of the tobacco or smoke. The pH strongly influences the percent of nicotine that is available in the freebase (that is, the more highly volatile, or “unbound”) form. Freebase nicotine has a greater impact on sensory nerves in the mouth and throat and facilitates more rapid absorption into the bloodstream in the case of smokeless products, such as oral **snuff**. It may also increase the speed of absorption from the lungs of cigarette smokers, although this has not been demonstrated experimentally in smokers. The site and rate of absorption are critical determinants of a drug’s potential for addiction. Sugars, acids, and other components in the tobacco blend play a critical role in controlling the pH. Likewise, the addition of ammonia or other additives may be used to alter freebase nicotine levels.

Other aspects of product chemistry influence delivery and absorption of constituents. The size of smoke particles may determine how deeply smoke constituents may be carried into the lung. Altering the temperature at which a cigarette burns influences the types of chemical changes that occur in the burning tobacco. Product design features such as paper porosity, ventilation, filtration, and use of additives must be adjusted to control these factors. Products can also undergo chemical changes over time as they sit in storage or on store shelves. A 2001 study of smokeless tobacco demonstrated that simply by sitting on a shelf unrefrigerated for six months, products generated significantly higher levels of tobacco-specific nitrosamines (TSNAs), potent cancer-causing agents (Brunnemann, Qi, and Hoffmann). In cigarettes, more volatile components such as **menthol** migrate between tobacco, paper, and filter over time, potentially affecting transfer to smoke. Finally, some chemicals can directly influence how other compounds behave in



flue-cured tobacco also called Bright Leaf, a variety of leaf tobacco dried (or cured) in air-tight barns using artificial heat. Heat is distributed through a network of pipes, or flues, near the barn floor.

air-cured tobacco leaf tobacco that has been dried naturally without artificial heat.



snuff a form of powdered tobacco, usually flavored, either sniffed into the nose or “dipped,” packed between cheek and gum. Snuff was popular in the eighteenth century but had faded to obscurity by the twentieth century.



menthol a form of alcohol imparting a mint flavor to some cigarettes.

the human body. For example, analysis of menthol use in cigarettes suggests that it may affect the body's absorption of other constituents, alter perception of harshness in the mouth and throat, and increase the smoker's capacity to hold smoke for longer periods within the lungs. A 1991 internal R.J. Reynolds study of smoke irritants found a significant relationship between the addition of a single compound (ethanol) to smoke and consequent smoker perception and behaviors, including reported perception of resistance as well as puff volume and other inhalation measures (Hayes et al. 1991).

Role of Chemical Analysis in Product Design

The complexity of tobacco product composition has led to the development of sophisticated mechanisms to monitor and assess product changes. The only common public measures of product chemistry used by government regulatory agencies are nicotine, tar, and carbon monoxide (a significant gas phase component of smoke). However, manufacturers routinely monitor physical product characteristics such as product weight, length, circumference, density, air ventilation, filtration efficiency, and draft, as well as chemical composition (in both tobacco and smoke) of **alkaloids**, sugars, ammonia, common additives, and many known toxic and carcinogenic compounds. One role of these analyses is simply to assure that key characteristics of a particular brand are maintained despite variations in growing conditions, agricultural practices, or other factors affecting the finished product. Nicotine content, moisture levels, smoke pH, and other critical blend components are all carefully controlled. This in turn enables manufacturers to minimize product variations over time, as well as across manufacturing and production plants located throughout the world.

Chemical analysis is also used internally to assess competitor products and direct product changes. For example, in the 1980s Brown & Williamson Tobacco Company undertook a series of projects to reverse-engineer the Philip Morris Marlboro brand in an attempt to characterize the factors driving its worldwide success (Wells 1995). They concluded that **ammoniation** of reconstituted tobacco used in Marlboro resulted in increased smoke pH and free nicotine delivery and produced unique compounds that improved smoke mildness and provided the characteristic Marlboro flavor. This analysis led Brown & Williamson to adopt ammoniation in its own cigarettes.

Chemical analysis has been instrumental in the development of product changes intended to reduce the health consequences of tobacco use. For example, cigarette filters were introduced in the 1950s to reduce harmful constituents in tobacco smoke. However, measures were necessary to determine whether these and other changes were effective in reducing the most harmful chemical compounds. In the 1960s and 1970s, the scientists Dietrich Hoffmann, Ernst Wynder, and others evaluated the smoke produced by cigarettes under different filtered conditions, measuring specific compounds commonly associated with greater health risks, such as **ciliotoxic** (hydrogen cyanide, acrolein) and cancer-causing agents (nitrosamines, aldehydes, PAHs). In 1989 Hoffmann produced a list of the most harmful known compounds in tobacco smoke, and this list is commonly referred to in discussions of overall product toxicity. Further efforts have been undertaken, both internally by manufacturers



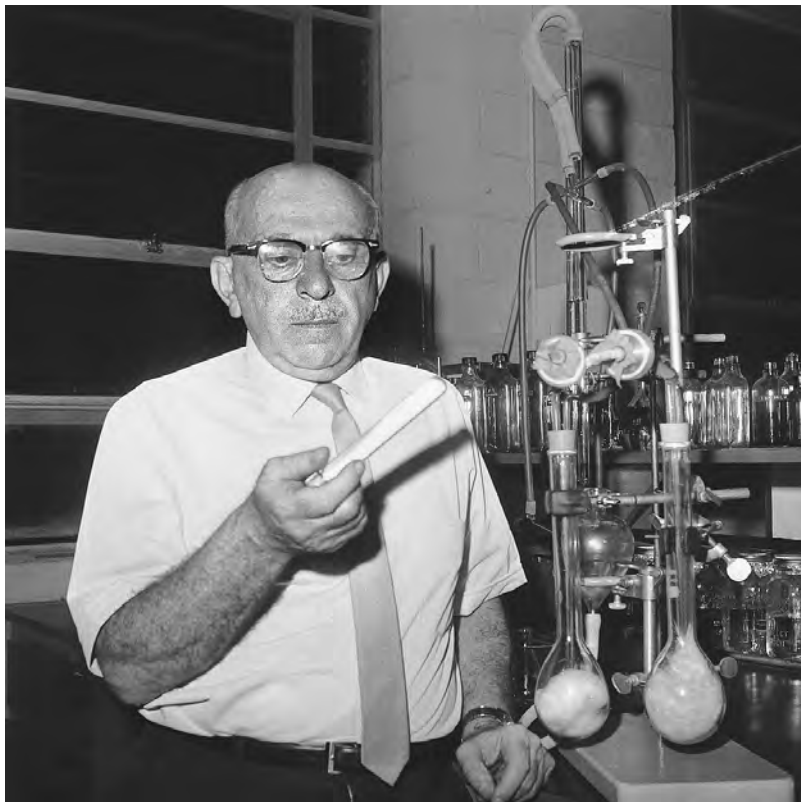
alkaloid an organic compound made out of carbon, hydrogen, nitrogen, and sometimes oxygen. Alkaloids have potent effects on the human body. The primary alkaloid in tobacco is nicotine.



ammoniation a process of adding gaseous ammonia during cigarette manufacture to improve smoking and flavor characteristics.



ciliotoxic being harmful to the cilia of the lungs. Cilia are tiny hairlike, structures on the inner surfaces of the lung.



In this 1967 photo, Robert L. Strickman holds some of the white crystalline substance that makes up a filter he has invented which, he claims, is in general 70 percent more effective than conventional filters. The device briefly received national attention in 1967 when Columbia University purchased the rights to it, but test results were disappointing and the filter was never widely marketed. The device was one of many that appeared in the wake of increased publicity around the health hazards of smoking.

© BETTMANN/CORBIS

as well as independently, to identify means for selective filtration of these components, although with mixed success.

The role of chemical analysis has become even more important as cigarette manufacturers have sought ways to reduce tar and nicotine content while retaining flavor, impact, and other product characteristics. One of the primary areas explored by industry researchers is sensory analysis. The properties of the smoke aerosol, as well as individual smoke components, determine both the body or mouthful of the smoke, as well as the strength or impact on receptors in the mouth and throat, which are critical to consumer perception. In order to provide greater sensory character to lower tar and nicotine delivery cigarettes, industry researchers analyzed dynamics of the smoke aerosol, including the swirl of the smoke produced by different filter and ventilation configurations, and how these affect transfer of smoke particles and consumer sensory perception. Other sensory changes have included increased smoke pH, manipulation of tar/nicotine ratios, and use of additives to increase strength as well as flavor characteristics. Industry research has demonstrated that sensory characteristics may affect consumer satisfaction, inhalation patterns and smoking behaviors, and appeal among specific populations such as youth.

Health and Other Effects of Product Changes

Chemical changes to tobacco and smoke have far-reaching implications for product effects, including health, addiction, and smoking behaviors. A 1995 study of U.S. Tobacco, a smokeless tobacco manufacturer, demonstrated an intentional strategy of graduated product marketing,

in which starter products with low nicotine delivery were targeted to new users. The users were then gradually encouraged through advertising and free samples toward products with increasing nicotine delivery until they had adopted Copenhagen, the most addictive product available (Connolly 1995). In a 2002 study of the youth-targeted brand Camel, internal documents revealed the importance of smoothness and mildness as factors in the adoption of cigarette smoking among youth (Wayne and Connolly 2002). Internal documents have also shown that cigarette smoke pH—and consequently free nicotine delivery—were critical factors in the success of cigarette brands such as Marlboro and Kool. Presumably, this was due to the increased sensory character and addictive effects of these products (Hurt and Robertson 1998).

Design changes made to cigarettes in the past decades have resulted in products with reduced delivery of tar and nicotine, as measured by smoking machines. Public perception of these changes is that these products offer reduced health risks. However, research has found that changes in consumer smoking behaviors as a response to the reduction in tar deliveries appear to have undermined the intended benefits of reduced smoke yields. For example, lung cancers have appeared deeper in the lung as smokers have altered behaviors by inhaling more deeply, as well as more frequently. As a result, measures of health outcomes (such as rates of lung cancer) are not reduced as would be expected in relation to product changes. In addition, chemical analysis has demonstrated that some cancer-causing agents in tobacco products have increased even as others have been reduced. For example, design changes over the last 30 years have resulted in a significant reduction in measures of benzo(a)pyrene, but correspond to an increase in the tobacco-specific nitrosamine NNK, another significant cancer-causing agent. Thus, the complexity of the product chemistry has made it much more difficult to accurately assess and control health risks.

See Also Genetic Modification; Toxins.

■ GEOFFREY FERRIS WAYNE

BIBLIOGRAPHY

- Browne, C. L. *The Design of Cigarettes*, 3rd ed. Charlotte, N.C.: Hoechst Celanese, 1990.
- Brunnemann, K., J. Qi, and D. Hoffmann. "Aging of Oral Moist Snuff and the Yields of Tobacco-Specific N-Nitrosamines (TSNA)." 22 June 2001. American Health Foundation, Valhalla, New York. Unpublished report.
- Connolly, G. "The Marketing of Nicotine Addiction by One Oral Snuff Manufacturer." *Tobacco Control* 4 (1995): 73–79.
- Hayes, A. W., et al. "Effect of Chemical Stimulant Concentration on the Perception of Draw." 9 April 1991. Bates: 508277453–508277466. <http://tobaccodocuments.org/product_design/508277453-7466.html>.
- Hurt, R. D., C. R. Robertson. "Prying Open the Door to the Tobacco Industry's Secrets about Nicotine: The Minnesota Tobacco Trial." *JAMA* 280 (1998): 1173–1181.
- National Cancer Institute. *The FTC Cigarette Test Method for Determining Nicotine, and Carbon Monoxide Yields for U.S. Cigarettes*. Smoking and Tobacco Control Monograph 7. Bethesda, Md.: U.S. Department of Health and Human Services, National Institutes of Health, National Cancer Institute, 1996.

- . *Risks Associated with Smoking Cigarettes with Low Tar Machine-Measured Yields of Tar and Nicotine*. Smoking and Tobacco Control Monograph 13. Bethesda, Md.: U.S. Department of Health and Human Services, National Institutes of Health, National Cancer Institute, 2001. Available: <<http://cancercontrol.cancer.gov/tcrb/monographs/13/index.html>>.
- Stratton, Kathleen, et al., eds. *Clearing the Smoke: Assessing the Science Base for Tobacco Harm Reduction*. Washington, DC: Institute of Medicine, National Academy Press, 2001. Available: <<http://www.nap.edu>>.
- U.S. Department of Health and Human Services. *The Health Consequences of Smoking: The Changing Cigarette*. Rockville, Md.: U.S. Department of Health and Human Services, Office on Smoking and Health, 1981. Available: <http://www.cdc.gov/tobacco/sgr/sgr_1981/index.htm>.
- Wayne, G. F., G. N. Connolly. "How Cigarette Design Can Affect Youth Initiation into Smoking: Camel Cigarettes, 1983–93." *Tobacco Control* 11 (2002): 32–38.
- Wells, John Kendrick, III. "Subject: Technology Handbook." (22 August 1995). Bates: 50550002. Available: <http://tobaccodocuments.org/product_design/945335.html>.

Cheroots and Bidis See South Asia; South East Asia.



Chesapeake Region

The Chesapeake region, encompassing the colonies of Virginia and Maryland, was neither the first nor the only area of Anglo-America where settlers cultivated tobacco. English immigrants established commercial tobacco **plantations** in the Amazon region and Guiana in 1609, four years earlier than Bermudans and Virginians, and several Caribbean island colonies were founded on the economic base of tobacco cultivation. Yet, after the fall of England's South American colonies and Providence Island to Spain and Portugal, and once Caribbean planters switched to the even more profitable staple of sugar from the 1640s, the Chesapeake became the New World's leading tobacco-producing region, and tobacco became a fundamental force in Chesapeake life, defining to a great extent its settlement patterns, society, and politics, as well as its economy.



plantation historically, a large agricultural estate dedicated to producing a cash crop worked by laborers living on the property. Before 1865, plantations in the American South were usually worked by slaves.

The Settling of Virginia

ORIGINAL PLANS. The first English colonists arrived in Chesapeake Bay aboard the *Susan Constant*, *Godspeed*, and *Discovery* in April 1607, settling Jamestown the following month. (The town was named after the English king and the colony in honor of the virginity of Elizabeth I.) The first migrants included thirty-five gentlemen, forty soldiers, a doctor, an Anglican minister, and a number of artisans and laborers. As there were no farmers or women, the group did not intend to form a self-sufficient agricultural community. The Virginia Company, the



A man dressed as a colonist sorts and grades tobacco leaves at a tobacco barn during a historical reenactment at Colonial Williamsburg, October 1997. © RICHARD T. NOWITZ/CORBIS



panegyric a speech or writing of high praise for a person or event.

organization that sponsored the settlement, did not originally intend to plant tobacco or indeed any crop in Virginia. Instead, its early settlers, like the Spanish conquistadors, were to conquer local peoples and collect gold, silver, and sassafras (believed to be a medicinal **panegyric**). When they failed to find these resources, they attempted to turn the colony into a trading post and only when this failed did settlers finally turn to tobacco agriculture.

EARLY DISASTERS, 1607–1624. Partly as a result of this misguided planning, the early years of English settlement in the Chesapeake were disastrous, though tobacco eventually proved crucial in rescuing the venture. Another problem was that Jamestown was located on a tide-water marsh, so settlers suffered from malaria, saline poisoning, and cholera (“the bloody flux”) as their sewage washed back and forth in the tide. Half the settlers died within three months and only thirty-five survived the first winter. Also, without agriculture, the colony depended for food and new settlers on resupply ships from England. When a resupply fleet was scattered by a storm off Bermuda in October 1609, there followed a bad winter when, again, half the settlers died. Nor could settlers rely entirely on Amerindians supplying food. The local Powhatan

people fed the English until 1609, when, realizing they intended to stay permanently, they cut off their food supply and began attacking crops and livestock in a war that lasted until 1614. On 22 March 1622, after the emperor Powhatan died and was succeeded by his brother, Opechancanough, and following the murder of a werowance (chief), local Indians rose up and killed 350 colonists, one-third of the settlers, and it would have been worse if an Amerindian Christian convert had not given advance warning. In all, the Virginia Company shipped 7,500 people to the colony, but Virginia's population was only 1,200 in 1624. That year the Virginia Company was dissolved and in the following year Virginia became a royal colony.

Foundations of Successful Colonization

POLITICAL INSTITUTIONS. Though it was not clear in 1624 that the colony would last, the foundations of its survival had in fact been laid. One foundation was a stable political system that commanded settlers' respect. Rivalries among the original twelve councilors and weak leadership by president Edward Wingfield led to ineffectual government until Captain John Smith forced settlers to relocate and to grow food. Smith departed in 1609 following a gunpowder accident, although some historians suspect attempted assassination. Governors Thomas Gates (1611–1613) and Thomas Dale (1614–1616) enforced the **authoritarian** *Lawes Divine, Morall and Martiall* (1611) that may have helped the colony survive but were deeply resented. By 1618 Governor George Yeardley and the Virginia Company treasurer Edwin Sandys restored English laws and established political representation (at least for wealthier property holders) with the first meeting of the Virginia Assembly on 30 July 1619.



authoritarian demanding unconditional obedience; dictatorial

PRIVATE PROPERTY (HEADRIGHTS). Another foundation for colonial survival and prosperity was private property. Initially the Virginia Company owned the colony's land, but shareholders soon found it necessary to offer land to attract settlers. These plans culminated with the headright system wherein the Virginia Company granted fifty acres to all migrants who paid their own passage across the Atlantic, plus another fifty acres for every family member and servant they brought with them. By granting headrights the Virginia Company helped bring about its own bankruptcy, but it nevertheless helped create a viable society.

TOBACCO. Equally important, successful colonization required a profitable staple commodity, and Virginians found this in tobacco. The Chesapeake's native tobacco was *nicotiana rustica*, which was too bitter and unpalatable for commercial success. During the 1609 Bermuda shipwreck, though, John Rolfe had encountered the sweeter West Indian *nicotiana tabaccum* and in 1612 introduced a Trinidadian strand of it to Virginia. After some experimentation, Virginia exported its first four **hogsheads** containing 2,600 pounds of tobacco in 1614. Exports rose rapidly to 50,000 pounds in 1618 and 200,000 pounds in 1622. In these early years, tobacco cultivation threatened the colony's survival. With prices peaking at three shillings per pound, planters neglected food production in favor of tobacco cultivation and ruthlessly overworked their servants. As Virginian supply caught up with English demand,



hogshead a large wooden barrel formerly used to store and transport cured leaf tobacco. A hogshead typically held approximately 800 to 1000 pounds (350 to 450 kg) of tobacco.



Drawing of John Rolfe, Jamestown, Virginia, minding tobacco crop. Rolfe introduced tobacco cultivation in Virginia.
© CORBIS-BETTMANN

however, prices fell to three pence per pound by the mid-1630s, and the tobacco boom settled into steady growth in which the crop took its central place in the formation of Chesapeake economy and society.

The Settling of Maryland

THE CALVERT FAMILY'S PROPRIETORSHIP. The next stage in establishing Chesapeake tobacco society came with the founding of Maryland in 1634. Unlike Virginia, Maryland was neither a company nor a royal colony but a proprietorship (technically a **palatinate**) in the hands of the Calvert family. George Calvert, from a Yorkshire landowning family, was a courtier of James I who withdrew from public life because his Catholicism rendered him unable to take the Oath of Supremacy in 1625. James I nevertheless rewarded Calvert's service with the title



palatinate the territory of a feudal lord having sovereign power within his domain.

Baron Baltimore, and King Charles I granted his son, Cecilius Calvert, a charter for Maryland (named after Queen Henrietta Maria) in April 1632, two months after George died. One hundred forty migrants aboard the *Ark* and *Dove* reached Maryland in May 1634.

EARLY SUCCESSES. Maryland's founders benefited from the existence and experience of Virginians. They collected food supplies in Jamestown before settling at St. Mary's City, and the proprietor ordered that settlers grow food crops before cash crops. It helped too that the Piscataway Indians had been suppressed following the 1622 massacre, and the Yao-comico saw the colonists as possible allies against the Susquehanna. While colonial Maryland suffered many political convulsions, first with Virginia settlers already in the territory and afterward between Catholics and Protestants (despite Calvert religious toleration), Marylanders avoided the catastrophes that plagued early Virginia and soon established prosperity based on tobacco planting.

Tobacco Cultivation

PRODUCTION AND MARKETING. Within four years of settlement Marylanders exported 100,000 pounds of tobacco, and in 1640 the two Chesapeake colonies exported one million pounds. By 1690 the figure reached 25 million pounds and then dipped during the Nine Years War (1689–1697) and the War of the Spanish Succession (1702–1713), but by 1728 Chesapeake exports reached 50 million pounds and by the time of American Independence in 1776, 100 million pounds. Mass consumption (with 25 percent of adults smoking a pipe per day) appeared in England by the 1670s and throughout Europe by 1750. Demand was greatest among the French, and by the 1770s four-fifths of Chesapeake tobacco was re-exported from Britain to France. The **Navigation Acts** (1660, 1696) required Chesapeake tobacco to be exported directly to England or, after the Act of Union of 1707 that created Great Britain, to Scotland. Thereafter Glasgow became a major tobacco center, and Scottish factors established themselves in the Chesapeake (planters had previously traded directly to London merchants).

After Independence, European wars disrupted markets and drove production down until the 1810s. After that, U.S. production rose to 300 million pounds by 1859, although by then Maryland and Virginia produced only 37 percent of that total while production had shifted to North Carolina, Georgia, Tennessee, and especially Kentucky, where newer land was more productive and lighter soil more suited to the milder and increasingly popular Bright tobacco.

DIVERSIFICATION. In colonial times overproduction drove down prices, and overdependence on one product made planters vulnerable to price fluctuations and wartime disruption of trade. The Virginia Company and later Governor William Berkeley of Virginia attempted to encourage the cultivation of cotton, silkworm, flax, hemp, naval stores, sugar, rice, rapeseed, and various fruits and spices. Yet Chesapeake planters stuck tenaciously to tobacco as their staple, although the region was self-sufficient in food and indeed an exporter of grain and livestock products to the West Indies once planters there began neglecting food



Navigation Acts laws passed by the British Parliament that subjected the American colonies to sell only to Britain, buy only from Britain, and ship only in British vessels. The Navigation Acts were one of the background causes of the American Revolution.

John Rolfe

John Rolfe (6 May 1585–22 March 1622) played a fascinating role in early Chesapeake history. Besides being in the Bermuda shipwreck that inspired William Shakespeare's play *The Tempest* (1611) and bringing tobacco cultivation to Virginia, he also observed and recorded the arrival of the first slaves in Jamestown among other major events. Most famously, in 1613 he met and in 1614 he married Pocahontas, daughter of Chief Powhatan of the large Native American confederacy of tribes south of the Potomac River, and thereby helped bring an end to the first Anglo-Amerindian war in North America (1611–1614). On a subsequent trip to London, King James I snubbed Rolfe, affronted by the commoner marrying into Amerindian royalty (Powhatan was crowned a king by the English, though he owned fealty to James I). Sadly, Pocahontas died at the beginning of the return voyage to Virginia and was buried at Gravesend, Kent. Poignantly, given his role in improving Anglo-Amerindian relations, Rolfe died in Opechancanough's uprising in 1622.

production in favor of sugar cultivation. Only in the early to mid-eighteenth century did significant numbers of planters and farmers in western and northern Virginia and northern and eastern Maryland switch to wheat cultivation, giving the Chesapeake a much more diverse economy.

REGULATION. Tobacco production nevertheless required regulation, and planters attempted unsuccessful voluntary production limits to stem a fall in prices in the 1630s and from the 1680s. In the early eighteenth century concerns about the quality of Chesapeake tobacco inspired lawmakers in Virginia in 1730 and Maryland in 1747 to pass tobacco inspections acts wherein county inspectors burned poor-quality produce. Up to a third of produce was thereby destroyed. This policy hurt smaller yeoman farmers and tenants most especially, and they retaliated by cutting and burning gentlemen's plants in the fields. After the Revolution, states amended these laws so that while poorer farmers could still not export poor tobacco they could sell it locally instead.

Tobacco Society

POPULATION. The creation of a viable society in the Chesapeake, made possible by political stability and a tobacco commodity combined with widespread landownership, meant that the population rose steadily after the demographic disasters of the early years. From just 1,200 souls in 1624, the population rose to 35,446 in 1660, 190,000 in 1760, and 2.3 million in 1860. For much of the seventeenth century the populations of Maryland and Virginia remained predominantly immigrant. By the 1690s, however, after the equalization of sex ratios and after birth rates overtook death rates, the Chesapeake had a predominantly Creole (American-born) population that developed an increasingly powerful and distinct local identity and culture that were profoundly shaped by tobacco. In *The Present State of Virginia* (1724) Reverend Hugh Jones provided a sense of how central tobacco was to Chesapeake life when he wrote that the crop is "our meat, drinke, cloathing and monies." (Indeed, tobacco was used as currency in the Chesapeake throughout the colonial period and continued to represent money afterward.)

SETTLEMENT PATTERNS. Tobacco cultivation largely determined settlement patterns. Settlement began on the banks of the deep and wide rivers leading off the bay, so that planters could load their crops directly on to oceangoing vessels. Only after the riverbanks were full did settlement move inland. Even then, the land-intensive nature of the crop closely shaped the human geography of the Chesapeake. To avoid soil exhaustion (manure was thought to taint tobacco, although planters experimented with various forms of fertilizer), tobacco cultivation usually required at least forty acres of land per worker: three acres planted in tobacco, the rest in food crops or fallow. Even the smallest tobacco farms, therefore, had to be a minimum of forty acres in size, while the largest plantations ran to tens of thousands of acres.

The soil-exhausting potential of tobacco therefore required that settlement spread rapidly throughout the region. Virginia tobacco

planters had already settled in northern North Carolina before the Carolinas officially became colonies in 1660. By the early eighteenth century, settlement reached the backcountry, or piedmont region, near the Allegheny Mountains. After the Revolution, Chesapeake planters established tobacco as the principal crop in Kentucky and Tennessee. But the land-intensive quality of tobacco also led to a thinly spread population and an absence of towns. Courts, churches, taverns, and markets tended to be located at crossroads near the center of counties, not in villages. To counter the consequent image of rusticity Governor Francis Nicholson of Virginia ordered the building of capital cities at Williamsburg, Virginia, and Annapolis, Maryland, in the 1690s.

INDENTURED SERVITUDE. In addition to being land-intensive, tobacco was labor-intensive, and it thus powerfully shaped the nature of Chesapeake social relationships. Early colonial planters relied mainly on indentured servants as laborers, men and women who received free passage across the Atlantic in return for typically four to seven years of service to the planter who paid their fare. Some 100,000 servants migrated to the Chesapeake in the seventeenth century, predominantly from the southwest of England (although later servant migrants came from all over the British Isles), constituting over 80 percent of all migrants. In the peak period of the 1630s to 1650s up to 1,900 servants migrated there annually.

Servants were housed, fed, and given so-called freedom dues by masters at the end of their terms (usually a set of clothes, tools, and a small amount of food and money, depending on local custom). Though servants had certain rights, their status was lower than that of agricultural servants in England who were employed annually and were members of local communities and often neighbors of their masters. In the newer and looser communities and more intensive economy of the Chesapeake, servants were often treated more as commodities and with less humanity.

FROM SERVITUDE TO SLAVERY. The commodification of labor grew worse, though, for from the 1660s slavery began to displace servitude as the primary workforce on Chesapeake tobacco farms and plantations. The first twenty slaves arrived in Jamestown in 1619 aboard a Dutch privateer that had been raiding the Spanish West Indies. With a ready supply of cheap servants from England, though, slavery remained a minor institution for some forty years.

From the 1650s, however, the English economy improved and new colonies opened up in New York, New Jersey, the Carolinas, and later Pennsylvania and Delaware, so the supply of servants to the Chesapeake declined while their prices increased. By that time, Chesapeake planters had acquired the capital necessary to purchase significant numbers of slaves, who were costly to transport, whose service was lifelong, and who were therefore expensive. By 1720, slaves had overtaken servants as the region's primary source of labor, and indentured servitude gradually disappeared by 1830. Meanwhile, the slave population of the Chesapeake rose from only 950 in 1660, to 8,000 in 1710, 49,000 in 1760, and 578,000 in 1860. From the early eighteenth century, slaves represented around a third of the region's inhabitants.





chattel personal property, other than real estate, that may be bought, sold, or pledged against a debt.



paternalistic fatherly; acting as a parent. Although paternalism presumes an obligation for the stronger to provide for the weaker, it implies superiority and dominance over them as well. For example, slave masters often had paternalistic feelings for their slaves, whom they considered child-like.

SLAVERY. As long as slave numbers remained small, slavery remained a relatively moderate institution. Some early Chesapeake slaves mixed socially with and were treated similarly to white servants, even being freed after a number of years of service, although the historical evidence is inconclusive regarding how extensive this was. In any case, once servant numbers declined and planters became more reliant on slave labor, conditions deteriorated. Virginia and Maryland enacted the first slave codes, defining slaves as **chattels** for life and closely regulating their lives, in the 1660s, and these laws were codified in 1705.

The history of tobacco affected slave life in other ways besides creating such great demand for their labor. Because English settlers learned to cultivate tobacco from Amerindians, planters were able to impose the harsh sunup to sundown gang labor regime on Chesapeake slaves. In the colonial Carolinas, by contrast, planters depended on African expertise in rice production, so slaves created a task system that left them more free time. Also, rice being more lucrative than tobacco, Carolina plantations tended to be larger and their owners more often absentees, taking little interest in their slaves' lives, while the normally resident owners of smaller Chesapeake plantations tended to be more **paternalistic** as slaveholders. Carolina slaves therefore tended to be more culturally autonomous and to retain more of their African traditions than did slaves in the Chesapeake. Even so, slaves in the Chesapeake had some measure of autonomy and, once a large Creole community appeared by the 1740s, they laid the foundations of a new and profoundly vital African American culture.

The Civil War and the End of Slavery

Slavery survived in the Chesapeake until the Civil War (1861–1865), although the history of Maryland and Virginia diverged drastically during this conflict. Most Maryland farmers had switched to wheat production long before the Civil War, and dependence on slavery was relatively weak in this so-called border state, allowing President Abraham Lincoln to keep Maryland in the Union (although many Marylanders fought for Southern regiments). Virginia (and other tobacco states) seceded from the Union following the Battle of Fort Sumter in April 1861. Richmond became the Confederate capital and from the first Battle of Bull Run in July 1861 to General Robert E. Lee's surrender at Appomattox in April 1865 much of the war was fought on Virginian soil. Even there, though, there were Union loyalists, especially in the mainly wheat-growing west where several counties seceded from the Old Dominion to form the state of West Virginia in 1864.

See Also British Empire; Native Americans; Plantations; Slavery and Slave Trade; United States Agriculture.

■ STEVEN SARSON

BIBLIOGRAPHY

Beeman, Richard R. *The Evolution of the Southern Backcountry: A Case Study of Lunenburg County, Virginia, 1746–1832*. Philadelphia: University of Pennsylvania Press, 1984.

- Breen, T. H. *Tobacco Culture: The Mentality of the Great Tidewater Planters on the Eve of Revolution*. Princeton, N.J.: Princeton University Press, 1985.
- Carr, Lois Green, Russell R. Menard, and Lorena S. Walsh. *Robert Cole's World: Agriculture and Society in Early Maryland*. Chapel Hill: University of North Carolina Press, 1991.
- Clemons, Paul G. E. *The Atlantic Economy and Colonial Maryland's Eastern Shore: From Tobacco to Grain*. Ithaca, N.Y.: Cornell University Press, 1980.
- Cottom, Robert I., Jr, and Mary Ellen Hayward. *Maryland in the Civil War: A House Divided*. Baltimore: Maryland Historical Society, 1994.
- Fields, Barbara Jeane. *Slavery and Freedom on the Middle Ground: Maryland during the Nineteenth Century*. New Haven, Conn.: Yale University Press, 1985.
- Horn, James. *Adapting to a New World: English Society in the Seventeenth-Century Chesapeake*. Chapel Hill: University of North Carolina Press, 1994.
- Isaac, Rhys. *The Transformation of Virginia, 1740–1790*. Chapel Hill: University of North Carolina Press, 1982.
- Kulikoff, Allan. *Tobacco and Slaves: The Development of Southern Cultures in the Chesapeake, 1680–1800*. Chapel Hill: University of North Carolina Press, 1986.
- Main, Gloria L. *Tobacco Colony: Life in Early Maryland, 1650–1720*. Princeton, N.J.: Princeton University Press, 1982.
- Menard, Russell R. *Economy and Society in Early Colonial Maryland*. New York: Garland, 1985.
- Morgan, Edmund S. *American Slavery, American Freedom: The Ordeal of Colonial Virginia*. New York: Norton, 1975.
- Morgan, Philip D. *Slave Counterpoint: Black Culture in the Eighteenth-Century Chesapeake and Lowcountry*. Chapel Hill: University of North Carolina Press, 1998.
- Price, Jacob M. *Capital and Credit in British Overseas Trade: The View from the Chesapeake, 1700–1776*. Cambridge, Mass.: Harvard University Press, 1980.
- Robertson, James I., Jr. *Civil War Virginia: Battleground for a Nation*. Charlottesville, University Press of Virginia, 1991.



Chewing Tobacco

Chewing tobacco was probably the earliest form of tobacco used in the Americas. In its simplest form, it requires no special preparation, although some Native Americans did mix lime with the tobacco to increase its effect. Tobacco chewing was especially prevalent in the vicinity of the Andes Mountains where coca leaf was also chewed.

When Europeans arrived in America, they learned the use of tobacco from Native Americans and took the habit back to Europe. As the tobacco habit spread throughout the world, few people practiced tobacco chewing, but one major exception was, for example, sailors who could not safely smoke onboard ship. It is difficult to ascertain exactly how much tobacco was consumed by chewing because prior to the 1800s most tobacco was manufactured in the same form, regardless of how it was consumed.



Baseball players Don Zimmer of the Brooklyn Dodgers (l.) and Nellie Fox of the Chicago White Sox (r.) chewing tobacco, 1955 © BETTMANN/CORBIS

In most countries, excluding Scandinavia and the United States, tobacco chewers represented a small minority of the population. In particular, tobacco chewing was the preferred method of tobacco consumption in Sweden well into the twentieth century. Not until the 1920s did oral consumption of tobacco begin to decline. Moreover, not until 1951 did cigarettes constitute 50 percent of tobacco's consumption in Sweden, ten years after this occurred in the United States.

During the nineteenth century, tobacco chewing was particularly prevalent in the United States. Exactly why this happened is not certain, but it became widespread and, in 1880, 55 percent of tobacco produced in the country was **plug** tobacco, a form of chewing tobacco. While plug tobacco's percentage of total production fell after 1880, gross production continued to rise until 1917, when it reached its all-time peak of 206 million pounds.

Throughout most of the twentieth century, chewing tobacco usage declined in the United States. Formerly, the population had been largely rural and spent much time outdoors. As the country became more urban and spent more time indoors, tobacco chewing and the accompanying expectoration came to be looked upon as unsanitary and unseemly. Only in the 1980s was this trend halted, as increasing restrictions on smoking in public caused some smokers to turn to various forms of chew when unable to smoke.

Chewing tobacco in the United States was for a long time associated with baseball players. During ballgames, the player with the huge chew in his mouth and a package of chew in his back pocket was an image frequently seen in photographs and on television. By the 1990s, pressure from health advocates resulted in the banning of this practice.



plug a small, compressed cake of flavored tobacco usually cut into pieces for chewing.

Plug and Twist

In its earliest form, chewing tobacco was just a leaf torn from the plant. The need to preserve, flavor, and then transport the tobacco led to different forms of processing. One of the earliest ways that tobacco was prepared was in the form of a twist, by which leaves were twisted together to form a rope of tobacco that could be cut into smaller lengths for ease of transporting. The user would cut off as much as he needed for chewing, smoking, or grinding into **snuff**. The manufacture of twist tobacco was simple and was mechanized prior to 1667, when an illustration of the process was published.

Plug tobacco was said to originate with early settlers in Kentucky or Missouri who placed cut tobacco, sweetened with honey, in holes drilled in green maple or hickory logs. Wooden plugs driven into the holes compressed the tobacco, and the drying wood absorbed the excess moisture from the tobacco. The log was then split, and the plugs of tobacco could then be consumed.

By the early 1800s, the process of producing plug tobacco had been somewhat mechanized. Small hand- or animal-powered screw presses were used to create the plug until around 1860 when steam-powered **hydraulic** presses came into use. These presses worked faster and were more efficient at equalizing the moisture level within the plugs; consequently, the plugs did not spoil as readily.

As plug tobacco became increasingly popular, two basic types evolved. Navy plug, so called because it was originally produced for sale to the U.S. Navy, was made with heavily sweetened Burley tobacco with a Bright tobacco wrapper leaf. The second variety, flat plug, was produced entirely with Bright tobacco, which did not absorb as much sweetening as the Burley tobacco used in navy plug.

Much of the country, especially the northern states, preferred very sweet chew. This put producers using Burley tobacco at an advantage because of its greater ability to absorb flavoring. The R.J. Reynolds Company, a major producer of flat plug, looking for a way to compete with navy plug producers, pioneered the use of saccharine as a sweetener in chewing tobacco. Sweeter than sugar and, at the same time, cheaper per unit of sweetness, the additive enabled R.J. Reynolds to compete and, at the same time, decrease production costs.

Scrap Tobacco

Toward the end of the nineteenth century, as cigars increased in popularity in the United States, enterprising tobacconists developed a new form of chewing tobacco. At the time cigar scraps and clippings frequently were being bagged and sold as cheap smoking tobacco. Some of this tobacco was probably chewed, but the tobacco was not widely used for chewing until someone thought to soak the scraps in sweetening. The Bloch Brothers Company of Wheeling, West Virginia, with its Mail Pouch brand, was among the earliest producers of this type of tobacco.

The twentieth century saw the development of cigar-making machines, which did not yield the residue used for scrap tobacco. While some cigars continued to be made by hand, their number steadily decreased. At the same time, scrap tobacco increased in popularity.



snuff a form of powdered tobacco, usually flavored, either sniffed into the nose or “dipped,” packed between cheek and gum. Snuff was popular in the eighteenth century but had faded to obscurity by the twentieth century.

hydraulic operated through the force of liquid, typically water or oil. For centuries, mill machinery was powered by hydraulic (water-operated) wheels.

Plug Wars

In the mid-1890s James Duke, the president and founder of American Tobacco Company, expanded into the chewing tobacco market by acquiring plug and smoking tobacco firms such as the National Tobacco Works and the J.G. Butler Company. Most of the remaining large firms, including R.J. Reynolds Tobacco and Liggett & Myers, were soon acquired as well. Duke then purposely sold plug at prices below cost to wear down his competitors.

The cost of competing in the “Plug Wars” drove many of Duke’s major competitors, including Peter Lorillard & Company, to join the Tobacco Trust. In 1911 American Tobacco Company was dissolved by the federal government for violation of the Sherman Antitrust Act of 1890.



Today's U.S. brands of smokeless tobacco include chewing tobacco and snuff, as exemplified in this 2001 photograph.

During the 1990s, the production of chewing tobacco in the United States decreased while snuff production grew.

AP/WIDE WORLD PHOTOS

Price had been the original selling point, but increasingly, this form of tobacco came to be preferred. Therefore, producers began using fewer scraps and buying more leaf, to the extent that, eventually, scraps were no longer used. Today, this variety of chewing tobacco is known as loose-leaf chewing tobacco.

Fine-Cut and Long-Cut Tobaccos

Fine-cut and long-cut tobaccos, when used for chewing, are considered oral snuff. These same tobaccos are used for smoking, although tobacco used for chew is generally sweeter. In the United States their use has remained small but steady. The growth in chewing tobacco use in the 1980s in America was primarily in this category, and in Sweden fine-cut and long-cut tobaccos have long been the preferred types of chewing tobacco. Today, more than any other country, Sweden has a higher percentage of users who prefer this form of tobacco.

Chewing tobacco has existed for as long as people have used tobacco. As the restrictions on smoking in public places continue to be adopted, along with incessant warnings of the dangers of primary and secondhand smoke, perhaps reflecting on chewing tobacco's longevity will give smokers "something to chew on."

See Also Additives; Industrialization and Technology; Snuff.

■ JOSEPH PARKER

BIBLIOGRAPHY

- Brooks, Jerome E. *The Mighty Leaf: Tobacco Through the Centuries*. Boston: Little, Brown & Company, 1952.
- Dew, Lee A. *History of the Pinkerton Tobacco Company: The Flavor of America*. Pinkerton Tobacco Company, 1994.
- Robert, Joseph C. *The Tobacco Kingdom: Plantation, Market, and Factory in Virginia and North Carolina, 1800–1860*. Durham: University of North Carolina Press, 1938. Reprint, Gloucester, Mass.: Peter Smith, 1965.
- . *The Story of Tobacco in America*. New York: A. A. Knopf, 1949. Reprint, Chapel Hill: University of North Carolina Press, 1967.
- Rogozinski, Jan. *Smokeless Tobacco in the Western World, 1550–1950*. New York: Praeger, 1990.
- Tilley, Nannie M. *The Bright-Tobacco Industry, 1860–1929*. Chapel Hill: University of North Carolina Press, 1948. Reprint, New York: Arno Press, 1972.
- . *The R.J. Reynolds Tobacco Company*. Chapel Hill, N.C.: University of North Carolina Press, 1985.



China

Tobacco for smoking was introduced by European traders during the late sixteenth and early seventeenth centuries, probably on Spanish or Portuguese vessels from Manila and through the ports in Fujian. It was referred to as *danbagu* or *danrouguo*, transliterations of tobacco, although the substance also became commonly known as *yancao* (“grass for smoking”), *jinsiyen* (“golden silk smoke”), or *jinsicao* (“golden silk grass”). While rulers of the Qing dynasty (1644–1911) repeatedly tried to ban smoking in the seventeenth century, the tobacco plant rapidly became a popular crop, particularly in the tropical south.

Yao Lü (d. 1622) was an early observer of the smoking habit: “You light one end and put the other in your mouth. The smoke goes down the throat through the pipe. It can make one tipsy, but it also protect against malaria.” Tan Qian (1593–1657), a historian of the late Ming dynasty, reported that tobacco was grown extensively in Guizhou province by 1622. Along the coast tobacco conquered the local population in the first decades of the seventeenth century, as “even boys of three feet tall” acquired the habit of smoking. By 1658, as the scholar Shen Chiran observed, tobacco had become so popular that men, women, and children held pipes in their hands and carried pouches of tobacco around their waists.

A passage in the *Siku quanshu*, dated 1701, noted that many smoked tobacco, regardless of social class, while farmers planted the crop everywhere and made enormous profits. The rage for tobacco smoking was noted by Lord Macartney in 1793. The British ambassador observed that almost all the locals he encountered smoked tobacco, while **snuff** was also taken in small quantities. While scholars know little about the changing patterns of tobacco cultivation in late imperial



snuff a form of powdered tobacco, usually flavored, either sniffed into the nose or “dipped,” packed between cheek and gum. Snuff was popular in the eighteenth century but had faded to obscurity by the twentieth century.



Map of China showing all provinces. XNR PRODUCTIONS, INC. BERKSHIRE PUBLISHING GROUP



alkaloid an organic compound made of carbon, hydrogen, nitrogen, and sometimes oxygen. Alkaloids have potent effects on the human body. The primary alkaloid in tobacco is nicotine.

China, by the nineteenth century it was widespread in most regions. In Yunnan province, for example, every farmer reportedly reserved a corner of his field for its cultivation. The leaves would be dried for several weeks, with equal exposure to shade and sun. Leaves were rich in **alkaloids**, explaining the high nicotine content of local tobacco, surpassing the strongest European products.

Medical Use of Tobacco

Scholars praised the alleged medical benefits of tobacco, despite early imperial edicts against its use. Zhang Jiebin (1563–1640), one of the first medical writers to comment on tobacco, concluded that soldiers who smoked in Yunnan were protected from malaria, while its juice was a potent antidote against lice on the scalp; its fine quality earned it the name “golden silk smoke” (*jinsiyan*). He recommended occasional smoking, but cautioned that excessive use could cause the smoker to faint.

Fang Yizhi (d. 1667), another medical authority, prescribed it against rheumatism and the common cold, but warned that too much smoke could lead to “dried-up lungs” and premature death.

Qing author Wang Ang (b. 1615) remarked that smoke “circulates throughout the whole body,” invigorating the smoker and suppressing hunger. Boiling the tobacco and applying the hot paste to the affected body parts could enhance its medical properties. In the beginning of the eighteenth century, the celebrated medical writer Quan Zuwang (1705–1755) even lauded tobacco as a medical panacea in his *Danbagu fu* (An essay on tobacco), noting that neither alcohol nor tea could be compared to tobacco, which could cheer the spirit when depressed and guide the *qi* (“vapors,” or “energy”) up spiritual passages. A “plant of immortality” and a “necessity for daily life,” Quan believed tobacco was as an effective gastric remedy and a reliable hunger suppressant.

The perceived medical benefits of tobacco and the rapid inculturation of smoking as a new mode of delivery probably thrived on the positive meanings traditionally associated with smoke. Incense sacrifice originated in Buddhist India and was incorporated into the ancestral rites during the Song, aided by Buddhist scholars such as Channing (919–1001). Healers used the fumes of burning herbal drugs to exorcise demons and release evil *qi*. Moxibustion, in which a herbal substance was burnt on the skin as a counterirritant, drew on the healing powers attributed to smoke. As a consequence of these positive connotations, tobacco was widely cultivated in China, although little research so far has attempted to evaluate its social and economic importance.

Pipes and Snuff

Ordinary pipes were small in comparison to contemporary European pipes, often consisting of a simple brass bowl and a brass or stone mouthpiece, connected by a reed or bamboo stem. On the other hand, the pipes used by the wealthy could be expensive objects of conspicuous display, made of gold, silver, copper, or cast iron, often embellished with black wood or ivory at both ends. **Water pipes** were also used in many parts of the country, having probably appeared in China via South East Asia and Inner Asia a few centuries before. By the Qianlong period (1736–1796), according to one observer, water pipes were made in Gansu province. As Shu Wei (1765–1816), a noted poet and keen smoker, remarked, water pipes were offered to entertain guests, while large sums of money were spent on pipes made of bronze. Clean water was poured into the pipe, which was held with one hand, the bubbling sound also being enjoyed by smokers, some of whom would rather miss a meal than give up a smoke. The gradual spread of the water pipe led to the introduction of a new smoking terminology, as by the 1820s the term *hanyan* (“dry smoking”) came to be used in contrast to water pipe smoking, known as *shuiyan* (“water smoking”).

Tobacco was also taken as snuff in China from the end of the sixteenth century onward, although its use initially remained confined to imperial elites in the north of the country. During the late seventeenth century, an imperial factory began to produce snuff, which often



water pipe also called a hookah, a tobacco pipe in which the smoke is filtered through a bowl of water. The smoker inhales through a mouthpiece connected to the pipe by a flexible tube. Water pipes are traditional in the Orient.



opium an addictive narcotic drug produced from poppies. Derivatives include heroin, morphine, and codeine.

contained expensive additives such as musk. Tobacco connoisseurs prized finely crafted snuff bottles, as they did expensive **opium** pipes, which would appear on the market in the following two centuries. Snuff was also used as a means of self-medication, for instance in order to alleviate the symptoms of colds and for clearing the nostrils. Wang Shizhen (1641–1711) thus noted that that snuff (*biyan*) was used to focus one’s vision and to cure a variety of illnesses. By the early eighteenth century, snuff had crossed the social divides and appealed to a wider public, as Shen Yu expressed his alarm at the fact that even “peddlers and shepherds” regularly resorted to the substance.

The Ascendance of the Cigarette

Cigarettes were imported into China for the first time in the 1890s. Traveling on foot just before the downfall of the Qing dynasty, Edwin Dingle witnessed how the foreign cigarette was sold at wayside stalls by vendors of monkey nuts and marrow seeds. According to his observations, no trade prospered so much in Yunnan as that in foreign cigarettes, as garish posters advertising them appeared on the walls of temples, private houses, and official residences. With the spread of the anti-opium movement, all social classes and demographics—high and low, rich and poor, women and children—smoked cigarettes. It was offered at small celebrations, while a packet of cigarettes instead of a whiff of opium was offered when people called upon high officials in Kunming.



ubiquitous being everywhere; commonplace; widespread.

The cigarette became a **ubiquitous** feature in the 1910s, even in the remote interior, as hand-painted advertisements adorned pagodas, street corners, and city walls. Although the number of people who substituted cigarettes for opium is impossible to calculate, one observer was struck in 1915 by the “astonishingly rapid” spread of cigarette smoking among men and women “of all classes and ages, from ten years up.” Tobacco use thus spread with opium prohibition. As much as the nineteenth century was dominated by opium, the cigarette defined the twentieth century in China. Within several decades the ready-made cigarette superseded not only opiates but also other forms of tobacco smoking, including the water pipe and hand-rolled native produce. Cigarettes were light and palatable, easy to store and handy to use, capable of delivering nicotine straight to the lungs as the smoke could be inhaled deeply in a short span of time perfectly attuned to the faster pace of industrial life. The vast majority of workers surveyed by the Shanghai Bureau of Social Affairs in the 1930s, for example, smoked cigarettes, and only 3 percent resorted to native tobacco.

The number of cigarettes legally imported into China multiplied nearly tenfold between 1915 and 1924 to some 7 billion. In 1915 the Life Extension Institute in New York, a supporter of medical missions, claimed that the Anglo-American Tobacco Company was distributing tens of millions of cigarettes free for the avowed purpose of planting the habit in the wake of the opium habit. British American Tobacco’s greatest success was indeed in China, where an integrated system of mass distribution and production was created between 1905 and 1922, including modern factories and camel trains fanning out across the hinterland. Native slogans and bright placards appeared in advertising campaigns throughout the country; a huge clock sign touting Ruby Queen



Hatamen Cigarettes poster, c. 1932. Cigarette smoking spread in China in the early twentieth century as opium use was increasingly prohibited. © SWIM INK/CORBIS

Cigarettes was built in Shanghai with 10-foot-square neon characters. The company prided itself on combining business with humanity by weaning local people from opium and teaching them to smoke North Carolina cigarettes. Delivered in tin-lined wooden cases, cigarette imports grew to almost half a billion a month in a number of provinces in the north by the 1930s.

The American government was a shrill opponent of opium and other **psychoactive** substances, although it had few reservations about the growing cigarette industry from which it stood to gain fiscally. The cigarette, unlike opium, had few enemies in China. If opium was decried as poison, cigarettes were promoted as a healthy and modern consumable. Even renowned medical publications denied any health hazards, and opposition to cigarette smoking stemmed mainly from a minority of foreign temperance activists.

One exception was Herbert Lamson's *Social Pathology in China*, published in Shanghai in 1935. This work referred to opium in one sentence but condemned nicotine as the real poison, since it tended to raise blood pressure, decrease powers of prolonged exertion, and increase the



psychoactive having an effect on the mind of the user.



habit of spitting. Consumers, on the other hand, thought that foreign cigarettes were elegant to smoke, convenient to carry, and fashionable to display. They also enjoyed their refreshing taste. With the huge population movements in the republican period, cigarettes were marketed as “the best companions of modern travelers.” The ready-made cigarette, in a context of increased geographical and social mobility, made the habits of sociability fostered by opium smoking even more popular: As a sign of conviviality, friendship and gratitude, it was shared in a ritual of exchange that transcended the practical as well as the social constraints of opium smoking. As opium pipes were increasingly depicted as vehicles of diseases in an age marked by new regimes of moral and medical hygiene, accused of spreading syphilis, tuberculosis, or pyorrhea, the cigarette was seen as “hygienic” (*weisheng*).

The match further facilitated the spread of the cigarette. Before its advent, fire was obtained by striking a steel blade on flint. The first match appeared in China in 1865, between 2,000 and 3,000 boxes being imported in the following years to reach 100,000 boxes in 1891 as the country rapidly became the world’s biggest market for matches. By 1928 almost 200 different brands were competing for consumer attention. Lighters also spread in the republican period, some producers even including one with each pack of cigarettes as a marketing tactic. The cigarette, the match, and the lighter thus emerged as the new technologies of smoking culture and the symbols of a desirable modernity.

With the advent of the Chinese Communist Party (CCP) in 1949, the cigarette became the official intoxicant, as committee meetings of party delegates were held amid clouds of smoke, the floor covered in cigarette butts. Smoking came to symbolize the relentless sequence of struggle sessions, deliberations, and resolutions, while in the war films of the early 1950s decisive action by political leaders was often expressed by the energetic throwing of burning cigarettes on the ground. Tobacco cultivation and cigarette production were thus vigorously promoted by the CCP, as the cigarette was allowed to take over the everyday rituals and social roles of opium within a thriving smoking culture which appeared impervious to the deleterious effects of nicotine. Cigarettes evoked power and prestige and were promoted by the Communist Party’s top leadership: Deng Xiaoping expressed his gratitude to the cigarette as the reason for his political longevity.

By the end of the twentieth century China had emerged as the largest market for cigarettes and the world’s leading tobacco producer. China, for example, produced more than 2 billion kilograms of leaf tobacco in 2000, representing more than one-third of the world’s production. However, the country is also a substantial market for foreign leaf tobacco, as more than 320 million people are smokers, about one-quarter of all smokers around the world. The China National Tobacco Corporation, a government-owned monopoly, has an annual production of 1.7 trillion per year, while those who can afford it prefer to smoke imported cigarettes.

Contrary to the late imperial period, gender lines are very marked when it comes to tobacco consumption. The vast majority of smokers are male adults; only 4 to 7 percent are women. The tobacco industry contributes about 10 percent of the country’s revenue, and has been the



country's top revenue generator since the 1990s. There are few signs that smoking is on the decline.

A shopkeeper measures out a quantity of tobacco © HULTON-DEUTSCH COLLECTION/CORBIS

See Also Japan; Origin and Diffusion; Philippines.

■ FRANK DIKÖTTER

BIBLIOGRAPHY

- Cochran, Sherman. *Big Business in China: Sino-Foreign Rivalry in the Cigarette Industry, 1890–1930*. Cambridge, Mass.: Harvard University Press, 1980.
- Dikötter, Frank, Lars Laamann, and Xun Zhou. *Narcotic Culture: A History of Drugs in China*. Chicago: Chicago University Press, 2004.
- Goodrich, L. Carrington. "Early Prohibitions of Tobacco in China and Manchuria." *Journal of the American Oriental Society* 58 (1938): 638–657.



Christianity

When Jesus was born, there was no tobacco in Palestine or anyplace else in the "Old World." Thus, neither the Hebrew Bible nor the Christian gospels have anything to say about tobacco. Nevertheless,

from 1492 onward, the history of tobacco and Christianity intersect in many places. Tobacco was an argument for and hindrance to the evangelization of Native Americans, a cause for theological conundrums, and an inducement to immorality. Despite the generally negative view of tobacco held by religious authorities of diverse Christian denominations, clerics contributed to the spread of tobacco, and ecclesiastical institutions benefited from taxes on its sale. Today, basing their opposition on scientific research showing tobacco's harmful health effects, many church groups actively oppose the global tobacco industry, and some denominations forbid their members from consuming tobacco.

Tobacco and Diabolical Idolatry

Because Ferdinand and Isabella, known as the “Catholic Kings,” sponsored Christopher Columbus’s inadvertent voyage to the Americas, the first European power to colonize in that hemisphere was Spain. The rulers of Spain quickly sought a papal bull to legitimize their territorial claims: In May 1493 Pope Alexander VI ceded the papal bull known as the *Inter caetera divinae*, which gave the Spanish Crown full and perpetual dominion in America in return for bringing people into the Christian faith. Accordingly, from the beginning of the colonial project, it was important to establish that the indigenous peoples of America lay well outside the community of Christians and to identify them as **heathen** and, oftentimes, as idolatrous.

This partly explains why, for the first eighty or so years of the European presence in the Americas, tobacco was identified as a manifestation of Indian barbarism, idolatry, and even diabolical intervention. In 1535, the first published reference to tobacco appeared in *Historia General de las Indias* (General History of the Indies), authored by Gonzalo Fernández de Oviedo, a conquistador-turned-chronicler. The first mention of tobacco appeared in a section entitled the “crimes and abominable customs and rites” of the indigenous people of Hispaniola (Taíno). Oviedo introduced the section on tobacco with the statement, “The Indians of this island have among other vices one that is very bad, which is taking smokable things which they call *tabaco* in order to leave their senses.” Thus, he began by singling out tobacco use as a particularly vile example of Indian vices. Later, when describing the Caquetío Indians (northern Venezuela), he identified tobacco as a substance that allowed Indian shamans to summon and communicate with the Devil. Oviedo’s works influenced subsequent European chroniclers’ and historians’ views of tobacco and initiated a long-lasting legacy of stigmatizing tobacco as an accessory to pagan rites and a diabolical influence.

Oviedo was motivated to demonize Indian religion—and so expose tobacco as a manifestation of barbarism—to justify the claims and depredations of the conquistadors. Others were committed to the evangelical project and sought to find the best way to convert Native Americans into Christians. At first tobacco was of little concern as missionaries focused on practices more obviously at odds with Christian beliefs, such as human sacrifice in the former Aztec domains of Mexico and what they took to be “idol worship” throughout the Americas. By the second half of the sixteenth century and the seventeenth century, however, some clerics, recognizing the integral place of tobacco in many indigenous religions, viewed native tobacco practices as a hindrance to



heathen any person or group not worshipping the God of the Old Testament, that is, anyone not a Jew, Christian, or Muslim. May also be applied to any profane, crude, or irreligious person regardless of ethnicity.

genuine Christian conversion. Accordingly, in 1556, the synod of Santa Fé in Colombia prohibited Indians from growing or using tobacco. In the early seventeenth century, a cleric in Mexico discovered that “idolatry”—or traditional Mesoamerican beliefs and practices—was rife among his parishioners in central Mexico. His report, entitled “Treatise on the Heathen Superstitions and Customs That Today Live Among the Indians Native to New Spain,” documented the pagan vestiges in the rites used by midwives to deliver babies, doctors to cure illness, farmers to rid growing fields of anthills, theft victims to recover stolen goods, fishermen and hunters to catch fish and birds, woodcutters to fell trees, travelers to protect themselves on long journeys, and householders to ward off misfortune from newly constructed houses. In all of these he detected the malign influence of tobacco lurking. He found that even the medicinal uses of tobacco were intertwined with beliefs about tobacco’s divinity; healers would pray and summon deified tobacco as they applied it to wounds. By that time, however, tobacco was used as much, perhaps even more, by the colonial elite and residents in Spain, so there was no discussion of outlawing tobacco.

Catholic Orthodoxy

Even as tobacco became folded into a discourse of Indian idolatry, some observers, including Oviedo himself, recognized that increasing numbers of Christians, as well as pagans, ranked among tobacco devotees. Many such users cited tobacco’s purportedly salubrious effects, but clerics such as Bartolomé de las Casas condemned it as a vice. He lamented that even when reprimanded, these smokers insisted that “it was not within their power to quit.” By the second half of the sixteenth century, it was clear that the tobacco habit was well rooted in the New World among Europeans and Africans, along with the Indians. There soon appeared a flurry of Catholic Church edicts concerning tobacco use that targeted **Creoles** (European inhabitants in the Americas) and Europeans.

Given tobacco’s diabolical and pagan associations, it is striking that there was no serious effort to ban tobacco. Rather, Church edicts and theological guidelines sought to define orthodox usage and prevent tobacco from contaminating sacred spaces and activities. The earliest directives targeting European tobacco consumers related to worries that tobacco consumption might interfere with transubstantiation during mass (the Roman Catholic belief that the bread and wine in the Eucharist become the body and blood of Christ). A provincial synod that met in Lima, Peru, in 1583 ruled that priests could not consume tobacco before administering communion:

*It is forbidden under the penalty of eternal damnation for priests to take tobacco before administering mass whether taking tobacco or sayre (the Peruvian term) in smoke or **snuff**, by way of the mouth, or the nostrils, even under the guise of medicine.*

Likewise, in 1585, a provincial meeting in Mexico ruled that “because of the reverence which should be shown in the taking of communion,” no priest should take tobacco before administering mass, nor should its use taint anyone receiving communion. The overt concern was that by ingesting tobacco, priests would break the condition of a total fast required for the wafer to become the body of Christ.



Creole originally, a person of European descent born in the Spanish colonies. Later, the term was applied to persons of mixed European and African descent. As an adjective, it can describe admixtures of European and African cultural components such as language, cookery, and religion.



snuff a form of powdered tobacco, usually flavored, either sniffed into the nose or “dipped,” packed between cheek and gum. Snuff was popular in the eighteenth century but had faded to obscurity by the twentieth century.

By the early seventeenth century, tobacco had become well entrenched in the daily habits of increasing numbers of people living in Europe. Theological regulation followed close behind. Treatises in Catholic Europe echoed the Latin American synods, insisting that priests should abstain from tobacco before administering communion on the grounds that it interfered with transubstantiation. However, other authorities disagreed. In the mid-seventeenth century, the Italian theologian Antonio Diana stated, in his treatise on canon law, “I respond negatively to the question posed, namely whether the consumption of tobacco in leaf, powder or smoke impedes communion, for tobacco in leaf and powder is consumed through the nose and therefore does not break the natural fast because it is not consumed by an eating action which is done only with the mouth.” But there was no clear consensus, and local synods appeared to decide the matter themselves; in 1685, the Council of Tarragona threatened excommunication to those who smoked or chewed tobacco before (or an hour after) saying mass or receiving communion.

More generally, some Church authorities viewed tobacco as filthy (and thus unsuitable for Church or other sacred spaces), generative of other vices (such as drunkenness), and generally suspect because of its pagan origins. In 1642 Pope Urban VIII issued a bull that forbade the smoking or taking of tobacco in churches or in their environs in the archbishopric of Seville, under penalty of excommunication. The bull called attention to the fact that tobacco abuse had reached the point that tobacco stained the floor and its odor pervaded church. Similarly, in 1650, Pope Innocent X threatened excommunication for those who committed sacrilege by using tobacco in St. Peter’s. In 1642, the vicar general of Seville also forbade ecclesiastics, “be they regulars or seculars, and men or women, and of whatever estate, trade, condition, or dignity,” in the archbishopric from using tobacco “in public.” The edict called attention to the scandal caused by the uncontrolled use of tobacco by the clergy “at all hours, in all places, with publicity.” In addition, discomfort about tobacco’s pagan origins lingered. A pamphlet published by one of the proponents of the 1642 papal bull argued that the “idolatrous priests of the Indies invented and introduced it . . . so that the Devil, by the properties of tobacco, could affect their imagination.”

The repetition of such edicts makes it clear that clergy were a conspicuous subset of tobacco devotees. In the case of the Italian priest Joseph of Cupertino (d. 1663)—revered for his mystical visions, asceticism, and levitations—his snuff habit jeopardized efforts to make him a saint. Opponents of his canonization charged that Joseph’s frequent recourse to snuff made him unfit for sainthood. However, his advocates argued that he took snuff for its health benefits, and, more importantly, because of his humility. They insisted that with the smell of tobacco, he disguised the great odor of sanctity that he emitted and that suffused his cell, thereby proving that he did not seek to exalt himself over his brothers and that he was free of the sin of pride. In fact, Joseph’s canonization did not succeed until after Pope Benedict XIII rescinded the prohibitions against the use of tobacco by the clergy in sacred places.

The church with the least tolerant policies toward tobacco was the Russian Orthodox Church. In 1634 the patriarch of Russia categorized tobacco use (smoke and snuff) as a deadly sin, leading the czar to prohibit its use. First-time offenders received whippings and nose slitting, whereas repeat offenders faced the death penalty. The prohibitions

remained in effect until the end of the seventeenth century, when Peter the Great gave **concessions** to an English joint stock company to import tobacco in return for an ample sum.

Protestant Responses

In Protestant Europe, the approach to tobacco resembled that of Catholic regions. Although many clerical authorities reviled tobacco, few serious efforts were made to ban it outright. The most famous early critic of tobacco on religious and health grounds was James I. As the king of England, James I was also head of the Anglican Church. In *A Counterblaste to Tobacco* (1604), he fulminated, “[T]here cannot be a more base, and yet hurtful, corruption in a Country, then is the vile use (or other abuse) of taking Tobacco in this Kingdom.” He vilified tobacco and its users by calling attention to its Indian origins:

What honor or policy can move us to imitate the barbarous and beastly manners of the wild, godless, and slavish Indians, especially in so vile and stinking a custom? . . . Shall we, I say, without blushing, abase our selves so far, as to imitate these beastly Indians, slaves to the Spaniards, refuse to the world, and as yet aliens from the holy Covenant of God? Why doe we not as well imitate them in walking naked as they do? in preferring glasses, feathers, and such toys, to gold and precious stones, as they do? yea why do we not deny God and adore the Devil, as they do?

More particularly, he charged that those who abused tobacco “sinned against God,” for they were guilty of lust and drunkenness. “Are you not guilty of sinful and shameful lust . . . that although you be troubled with no disease, but in perfect health, yet can you [not] be merry . . . if you lack *Tobacco* to provoke your appetite to any of those sorts of recreation, lusting after it as the children of Israel did in the wilderness after Quail?”

King James I also compared tobacco addicts to alcoholics. He described the trajectory of an alcoholic—“no man likes strong headie drinke the first day but by custome is piece and piece allured, while in the ende, a drunkard will have as great a thirst to bee drunke, as a sober man to quench his thirst with a draught when hee hath need of it”—to that of the tobacco user who needs more and more of it to achieve the same ends. Yet despite his diatribe, there is no evidence that James actually succeeded in banning tobacco. Instead, he, like so many other heads of state facing depleted treasuries, used tobacco’s suspect status as justification to levy successive taxes on the weed, beginning in 1604, the year of the publication of the *Counterblaste*. The poet-theologian Joseph Beaumont (1616–1699) wrote in his sermonic verse, *Tobacco*, that “Wee/ Mistook thy power, whose cheife & mightiest part/ Doth on y^e Soule not on y^e Body prey/ And can heal this, whilst it doth destroy,” and charged that smokers “rather than part with thee,” were willing to “look like Hell.” Moralists in Catholic and Protestant countries alike often linked tobacco smoke to the infernal fumes of hell.

As in Catholic Europe, moralists thought it particularly unseemly for clergymen to indulge in tobacco. This was part of the reason that authorities prohibited students—many of whom were clerical candidates—from smoking at Oxford and Cambridge Universities in the early



concession a grant of land, usually by a government, to produce and market certain commodities or perform certain services for profit. Agricultural concessions were sometimes offered by European governments to encourage immigration.

seventeenth century. However, in practice many men of cloth also belonged to the community of tobacco users.

Some Protestant sects did go so far as to forbid laity and clergy from using tobacco. In New England, the Puritan Massachusetts Bay Colony in 1629 prohibited the sale or use of tobacco within the colony unless “upon urgent occasion for the benefit of health and taken privately.” The ordinances were repealed but before long promulgated again, their authors having found that “since the repealing of the former Laws against Tobacco, the same is more abused then before.” In 1638 and again in 1647 the assembly ruled as follows:

Nor shall any take tobacco in any Inne or common Victualing-house, except in a private room there, so as neither the Master of the said house nor any other Guests there shall take offence therat, which if any doe, then such person shall forthwith forbear, upon pain of two shillings sixpence for everie such offence. And for all Fines incurred by this Law, one half part shall be to the Informer the other to the poor of the town where the offence is done.

Similar measures were decreed in other North American religious settlements. In Connecticut, Puritan regulations dating from 1647 ruled that youths under the age of twenty-one could not smoke, and that those over twenty-one wishing to consume tobacco required a physician’s certificate stating that it was medically necessary, accompanied by court license.

In the eighteenth century, some Methodist congregations strongly discouraged tobacco use on the grounds that it was “needless self-indulgence . . . unless prescribed by a physician.” Preachers were ordered to enforce “vigorously, but calmly the rules concerning needless ornaments, drams, snuff, and tobacco,” and for preachers to receive approval by the governing body, they had to respond affirmatively to the question, “Do you take no snuff, tobacco, drams?” By 1792, leaders of the congregations repealed the tobacco rules.

Benjamin Rush, a famous physician, signer of the Declaration of Independence, and devout Presbyterian, opposed tobacco on moral as well as medical grounds. He charged that “the use of Tobacco, more especially in smoking, disposes to idleness, and idleness has been considered as the root of all evil.” He also posed the rhetorical question and its answer:

What reception may we suppose would the apostles have met with, had they carried into the cities and houses to which they were sent, snuff-boxes, pipes, segars, and bundles of cut, or rolls of hog, or pigtail Tobacco? Such a costly and offensive apparatus for gratifying their appetites, would have furnished solid objections to their persons and doctrines, and would have been a just cause for the clamours and contempt which were excited against them.

Religious authorities continued to inveigh against tobacco use in the nineteenth century, but increasingly on grounds of its deleterious effects on health and its association with liquor. The nineteenth century was a period of religious reawakening in the United States, and many religious groups sought stricter adherence to moral codes. Though not as despised as alcohol, tobacco became the target of moral reformers in

the Temperance Movement. In fact, one of tobacco's primary faults, in the view of the crusaders, was its association with alcohol. As Rev. Orin Fowler stated in 1833, "Rum-drinking will not cease, till tobacco-chewing and tobacco smoking and snuff -taking shall cease." Lucy Gaston was one of the most formidable leaders in the antitobacco movement, which focused increasingly on cigarettes. Applying the tactics learned in the Women's Christian Temperance Union, she turned her attention to tobacco in the 1890s, urged children to wear antitobacco pins, and rallied groups of children to sing songs against smoking to shame their addicted elders. Such efforts led to temporary successes: between 1895 and 1921, fourteen states banned the sale of cigarettes, though all these laws were eventually repealed.

The Mormon denomination of the Latter-day Saints also emerged in the nineteenth century and came to forbid their members from taking tobacco. In 1833 the Church's founder, Joseph Smith, received a divine revelation known as the "Word of Wisdom," which declared that tobacco was "not for the body, neither for the belly, and is not good for man," except as a poultice for bruises and treating "all sick cattle." The origin of the revelation is often connected to an incident in which Smith's wife, Emma, complained to him about cleaning up the tobacco mess left behind by his disciples, prompting him to ask God for guidance about tobacco use. The basis for the prohibition rested in tobacco's hazardous effects on health. The strength of the Mormon Church in Utah contributed to efforts of the state to enact prohibitions against tobacco between 1896 and 1923.

Benefits

It might so far seem that Christian denominations worked to obstruct the use of tobacco throughout the world. But, in fact, different churches—or some of their members—benefited from tobacco, and, in turn, tobacco taxes and profits supported various ecclesiastical institutions. Because of the pan-European and, after 1492, global character of the Catholic Church, clerics were themselves often agents for the diffusion of tobacco. Spanish missionaries—not all of them so zealous as Ruiz de Alarcón—who lived and worked among Indians learned of tobacco's medicinal and recreational uses and brought back samples and know-how to their orders in Europe. A nuncio (papal representative) named Prospero di Santa Croce is credited with having introduced tobacco to Italy in 1585 after his sojourn in Lisbon, an early byway for American goods and knowledge. (His botanist protégé celebrated his achievement by comparing it to those of his Crusader ancestors: "Prospero di Santa Croce when he was sent as nuncio of the Holy See to Portugal brought this [plant] hither for the advantage of the Roman people. As his ancestors brought the wood of the holy cross, in which all Christianity rejoices, so the family of Santa Croce is called distinguished and zealous for our bodies and our souls.") Likewise, Spanish missionaries—some coming directly from the Americas—likely brought tobacco to Asia at the end of the sixteenth century.

Ecclesiastical institutions, like secular states, also came to rely upon tobacco taxes as an important source of revenue. The papal states—those territories in Rome where the papacy exerted temporal as well as spiritual power—implemented a tobacco monopoly in 1655. Following



plantation historically, a large agricultural estate dedicated to producing a cash crop worked by laborers living on the property. Before 1865, plantations in the American South were usually worked by slaves.

the loss of lands and revenue after the Protestant Reformation, the papacy came to rely increasingly on revenue from Italy itself; the increasing consumption of tobacco and the model of other monopolies made a tobacco monopoly an appealing expedient. Like so many other European states in the seventeenth century, the papal states established a state monopoly in which the exclusive right to manufacture and sell tobacco was granted to a private entity in return for annual payments. Catholic institutions also directly engaged in tobacco cultivation. Most notably, in colonial Paraguay members of the Jesuit Order organized tobacco **plantations**, relying on the labor of Guaraní Indians until the Jesuit expulsion in 1767.

Protestant churches in the tobacco regions of colonial North America relied on tobacco to support their clergy. In the seventeenth and eighteenth centuries, ministers of the Anglican Church in colonial Virginia received their salaries in tobacco (which served as currency more generally). For instance, in 1696, Virginia ministers received 16,000 pounds of tobacco annually. Consequently, during years of high demand, they prospered, but when demand fell, so did their purchasing power. The considerable fluctuations in the price of tobacco also contributed to the instability in their earning power. In Maryland, the Anglican General Assembly levied a poll tax of forty pounds of tobacco. The Quaker minority, unhappy with the Anglicans' efforts to establish themselves as the state church, refused to submit to the tobacco tax and petitioned the king, as well as the assembly, for its repeal. The king agreed to repeal the law, but the assembly passed a revised version in 1696; two more rounds of repeal and revision ensued. Finally, the assembly succeeded in passing the tax, which ultimately became void with the American Revolution.

Contemporary Christianity

Today, nearly all Christian denominations view tobacco as a scourge to physical and sometimes moral health. Within this general consensus, however, there is a wide range of approaches, encompassing pastoral counseling, mandates of abstinence, education campaigns, and political and corporate lobbying. In general, the contemporary theological basis for the negative attitude evinced toward tobacco by various Christian denominations comes from Paul's admonition in Corinthians 6:19: "What? Know ye not that your body is the temple of the Holy Ghost which is in you, which ye have of God, and ye are not your own?" In other words, the basis for tobacco opposition is firmly grounded in its deleterious health effects, long suspected but given recent confirmation by the scientific studies in the late twentieth century.

Despite this common theological ground, various denominations and even members of the same church approach antitobacco efforts in very different ways. For many, the issue begins by discouraging or even prohibiting individual use. Seventh-Day Adventists and Mormons are required to abstain from tobacco use. Other denominations urge church members to resist or to give up tobacco habits, often focusing their efforts on youth.

Some Christian religious groups and churches go further and use their moral authority to combat what they see as immoral corporate and governmental practices. In 1991, the American Baptist Churches

passed an antitobacco resolution that, among other actions, condemned tobacco corporations' practices of targeting products to particular social groups and securing land in developing countries to raise tobacco ("thus taking land out of food production and increasing tobacco consumption within those nations"), and it called for Congress and the U.S. Department of Agriculture to end tobacco subsidies to growers. In 1994, a coalition of antismoking religious groups that included Catholic Charities USA, the Seventh-Day Adventist church, and the United States Methodist Church lobbied Congress for a two-dollar-a-pack tax increase in the federal tax on cigarettes (over the 24 cents-a-pack federal tax in place at the time), asserting that it was "not only wise policy, but a moral obligation." A denomination particularly engaged in efforts to stem worldwide tobacco use is the Seventh-Day Adventist Church. Its humanitarian arm (Adventist Development and Relief Agency) has education and/or smoking cessation programs in Mongolia, Morocco, and Cambodia, among other places. A coalition of churches in England and Ireland called Christian Aid has focused on poor labor practices used in tobacco-growing regions in southern Brazil, blaming Souza Cruz, a **subsidiary** of BAT, for growers' health problems caused by pesticide use and for forcing growers to sell their crops for too little money.

Another tactic employed by religious groups is to mobilize their power as institutional investors to challenge corporate policies. The Interfaith Center on Corporate Responsibility, a coalition of 300 Protestant, Catholic, and Jewish institutional investors, began in 1980 to urge tobacco companies to limit **tar** and nicotine levels and add health warnings on cigarettes sold in developing countries. In more recent years, the coalition has aimed its efforts at discouraging nontobacco companies from benefiting the tobacco industry. It counts as successes McDonald's 1994 ban on smoking in corporate-owned restaurants and 3M's 1996 announcement of a global phase-out of tobacco advertisements for its billboards.

Finally, many use spiritual teachings of Christianity and other religious traditions to help them in their efforts to quit smoking. Some find prayer indispensable in their quest to give up tobacco. The notion of appealing to a higher power is also important in the more outwardly secular, twelve-step recovery programs. In the Nicotine Anonymous movement, smokers "ask God to help us accept the craving . . . and to give us the courage not to take care of this craving—as we have always done—by smoking one more cigarette."

■ MARCY NORTON

BIBLIOGRAPHY

- "American Baptist Resolution on the Promotion and Sale of Tobacco by U. S. Firms, 8187: 6/91." Available: <<http://www.abc-usa.org/resources/resol/tobacco.htm>>.
- Bier, George Louis, *The Origins of the British Colonial System, 1578–1660*. New York: P. Smith, 1933.
- Brooks, Jerome E., *The Mighty Leaf: Tobacco Through the Centuries*. Boston: Little, Brown, 1952.
- Crosby, Michael H. "Religious Challenge by Shareholder Actions: Changing the Behaviour of Tobacco Companies and Their Allies." *BMJ* 2000, 321 (5 August): 375–377. Available: <<http://bmj.bmjournals.com/cgi/content/full/321/7257/375>>.



subsidiary in commerce, a branch or affiliate of a larger unit that provides components or support services.



tar a residue of tobacco smoke, composed of many chemical substances that are collectively known by this term.

- Dickson, Sarah Augusta. *Panacea or Previous Bane: Tobacco in Sixteenth-Century Literature*. New York: New York Public Library, 1954.
- Fernández de Oviedo, Gonzalo. In *Historia general y natural de las Indias*. Edited by Juan Pérez de Tudela Bueso. Madrid: Ediciones Atlas, 1959.
- James I. *A Counterblaste to Tobacco*. Amsterdam: Theatrum Orbis Terrarum, 1604. Reprint, New York: Da Capo Press, 1969.
- McGrew, Jane Lang. "History of Tobacco Regulation." Available: <<http://www.druglibrary.org/schaffer/LIBRARY/studies/nc/nc2b.htm>>.
- Nicotine. Available: <<http://www.nicotine-anonymous.org/default.asp>>.
- Norton, Marcy. "New World of Goods: A History of Tobacco and Chocolate in the Spanish Empire, 1492–1700." Unpublished Ph. D. Dissertation. University of California, Berkeley, 2000.
- Oliver, Ansel. "World Church: No Tobacco Day Draws Adventist Support." May 27, 2003, Silver Spring, Maryland, United States. Available: <<http://news.adventist.ods.org//data/2003/04/1054051788/index.html.en>>.
- Ortiz, Fernando. *Cuban Counterpoint: Tobacco and Sugar*. Translated by Harriet de Onís. New York: Alfred A. Knopf, 1947. Reprint, Durham, N.C.: Duke University Press, 1995.
- Robert, Joseph C., *The Story of Tobacco in America*. New York: A. A. Knopf, 1949




Cigarettes

From the beginning of their mass production in the 1880s, few consumer products have had such a far-reaching impact as cigarettes. The cigarette was central in turning points in production technology, business methods, development of the modern tobacco industry, the development of **epidemiology**, the role of consumption in society, and, in no small way, the health of millions of people.

Origins

The cigarette's ancestry spans back to pre-Colonial South and Central America where among the Maya smoking tobacco was commonly wrapped in banana skin, bark, and maize leaves. The Spanish brought these *papalettes* back to Europe and replaced the maize-wrappers with fine paper. From at least the 1830s, *papalettes* crossed into France where the name "cigarette" was adopted by the French tobacco monopoly in 1845. In addition to changing the name, the French monopoly also changed the type of tobacco used in cigarettes after smokers were found to prefer American to French tobacco, which was seen as too bitter. The French introduced cigarettes in Germany and Russia where American tobacco was blended with Turkish or Balkan tobacco. After becoming popular among its soldiers during the Crimean War (1853–1856), English firms began manufacturing cigarettes and U.S. production began after the Civil War (1861–1865). These hand-rolled cigarettes found only limited popularity and were considered luxury or novelty items. In the West, demand for hand-rolled Turkish, or "Oriental," cigarettes was



epidemiology a branch of medicine that investigates the causes and contributing factors of disease.



Advertisement for Helmar Turkish cigarettes, c. 1910. Beginning in the late nineteenth century, as machine-made cigarette manufacturers looked to increase their markets, they relied heavily on branding. Their cigarettes became known by unique symbols or names, which became ubiquitous in newspapers and on walls of buildings. © BETTMANN/CORBIS

attached to images of forbidden desire and supposed Oriental permissiveness. Other hand-rolled cigarettes, rolled by their smokers, were far less elegant and often fell apart while being smoked. Tobacco in the nineteenth century was overwhelmingly either chewed, snuffed, or smoked in cigar or pipe form.

Mass Production and Mass Consumption

The popularization of the cigarette began in the 1880s with the onset of the second industrial revolution. During the second industrial revolution skilled workers were replaced with technologically advanced machines that increased the speed of production and reduced unit costs. In 1881 James A. Bonsack patented the Bonsack Cigarette Machine, and by the

late 1880s, when the most skilled cigarette rollers could make 3,000 cigarettes per day, one Bonsack Cigarette Machine could produce 120,000 cigarettes in the same amount of time. But the power and importance of the machine were not immediately recognized by tobacco companies. Adopting the machine was a significant risk because many believed that when a smoker chose a smoking product, part of his or her decision was based on the skill it took to roll or mix the tobacco. Indeed, several tobacco companies showed no interest in Bonsack's machine. Finally, in 1883 it was licensed to the French tobacco monopoly, in England to W.D. & H.O. Wills and later in 1885 to the American firm W. Duke, Sons & Co. headed by James B. Duke. Those tobacco companies that licensed Bonsack's machine went on to dominate their national markets and expand abroad.

In order to profit to the fullest from this technology, markets for machinemade cigarettes had to be created. In Britain and the United States, Duke and Wills promoted cigarettes through mass advertising. While advertising was not new, there is little question that more money was invested to advertise cigarettes than any previous product. Cigarette were "branded" products: They were known by unique symbols or names. These brand names in cigarette advertising appeared everywhere in newspapers and on walls of buildings, and, as technology developed, cigarettes were eventually advertised using electric signs and on the sides of trucks. Cigarette companies encouraged smokers to buy more cigarettes by giving away coupons in cigarette packages that were redeemable for prizes and by including collectable cards that showed images of historical moments, sports stars, and, most notably, scantily clad actresses. Tobacco companies dropped their prices, sold their products at a loss, and gave cigarettes away in the hopes of gaining new markets. In addition to the fact that an unprecedented amount of money was spent to promote cigarettes, this advertising was also notable because it targeted the popular classes as consumers rather than just the middle classes. These advertisements, combined with low prices, made the mass-produced cigarette part of the vanguard of the transition from bourgeois to mass consumption.

Globalization

The search for new markets meant that these firms spread the cigarette around the world. Beginning in the 1890s, Duke in particular proved himself adept at inserting the cigarette into new cultures. While the company was creating a **market share** in the United States, Duke's American Tobacco Company (ATC) sought international markets. It did so by exporting cigarettes that were made in the United States and, where high **tariffs** made their cigarettes uncompetitive, by directly investing in foreign businesses and building cigarette factories abroad. In the 1890s, ATC established divisions in Australia, Canada, Japan, South Africa, and Germany using the same kinds of managerial hierarchies and business methods Duke had pioneered with great success in the United States.

In 1901, Duke looked to conquer the British market as well, creating Imperial tobacco through an alliance with Ogden's, an important competitor of Wills'. In retaliation Wills entered the American market and a massive round of price cutting and advertising ensued on both



market share the fraction, usually expressed as a percentage, of total commerce for a given product controlled by a single brand; the consumer patronage for a given brand or style of product.

tariff a tax on imported goods imposed by the importing country to protect native industry from foreign competition, protect jobs and profits, and raise revenue. Tariffs typically raise consumer prices of affected products.



A cigarette authority smokes prodigiously as he makes the final and severest test of a cigarette—the smoking.
© BETTMANN/CORBIS

sides of the Atlantic until a truce was declared in 1902. According to the agreement, both companies were left to their national markets and the international markets were left to a jointly owned, newly created British American Tobacco Company (BAT). For ten years BAT was largely controlled by its American partners but in 1911 the British took an upper hand when the U.S. Supreme Court dissolved the ATC into competing companies after being found in violation of U.S. antimonopoly laws. Companies formed as a result of the ATC dissolution remain the dominant players within the international cigarette industry outside of countries such as France, Italy, Spain, Russia, China, and Japan, where state monopolies control their national markets.

Opposing the Cigarette

In many Western countries, the rise in popularity of the cigarette in the late nineteenth and early twentieth centuries drew organized opposition. Motives for attacks on the cigarette were strikingly similar: questions of moral and physical decline that easily fit into religious and **nationalist** frameworks. In European countries like England, France, and Germany fringes of the medical community put forward concerns over national degeneration due to cigarette smoking. These were marginal movements that only saw tangible results when coupled with other causes. In England, for example, anticigarette movements, coupled with panics



nationalism the belief that the narrow, selfish interests of one's country should supersede international standards of behavior.



over the health of soldiers during the Boer War and juvenile delinquency, prompted the government to pass an age restriction law in 1908. In the United States, Australia, and Canada, antismoking organizations were dominated and led by Evangelical Protestant women who sought to reform society. In the United States, these movements had some success. Between 1890 and 1930 fifteen states adopted laws that banned the sale, manufacturing, possession, and/or use of cigarettes and many other state legislatures debated the issue.

During World War I, these movements were undermined when cigarettes became linked to patriotism. In Allied countries during the war newspapers set up tobacco funds that allowed civilians to send cigarettes or tobacco to soldiers. These tobacco funds undermined anti-smoking movements in places like the United States and Canada when people who had previously opposed smoking changed their position and supported these funds. Similarly, anticigarette groups like the Red Cross and the Young Men's Christian Association distributed cigarettes to the troops.

The connection between patriotism and the cigarette also legitimized cigarettes among smokers, who were, at this point, almost exclusively male. At the turn of the twentieth century the cigarette was not seen as an entirely masculine smoke. According to etiquette, respectable men preferred the pipe or the cigar, allowing for a longer, more contemplative smoke. The cigarette was seen as diminutive and feminine. Increasingly, however, the speed and convenience of smoking a cigarette was regarded as more convenient for industrial societies. Though pipes in particular remained popular after World War I, it was the war that had the greatest impact on making cigarette smoking respectable for men. While all forms of tobacco were sent to soldiers, for a number of reasons cigarettes were particularly popular among soldiers: they required little attention after lit, unlike the cigar or pipe; they fit easily into a uniform pocket; and no special equipment was necessary to smoke them. In sum, cigarettes proved to be practical for army life and quickly became symbols of patriotic masculinity.

Women and the Cigarette

In the West, for the cigarette to become a truly mass consumption product they had to break through the highly gendered etiquette of smoking. During the rise of the cigarette in the late nineteenth century only men could respectably smoke. Women who smoked risked being labeled as barbarous or as prostitutes. Yet, at the same time, a group of largely middle-class women sought to challenge gender inequalities such as limitations on property rights, the right to vote, and access to liberal professions. One of the symbols used in their fight was the cigarette. Many of these "new women" asserted the right to smoke cigarettes in the same way as they asserted these other rights. By the 1920s the cigarette was linked to the image of the "flapper" and a broader association with a modern femininity. Cigarette manufacturers followed and promoted this image of the respectable female smoker. From the early twentieth century cigarette manufacturers advertised in women's magazines, but it would not be until the late 1920s, when smoking became more respectable for women, that manufacturers would openly advertise

in mass circulating dailies. By this time, women in movies had already begun smoking cigarettes, likely adding greatly to the popularity of the cigarette among women.

The addition of women as cigarette smokers pushed the cigarette past other forms of tobacco to become the most popular way to consume tobacco. Indeed, despite the power of multinational cigarette companies in countries like Britain, the United States, and Canada, it took a change in etiquette in the 1920s and 1930s and the advent of respectable women smokers for the cigarette to be the tobacco of choice for a majority of smokers. During the 1920s cigarettes exceeded 50 percent of the tobacco consumed in Turkey, Japan, China, and Greece while elsewhere this did not occur until after World War II. In some countries the cigarette remains less popular than local tobacco products. In Norway cut tobacco continues to be popular, and in India, a cross between a small cigar and a cigarette, called **bidis**, are produced with dark, domestic tobacco, and continue to outpace cigarette consumption by a margin of 7 to 1. Globally, however, in the course of the twentieth century, the cigarette has become the dominant way in which tobacco is consumed and the tobacco industry is primarily a cigarette industry.

The Cigarette and Health

Part of the reason that the cigarette was easily accepted by both men and women alike was because its tobacco was milder than the tobacco used in pipes or to make cigars. Modern cigarettes used Bright leaf tobacco, originally cultivated in Virginia and North Carolina. Traditionally after harvesting, tobacco was either hung out to dry in barns (the **air-curing** method) or dried over wood fires (the fire-curing method). In contrast, Bright leaf was cured using extreme heat that was channeled through pipes into curing barns in a process known as flue-curing. This process results in a milder-tasting tobacco that was far easier to inhale than other tobaccos. This change altered the way in which nicotine entered the smoker's bloodstream and thus the speed of the **physiological** effect of smoking. With tobacco and pipes nicotine entered the bloodstream, for the most part, indirectly through the saliva whereas with cigarettes nicotine entered much more directly through the lungs.

In response to health concerns in the 1950s and 1960s, cigarette companies increasingly promoted filtered cigarettes like Kents and Viceroy's and introduced similar new filtered brands like Winston and Salem. In Western countries during the 1970s and 1980s they also marketed low-**tar** and low-nicotine brands as less harmful alternatives to stronger brands. By the turn of the twenty-first century, the percentage of smokers in most developed countries has begun to decline. However, while in the developed world the cultural meaning of the cigarette has significantly changed, reducing the number of smokers in these countries, in the developing world, and in the world more generally, cigarette sales continue to rise worldwide.

See Also Additives; Camel; "Light" and Filtered Cigarettes; Lucky Strike; Marlboro; Menthol Cigarettes; Product Design; Virginia Slims.

■ JARRETT RUDY



bidis thin, hand-rolled cigarettes produced in India. Bidis are often flavored with strawberry or other fruits and are popular with teenagers.



air-curing the process of drying leaf tobacco without artificial heat. Harvested plants are hung in well-ventilated barns allowing the free circulation of air throughout the leaves. Air-curing can take several weeks. Burley tobacco is air-cured.

physiology the study of the functions and processes of the body.



tar a residue of tobacco smoke, composed of many chemical substances that are collectively known by this term.

BIBLIOGRAPHY

- Cox, Howard. *The Global Cigarette: Origins and Evolution of British American Tobacco, 1880–1945*. New York: Oxford University Press, 2000.
- Goodman, Jordan. *Tobacco in History: The Cultures of Dependence*. New York: Routledge, 1993.
- Hilton, Matthew. *Smoking in British Popular Culture 1800–2000*. Manchester, U.K.: University of Manchester Press, 2001.
- Kluger, Richard. *Ashes to Ashes: America's Hundred-Year Cigarette War, the Public Health, and the Unabashed Triumph of Philip Morris*. New York: Vintage, 1996.
- Nourrisson, Didier. *Histoire sociale du tabac*. Paris: Éditions Christian, 1999.
- Proctor, Robert N. *The Nazi War on Cancer*. Princeton, N.J.: Princeton University Press, 1999.
- Studlar, Donley T. *Tobacco Control: Comparative Politics in the United States and Canada*. Peterborough, Ont.: Broadview University Press, 2002.
- Tate, Cassandra. *Cigarette Wars: The Triumph of "The Little White Slaver."* New York: Oxford University Press, 1999.
- Tyrrell, Ian. *Dangerous Enemies: Tobacco and Its Opponents in Australia*. Sydney: University of New South Wales Press, 1999.



Cigars

There is much dispute about the origin of the word *cigar*. Some historians believe it comes from *sik'ar*, the Mayan Indian word for smoking, while others maintain that it derives from the Spanish word *cigarrar*, which means “to roll.” One of the most popular forms of cigars, made in Seville from Cuban leaf toward the end of the seventeenth century, was the *cigale*, which in Spanish means “locust,” so named because of its similarity in color and shape to that of a large locust.

Spanish and Cuban Origins

The first cigars (or Havanas), as discovered by Christopher Columbus in 1492, were smoked by the native inhabitants of what is now Cuba and were made from raw, twisted leaves of cured tobacco. Dried corn husks were used as wrappers. The first cigars made in similar fashion to those of today were produced by the Spanish company Tabacalera, in Seville, in the early eighteenth century. It was then that the idea of constructing a cigar with a filler, binder, and wrapper was invented. At this time, because of the cost of tobacco, cigars were only smoked by the wealthy. The practice was exported to Cuba in 1740, when the Real Compãnia de Comercio de la Habana (Royal Trading Company of Havana) was created by royal decree. Hence Cuba's cigar industry was, largely, created by the Spanish. Spanish regulation was interrupted during English occupation of the island but was restored in 1764.

By the end of the seventeenth century, the demand in Spain for cigars from Cuba, then a Spanish colony, exceeded the demand for *sevillas*, as the Spanish version was called. Therefore, in 1821 a royal decree allowed for the unfettered growth and sale of tobacco in Cuba. This decree

gave a boost to the industry, which previously had been controlled by the Spanish government, and new producers emerged throughout the island. Since that time, the Spanish Crown has obtained its entire supply of cigars from Cuba, and Spain remains the largest importer of Havana cigars.

Great Britain

In the middle of the eighteenth century cigars were exported to Holland and, soon after, to Russia, which became one of the first countries to impose a tax on tobacco products. By the end of that century cigar production had spread from Spain into France and Germany, but it was not until the first quarter of the nineteenth century that the manufacture of “segars,” as they were then called, started in Britain, and in 1821 an Act of Parliament began governing such production. Manufacture in Britain had become necessary because Lord Wellington’s troops, returning in 1812 from Portugal, had become used to segars in the Iberian Peninsula and were increasingly turning to that form of smoking in preference to the pipe—a trend that spread rapidly to the general public.

By the middle of the nineteenth century, smoking in Britain and abroad had become so universal as to require the establishment of smoking rooms in hotels and clubs and smoking compartments on trains. Skullcaps in bright colors and smoking jackets were introduced to obviate the aroma of cigars clinging to normal wear. The dinner jacket, or tuxedo, is called *le smoking* in French-speaking countries to this very day.

Cigar usage in Britain was affected by the active disapproval of Queen Victoria, and it was only after the accession of King Edward VII in 1901 that the after-dinner pronouncement: “Gentlemen, you may smoke,” became de rigueur. It was around this time that new shapes evolved, which were inspired, to some extent, by such prominent British smokers as the London financier Leopold de Rothschild and the Earl of Lonsdale.

Cigar Production in the United States

In the late eighteenth century cigar factories were established in Connecticut, New York, and Pennsylvania. It was at one of the Pennsylvania factories in Conestoga that a long cigar, called a stogie, was first produced. (Later this name was applied to any workingman’s cigar.) American production of tobacco, from Cuban seed, began around 1825, although American cigar factories continued to import Cuban tobacco, which they used to manufacture expensive cigars called Havanas, the same term applied to cigars produced in Cuba. The name Havana has since become a generic term for these exclusive cigars.

In the nineteenth century the cigar became a status symbol of sorts in the United States, in part, because of its use by such well-respected figures as President Ulysses S. Grant and the writer Mark Twain. Twain expressed his love of tobacco and cigars often in speeches and in his non-fiction. In his *Following the Equator* (1897), the author writes “I pledged myself to smoke but one cigar a day. I kept the cigar waiting until bedtime, then I had a luxurious time with it. But desire persecuted me every day and all day long; so, within the week I found myself hunting for larger cigars than I had been used to smoke; then larger ones still, and still larger ones.” The famous Henry Clay cigar, named after the American



Cuban cigar factory, 1964. Fidel Castro's image is displayed at this cigar factory in Havana, Cuba. In 1961, after the disastrous Bay of Pigs invasion, U.S. president John F. Kennedy declared an embargo on the importation of all goods from Cuba, which is still in force today. © BETTMANN/CORBIS



homogenize to make more uniform in appearance, texture, or quality by mixing and blending; to make alike.

senator, was launched toward the end of the nineteenth century as a premium cigar product. By the end of the nineteenth century there were more than 7,000 cigar factories in the United States, with some 500 located in the state of Florida. Cigar consumption peaked in 1907, after which its popularity waned due, in some measure, to the advent of cigarettes.

Because of their expense, cigars were regarded as a luxury until relatively recently. In 1919 Thomas Riley Marshall, a Democrat and Woodrow Wilson's vice president, grew tired of listening to a Republican senator ramble at length about the country's needs and uttered the now famous line: "What this country needs, is a really good five cent cigar." Nearly forty years later, **homogenized** tobacco was developed by pulverizing the leaf and then forming the matter into thin sheets, reducing waste. This process, together with machine rolling, invented in the 1920s, resulted in lower prices. Machine-made cigars represented 98 percent of total production in the United States by the end of the 1950s.

Cigar Consumption Today

For nearly thirty years, due largely to the antismoking movement, cigar consumption in the United States has declined from a peak of over 9 billion of all types of cigars in 1964, to a little over 2 billion in 1992. Total consumption in 2002 was close to 4.45 billion, of which about 200 million were premium cigars.

Except in the sanctuary of their own homes, tobacco shops, or in a declining number of cigar-friendly restaurants and bars, it is becoming increasingly difficult for cigar smokers worldwide to enjoy their

cigars unhindered. Just as in Victorian England, cigar smoking is again frowned upon in public.

See Also Antismoking Movement From 1950; Cuba; Smoking Clubs and Rooms; Smoking Restrictions.

■ THEO RUDMAN




Class


In one sense, smoking is a habit that overrides all distinctions of class. Since the seventeenth century it has been an item of mass consumption across Europe and America and in the twenty-first century cigarettes are smoked across all sections of society all over the world. However, significant class differences have always existed in tobacco consumption patterns. In the eighteenth century, **snuff** was associated with Europe's aristocratic elites, resulting in such fascinating historical quirks as the pockets of Frederick the Great of Prussia, specially enlarged to accommodate his prolific consumption. In southern Europe, the great state-owned tobacco factories of Cadiz and Seville ensured the popular appeal of the cigar, though one result of the Peninsular Wars (1808–1814) was to lead to its spread among the officer classes of England.

Although the virtues of smoking have been praised in prose and verse ever since its introduction into Europe, the late nineteenth century witnessed a particularly bourgeois celebration of the pipe and the cigar, promoting a culture based on liberal **individualism**. The periodical press brought the “art” of the connoisseur to a rapidly expanding pipe and cigar-smoking middle class. Numerous hack journalists of the kind parodied in English novelist George Gissing's *New Grub Street* (1891) churned out countless and highly derivative pieces which, importantly, enabled male consumers to escape the passive and feminine associations of consumption and the marketplace. Instead, their everyday, private, and self-indulgent purchasing acts were transformed into an activity in accord with the perceived male role in life. Men were taught how to appreciate a cigar, how to choose a pipe, how to develop their personal tastes and settle on their own personal tobacco mixture, all to ensure that they became the masters, not the victims, of commerce; not mere consumers, but “ardent votaries,” worshippers, disciples, aficionados, and true friends of “the divine lady nicotine.”


Historians and scholars know less about working-class smoking attitudes and practices. Undoubtedly, distinctions existed across states, regions, towns, and occupations. Visitors to Virginia in the seventeenth and eighteenth centuries frequently commented on the sight of entire communities smoking, their habits following those of their northern European counterparts as the majority used pipes, the great exception being the popularity of chewing tobacco. This required no special preparation since users merely bit off the hard manufactured tobaccos of twist and **plug** that were sold both for pipes and for grating into snuff. But the differences are too many to recount. In nineteenth-century



snuff a form of powdered tobacco, usually flavored, either sniffed into the nose or “dipped,” packed between cheek and gum. Snuff was popular in the eighteenth century but had faded to obscurity by the twentieth century.



individualism an independence of spirit; the belief that self-interest is (or should be) the goal of all human actions.



plug a small, compressed cake of flavored tobacco usually cut into pieces for chewing.



"The Sophomore." Smoking a cigar in his room at Harvard University. From the series of sketches of college life by J. N. Mead. © BETTMANN/CORBIS

Britain, for instance, Welsh miners were known to prefer strong shag tobaccos (coarsely cut leaf) and rolls (tied tightly into a type of rope), dock laborers were associated with thick twists, cabmen for Irish roll, while the better paid and London workers preferred the lighter and more finely cut Virginian flake tobaccos that were ready to smoke.

These differences were to some extent overshadowed by the rise of the cheap cigarette, an item much more of mass—as opposed to class—consumption. Popularized in wartime and on the cinema screen, and promoted by enormous tobacco combines and monopolies, some of the first global brands emerged in the cigarette market. Class differences have persisted, especially with regard to the prices of types of cigarettes, and advertisers have sought to appeal to people's sense of individuality; however, by the mid-twentieth century smoking was almost a classless pleasure.

However, since the smoking and health controversy of the 1950s, public health campaigns have had much greater impact upon affluent, professional males, making smoking today a health problem increasingly associated with poverty. The issue is also overlaid with questions of gender and ethnicity, as smoking rates among women have not decreased to the same extent and tobacco companies have been further criticized for targeting poor ethnic minorities in the United States. Outside the affluent West, tobacco companies have also entered new less-regulated markets in Africa and the East, raising the potential for new

distinctions of class as educated elites show far greater awareness of the dangers of smoking.

■ MATTHEW HILTON

BIBLIOGRAPHY

Hilton, Matthew. *Smoking in British Popular Culture, 1800–2000*. Manchester, U.K.: Manchester University Press, 2000.

Kiernan, V. G. *Tobacco: A History*. London: Hutchinson, 1991.

Klein, Richard. *Cigarettes Are Sublime*. London: Picador, 1995.

Kluger, Richard. *Ashes to Ashes*. New York: Vintage, 1997.

Coffee See Alcohol, Tobacco, and Other Drugs.

Colonialism and Imperialism See British Empire; Caribbean; Chesapeake Region; Cuba; Dutch Empire; French Empire; Globalization; Portuguese Empire; Spanish Empire; Trade.



Connoisseurship

Connoisseurship may be defined as expert knowledge and keen discriminating taste in a field of fine arts. “Taste” refers to the aesthetics attributed to the artful devices and requisites manufactured for the purpose of smoking, chewing, or ingesting tobacco in all its various forms. In his *Smokerama: Classic Tobacco Accoutrements* (1992) Philip Collins, a cigar smoker and collector of some intriguing tobacco-related accessories, referring to classic tobacco accoutrements, suggests, “It is doubtful that any other industry has spawned as many allied consumer products. Dashes of elegance and bursts of frivolity are interwoven in the design of the products.”

Indeed, if it were not for the discovery and eventual near-worldwide acceptance and use of tobacco, none of the artifacts described here would have been needed or, more accurately, manufactured. Each had a singular purpose specific to a direct or indirect use of tobacco. For example, without tobacco and the human desire to smoke it, the tobacco pipe in its many designs never would have been introduced.

Although smoking had become popular in most areas of the world by the nineteenth century, it was the lengthy, fashionable period of smoking, the Victorian era, that was the richest in special-purpose accessories for the smoker (pipes, cigars, and cigarettes) and the taker of **snuff**.

Today a wealth of opportunities exists to collect tobacco-related items that now are in disuse, have become passé, or no longer have a practical purpose. Hence, one might logically ask whether these accoutrements and utensils are *objets d’art*, worthy of the appellation antique, and thus befitting the realm of connoisseurship. Or are these



snuff a form of powdered tobacco, usually flavored, either sniffed into the nose or “dipped,” packed between cheek and gum. Snuff was popular in the eighteenth century but had faded to obscurity by the twentieth century.

Pipes of High Art

In October 2000, at an auction in Heidelberg, Germany, two early-nineteenth-century Meissen polychrome porcelain pipes crossed the auction block at, respectively, \$18,200 and \$21,300.

In May 2002, a small, mid-nineteenth-century, high-relief-carved meerschaum cigar holder depicting a Saxon couple sold at auction in England for approximately \$5,600.

In April 2003, the gallery Espace Tajan in Paris, France, auctioned an ornate ivory pipe bowl representing a figural bust of a female. It was crafted in Dieppe, France, the center of ivory-carving in the late seventeenth and early eighteenth centuries; although it was missing its stem and mouthpiece, the price paid for this rarity was nearly \$13,000.

In September 2003, a one-of-a-kind, ornately carved mixed medium pipe—made of coral, amber, and gold—depicting a cherub encircled in garlands and attributed to Emperor Franz Josef of Austria–Hungary, was purchased from a Massachusetts auction house at \$5,300.

accessories merely interesting collectibles to be traded at flea markets and swap meets?


Whether tobacco items are aesthetically worthy of collecting, either as collectibles or as fine art, depends on individual taste. Yet there is general agreement among connoisseurs of tobacciana (the realm of tobacco-related paraphernalia, art, and **ephemera**) regarding which items are collectibles and which are fine art. Tobacciana classified as collectibles include the following:

- tobacco signage and other advertising mediums;
- tobacco tins, bins, and pails;
- tin tags;
- ashtrays and spittoons;
- match holders, matchbooks, and matchboxes;
- cardboard and cedar cigar boxes;
- ephemera such as trade and **cigarette cards**, company billheads and letterheads, posters, caddy labels, cigar box labels and bands, cigarette packs, and cigarette rolling papers;
- tools such as tobacco cutters, pipe tongs, braziers, and cigarette rolling machines; and
- promotional materials produced by the tobacco industry as giveaways.


In contrast to these fairly **ubiquitous** collectibles, the items described in the following pages are the accoutrements prized by tobacciana connoisseurs. According to the collective wisdom of antique experts and personal property appraisers, these items are considered fine art. They are highly sought after, have a universal following, and usually command top dollar (see sidebar).

The Pipe and Its Accessories


Although not every pipe is art, some examples of high art are pipes. Passionate collectors are enamored of just about every category or style of pipe, whether antique or contemporary. Collectors seek not only the



ephemeral temporary, short-lived, subject to change.



cigarette cards paper trading cards sometimes featuring sports personalities or movie stars packaged with cigarettes and offered as an incentive for purchase.



ubiquitous being everywhere; commonplace; widespread.

pipes made in Europe—clays, meerschaums, porcelains, and early woods—but also the ethnographic pipes of Asia, Africa, the Americas, and the Near East. A pipe at auction can command a premium price, be it an ornate meerschaum masterpiece, a polychrome Meissen porcelain, an early European carved wood pipe, a convoluted Staffordshire puzzle pipe, or an infrequent ethnographic rarity such as a Queen Charlotte Islands **argillite** pipe, an Inuit ivory pipe, or a Native American pipestone ceremonial peace pipe. This is just as true for those who collect new, limited-edition, handmade **briar** pipes from a handful of renowned American, Danish, English, Italian, and Japanese craftsmen. The pipes from many of these artisans can command as much as \$5,000 to \$15,000, and these prices reflect an appreciation of the aesthetics, artistry, and caliber of workmanship invested in these smoker's trinkets.

TAMPERS. A pipe smoker requires at least one critical device, a short bar with a flat round piece at one end to tamp down the lit tobacco; it is known as a tamper in the United States, a stopper in England, and it is believed to have been invented in the mid-seventeenth century. The earliest tampers were rudimentary, amateur devices made of hardwoods, bone, ivory, or any other natural material suitable for carving. As skills and industry later allowed, metals (predominantly brass, but also bronze, copper, iron, pewter, silver, steel, and, less often, gold), assorted hard-paste ceramics, glass, lava, mother-of-pearl, shell, and other exotic mediums were employed.

Name a motif, and at least one tamper was made in just about every medium to celebrate it. The opportunities were endless, and those who made them had infinite imagination and inventiveness. As examples, a typical collection might include a bear's tooth tipped with silver; a brass boot or a horse's hind leg; a Bisque figural of Punch; a greyhound's head and neck executed in ivory; a plum wood bust of Lord Nelson, the Duke of Wellington, or Napoleon Bonaparte. It is not unusual to encounter an antique hardwood tamper bearing the face of some eighteenth-century English king with an asking price of \$1,000. Sadly, contemporary utilitarian tampers have replaced these ornate pocket fobs of previous centuries. Instead of exotic materials such as lava or mother-of-pearl, today's tampers are typically made of readily available materials such as acrylic, wood, or brass.

TOBACCO JARS. The ubiquitous leather, oilskin, or cloth tobacco pouch (or roll) was carried on the person. But another style of storage container, the tobacco jar, was found at home or at the office and remains an eye-catching conversation piece. The earliest European tobacco storage containers, called boxes, were of cast lead and were produced in England in the early eighteenth century. Next came jars of faience, that exquisite earthenware covered with a tin-enameled (staniferous) glaze from French manufactories such as Mennecy and Sèvres. These were followed by, in approximate chronological order:

- various simple to highly decorative wood jars from Germany that were made in the early to mid-nineteenth century;
- molded figural jars in soft and hard paste from Bohemia made in the late nineteenth and early twentieth centuries that depicted animals, children, and humans; and



argillite A smooth, black sedimentary rock. American Indians sometimes carved tobacco pipes from argillite.

briar a hardwood tree native to southern Europe. The bowls of fine pipes are carved from the burl, or roots, of briar trees.



Tobacco artifacts often are works of art, as evidenced by this Chokwe tobacco container from Angola. Rarities such as this are typically found in museums of natural history and ethnography and are as much prized by collectors as the abundant and much more sophisticated items produced in Europe. © NORTH CAROLINA MUSEUM OF ART/CORBIS



Nineteenth-century molded figural tobacco jars commonly depicted men, women, children, animals, and mythical creatures. Two illustrated here are a jar made from majolica (left), a type of glazed earthenware, and one from porcelain (right), a type of ceramic ware. BOTH PHOTOS © JOE HOROWITZ

- hollow cast bronze figural motifs produced, most probably, in France, and representing the last, the rarest, and the fewest produced in the past century.

Most tobacco jars were not vacuum-sealed, so they did not keep tobacco fresh and moist. However, the jars are now collected for other reasons—namely, their beauty and astounding variety. The recently founded Figural Tobacco Jar Society, comprised of an international membership, has successfully elevated the stature and importance of the jar and has stimulated renewed interest in the pursuit of the more vibrantly polychrome-colored, whimsical ceramic jars from Bohemia and Germany.

PIPE CASES. The pipe case is paraphernalia solely associated with the clay pipe. It was designed to encase the fragile, inexpensive clay when not in use or for ease of transport. Two countries stand out as the premier crafters. Holland was the principal center for boxwood, walnut, and pear wood cases, typically bearing ornate brass decor. England was noted for producing custom-fitted sterling pipe cases for the upper class.

Pipe cases of this caliber are not made today, because few smoke the clay pipe. The quantity of cases that circulate in antiquarian circles exceeds the number of collectors seeking to acquire them, because these cases customarily appeal only to those who are serious about clay pipes. In the early twentieth century, a few beer companies in England and the



This cigarette case, made by Cartier c. 1963, is decorated with lapis lazuli and gold chain. The gold lighter, also made by Cartier c. 1921, is decorated with a sunray motif. © MASSIMO LISTRI/CORBIS

United States gave away tin and pot-metal pipe cases advertising their products, but these have never been very collectible.

Cigar Accessories

Customized accessories were designed and produced for the cigar smoker just as they were for the pipe smoker. These accessories included:

- slide and clasp cases made of either molded leather, silver plating, or sterling;
- decorative tabletop and hand-held cigar cutters, or clippers, in various configurations, the most common of which were cast metal guillotines, ships' wheels, and assorted figurals;
- a wide array of cigar holders in such different materials as amber, gold, ivory, meerschaum, sterling, and wood;
- cigar lighters (also known as cigar lamps);
- the companion set; and
- the cigar dispenser.

CIGAR LIGHTERS. Collector attention has always been drawn to countertop cigar lighters, also called cigar lamps, once strategically placed near the cash register at the local tobacconist, always at the ready to light a newly purchased cigar. These lighters were sparked by denatured alcohol or gas.

To advertise and promote their brand or trademark, some cigar producers freely furnished rather majestic-looking figural lighters to their retail outlets. The largest producer of a broad assortment of lighter lamps for the home was Edward Miller & Company in Meriden, Connecticut, a late-nineteenth-century foundry whose product line included thirty-six different "bronzed, decorated, and real bronze" cigar lighters in various finishes that are in demand today, along with other styles,



such as mechanical and coin-operated lighters. These countertop lighters also appeal to crossover collectors interested in early American three-dimensional advertising objects and country store collectibles.

CIGAR COMPANION SET AND CIGAR DISPENSER. The cigar companion set was a tabletop storage device that was functional yet decorative. It was called a companion set because it had two containers, one for open storage of cigars and one for wood matches. The companion set was most often made in cast metal, ceramic, or wood.

The cigar dispenser, like the companion set, was a tabletop storage device. Yet unlike the companion set, which provided open storage, the dispenser stored cigars out of plain view. Some dispensers had an embedded music box that automatically played when the lid was lifted or the drawer was opened. Dispensers almost always were highly decorated treenware, a product of the wood turner. Both the companion set and the dispenser are quite collectible because their popularity all but ended with the advent of the hermetically sealed and humidified cigar humidor. The cigar humidor, considered furniture, is mentioned later.

Cigarette Accessories

The two most obvious accessories for the cigarette were the holder and the case, both of which are largely passé in today's society. With so much controversy about smoking nowadays, interest in collecting cigarette holders and cases may be either on the rise or ebbing, depending on one's expectations about the future of what many have deridingly called "the little white slaver."

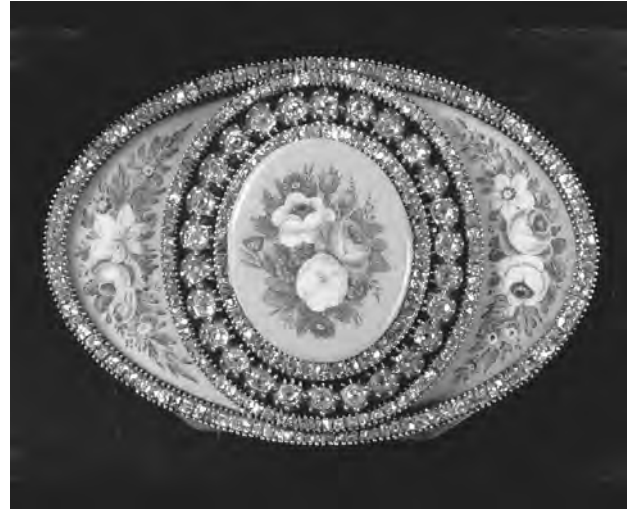
Holders were produced in a variety of materials, from Bakelite to precious material, in assorted lengths, and with varying degrees of ornamentation. The cigarette case, similar to a lady's compact yet distinctively made for each gender, was an ornate affair that defied generalization. The case might be of silver-plate or gold-plate, enameled metal, Russian niello, tortoise shell, mother-of-pearl, tooled leather, something very elaborate from the artistic hand of Carl Faberge, and anything in between. Variety and assortment in the case were never wanting, particularly when the cigarette was in its heyday during the early to mid-twentieth century.

The cigarette dispenser, like its cigar counterpart, was a tabletop storage container. Some were novelties, designed to dispense a cigarette at the push of a button, while others were nothing more than display boxes containing cigarettes that guests were welcome to take. These, too, are sought after by a number of collectors who otherwise have no interest in tobacco.

Snuff Accessories

Snuff is produced in two varieties: nasal (or dry) and moist (or wet). Moist snuff is dipped—taken in the mouth directly from the container—so it requires no special accoutrements. Nasal snuff, in contrast, requires accessories for preparation, storage, and partaking. Accessories associated with nasal snuff include boxes, bottles, rasps, graters, mulls, and handkerchiefs.

When considered as a group, nasal snuff and its accessories are somewhat parallel to the pipe in that the paraphernalia associated with



both were produced and used in the west and the east. In European-based societies, snuff was not universally accepted, as were pipes and cigars. Yet snuff taking, in its day, had been elevated to a fashionable and elegant social custom, and fashion dictated some special-purpose paraphernalia for its use.

SNUFFBOX. The snuffbox is considered by many collectors to be “the crown jewel of tobacciana.” The snuffbox was the singular tobacco-related paraphernalia that had the broadest range and breadth of choices, from coquilla nut and common wood, to papier mâché, porcelain, Japanese lacquer, and the most luxurious of boxes in gold with surmounted precious jewels. While the crude, yet functional, hardwood or gourd snuffboxes of Africa appeal to collectors of ethnographic African art, and snuffboxes made in North America of animal hide, bone, or ivory appeal to collectors of Native American art, the most exquisite and lavish snuffboxes prized by collectors of European tobacciana were produced on the European continent and in England almost continuously during the eighteenth and nineteenth centuries. Today, prices reach astronomical numbers at the auction block, often in the tens of thousands of dollars.

SNUFF GRATER. The snuff grater, a pierced metal device, was a fascinatingly simple tool for the person who made his own finely ground snuff from leaf tobacco. However, when encased in ornately carved ivory, porcelain, or wood, it became a rasp, as a caterpillar metamorphoses into a moth. Craftsmen in Dieppe, France, the premier center of European ivory carving, produced some of the most exquisite snuff rasps known today, while artisans in Germany and Holland crafted similarly handsome rasps in decorated wood. This trinket is in great demand not only by the tobacciana collector and the fancier of anything ivory, but also by anyone interested in the most resplendent treenware.

SNUFF BOTTLE. The snuff bottle, considered by some as a uniquely Chinese expression, is also a commonplace utensil in Germany, a country of considerable snuffers. The Chinese variant is exceptionally ornate and meticulously crafted, made from myriad materials including jade, amber,

These two snuff containers contrast the elegant simplicity of Native American art with the lavish stylings of the Europeans. On the left is a Canadian Eskimo snuffbox from the Inuit depicting a sea mammal (perhaps a sea lion) and her calf. © PETER HARBOLDT/CORBIS

On the right is an ornately decorated European snuffbox of the eighteenth century. © CORBIS



This example of a stylish velvet smoking jacket is modeled by the American actor Maurice Barrymore (born Herbert Blythe, 1847–1905), who appears to be posturing like a Victorian dandy.
© BETTMANN/CORBIS

cloisonné coral, glass, nephrite, porcelain, quartz, and turquoise, and such exotic mediums as hornbill, fossiliferous limestone, and pudding stone. The German variant, usually made of vibrantly colored glass or salt-glaze pottery, is not in the same league as the Chinese snuff bottle because it is not as alluring or sumptuous. From a standpoint of beauty and workmanship, the Chinese variant has always been a prized antique, whereas the German variant, still produced today, is categorized as a collectible.

SNUFF MULL. The snuff mull, or sneeshing mull, used for the storage of ground tobacco, is distinctively Scottish, and forever associated with the ram, goat, or ox. For one's use, the small, personal snuff mull was formed from the hollowed-out curled end of an animal's horn. The open end was covered with a hinged lid of either horn or some other material. A second, more gregarious, less-often-found version is the table mull, comprised of a ram's head and horns, hollowed out to make space for a snuffbox; this larger version was found in homes and at gentlemen's clubs and the then-popular smoking societies. As with snuffboxes, the most loyal collectors of mulls reside in Europe where sneeshing is still a relatively popular custom.

SNUFF HANDKERCHIEF. The snuff handkerchief was an affectation attributed to dandies. Although a component of the rite and ritual of snuffing, too few handkerchiefs have survived the test of time to form a collection.

Miscellaneous Accessories

Miscellaneous accessories include those items that are ubiquitous with pipes, cigars, or both, and a devoted following exists for each.

FURNITURE. The two- and three-dimensional, figural, **Art Deco** smoking and ash stand, a free-standing utensil familiarly known as the silent butler, was nothing more than a glorified ashtray, a silent servant to all who smoked, but in its time, it was a colorful conversation piece added to a hotel lobby, restaurant, and home.

Another substantial piece of furniture was the cigar humidor, customarily found at the tobacconist, but the truly passionate cigar aficionado, then, as now, procured a humidified storage container to keep a supply of cigars fresh and moist. Many a pipe smoker invested in a custom-made, wall- or floor-mounted cabinet or chest to exhibit his prized possessions.

The last of the accessories, classified as furniture, was the *fumeuse* (a French term for “female smoker”), an upholstered, high-back smoking chair specially made for the pipe smoker, but just as convenient for the cigar smoker. Its distinguishing feature was a crest rail incorporating a hidden compartment to store pipes, tobacco, and tools. Smoking chairs were used primarily in England and the Netherlands, where they were popular a century ago, and a few circulate today in venues other than the auction house.

CLOTHING. No discussion of tobacciana would be complete without mentioning two affectations of the smoker: the jacket and hat. The proper nineteenth-century American, English, or Continental gentleman customarily withdrew to his smoking room at home where he donned the requisite attire, sat in his *fumeuse*, and lit up. The jacket and the hat were manufactured in a variety of materials—cotton, felt, silk, velvet, and wool—but the hat was almost always the more ornate contrivance, exhibiting colorful embroidered patterns, fringe, and tassels. Nowadays, smoking jackets and hats reappear at private, formal engagements and lend an air of class at pipe-smoking contests, as frenetic pipe smokers from around the world assemble annually and compete to keep a pipe lit for an extended period of time.

CIGAR-STORE FIGURES. In general, tobacco advertising is considered a collectible, but one item is distinguishable from all the rest, floor-mounted and countertop cigar-store figures, because their rightful characterization is advertising art. In the seventeenth century the English tobacconist hung a sign at the entrance to his shop to symbolize and identify his trade, particularly at a time when few could read. Much later, as a uniquely American expression, it became custom to place a large, three-dimensional, polychrome-painted, wood, zinc, or



Art Deco the most fashionable style of design in the 1920s and 1930s. Art Deco is usually characterized by geometric lines and shapes. Smoking tobacco tins and cigarette packages of this period were often rendered in the Art Deco style.



Shown here is a late-nineteenth-century carved and polychrome-painted pine cigar-store figure of a Native American. A hundred years ago, these figures could be found outside tobacco shops in fair and foul weather alike. Today they occupy space in environmentally controlled museums and homes. © CHRISTIE'S IMAGES/CORBIS

gutta-percha a form of hard rubber made from the sap of a Malaysian tree. Widely used in the nineteenth century, plastics largely replaced gutta-percha in the twentieth century.

gesso show figure—such as a Native American, Punch, or some other recognizable character—at the shop entrance. This American expression was later adapted in English tobacco shops as a smaller, but just as desirable, countertop figure depicting a more continental symbol, such as a Scottish highlander or a blackamoor. Cigar-store figures have all but disappeared into museums, the corporate headquarters of tobacco companies, and private homes. At auctions, however, these colorful statues command not only respect, but also a great deal of money. For instance, on 18 January 2004, as part of a Sotheby's Americana auction in New York, a five-foot cigar-store figure of a Native American attributed to the sculptor Julius Theodore Melchers (1829–1909) of Detroit, Michigan, more than tripled the catalog's high estimate, selling for \$153,600.

MATCH SAFES. In its simplest form, the match safe (vesta case in England) was a pocket-sized container with a hinged lid and roughened surface designed to keep friction matches dry. It was used from about 1860 to 1910 before the matchbook and the pocket lighter were invented. Although the first match safes were plain and simple devices made of common metal, they eventually were produced in a surprising number of other materials, from precious metals, vulcanite, and **gutta-percha**, to lacquer and enamel. Match safes exhibited a diverse range of designs, patterns, styles, techniques, and historical curiosities, including sports and pastimes, advertisements, and figural compositions of everything imaginable, including Tiffany-designed masterpieces.

Many thousands of match safes were in circulation during that era when a dry match was needed to light not just a pipe, a cigar, or a cigarette, but also the kitchen stove. The Cooper-Hewitt National Design Museum in New York owns an extraordinary collection of more than 4,000 match safes. Aiding the efforts of match safe collectors is the International Match Safe Association, founded in 1997, which meets annually to exhibit, swap, and exchange information on this fascinating, ornamental conversation piece.

LIGHTERS. At present, the most active, enthusiastic, and collaborative worldwide network revolves around the pocket and table lighter. This accessory includes an infinite variety of lighting devices, from early strikers and alcohol-based lighters, to today's butanes and piezo-electrics, and from fourteen-carat-gold Cartiers, Dunhills, and Duponts to the universally known Zippo, and every format and construct in between. Lighter clubs in several countries sponsor expositions, particularly On the Lighter Side, one of the largest international societies in the United States; more than twenty recently published illustrated books (in America alone) about their history and valuation have helped make the antique lighter the hottest tobacciana collectible. It is expected that membership and interest will continue to grow exponentially, as lesser-known, rarer, and more exotic lighters come to the fore.

Historical Significance

Tobacco's impact and influence in the eighteenth and nineteenth centuries is analogous to the automobile's impact in the twentieth century. In the early 1900s the automobile spurred and stimulated many



other businesses: the steel, rubber, and glass industries; construction companies, which boomed as highways and garages were built; and companies that sold kerosene, which made up their losses due to the spread of electricity with increased gasoline sales. A century earlier a similar phenomenon occurred with the spread of tobacco. Beyond the field where tobacco was grown, far from the factory where it was processed, outside the retail shop where tobacco products were sold, there was another world, a world of artisans and handicraft people who, perhaps, never came near a hand of tobacco, a cigarette, a cigar, or a tin of pipe tobacco, nor indulged in the social custom of smoking. As can be readily seen, cottage crafts and, later, industries flowered everywhere soon after the introduction of tobacco. The examples are numerous:

- chromolithographers who designed and produced cigar-box labels and bands for the cigar industry, caddy labels to identify tobacco bales, and paper labels and silk screen images for tobacco tins and cigarette packs;
- silver- and goldsmiths who plied their skills making snuffboxes, match safes, cigar and cigarette cases;
- horn turners who also made snuff and tobacco boxes;
- porcelain workers who produced not only pipes but also figural tobacco jars;
- wood turners and treeners who crafted pipes and pipe cases, pipe humidors, pipe stands, and other pipe furniture;

The lid of this eighteenth-century Russian ivory tobacco box is etched in scrimshaw and depicts the Old Testament (Genesis 39) story of Joseph fleeing from the grasp of the courtesan, the wife of Potiphar.

© MASSIMO LISTRI/CORBIS

- those who worked with leather goods, tooling and shaping tobacco pouches, and those who worked with various base and alloy metals who molded pipe tampers; and
- stonecutters, gemologists, enamelists, etchers, and engravers who worked in amber, ivory, and other materials to accent all these objects.

The universal acceptance of tobacco was the impetus and the inspiration for the creative and imaginative arts and crafts expressions that rightfully deserve the title of connoisseurship.

As views of history change, the public's understanding of the past matures, and new ideas emerge about what is worth saving. Stories and artifacts once considered unimportant might be treasured by later generations, just as the value of once-precious things may fade with time. Without tobacco, none of the paraphernalia discussed here would have ever seen the light of day. Tobacco spawned a host of items that were once de rigueur not only in the smoking room but also in public.

Today people still smoke pipes and cigars, and snuff is still relatively popular in some continental quarters, but what have changed are the tobacco accoutrements. Those made long ago met a standard of form and function. In contrast, fewer accessories exist today, and most of these meet only the standard of form. Because of this marked change in the paraphernalia for the smoker, tobacciana collectors thrive, having ample opportunity to find those remarkable accoutrements of yesteryear that can rightfully be classed as objects of connoisseurship. As noted by Collins, "These objects echo a vast industry—and way of life—forever changed by scientific inquiry into the effects of smoking upon our health. Nonetheless smoking was a seemingly natural adjunct to glamorous living, and the possession of these accessories is another example of sophistication and good taste."

See Also Advertising; Arents Collection; Cigarettes; Cigars; Pipes; Smoking Clubs and Rooms; Snuff.

■ BEN RAPAPORT

BIBLIOGRAPHY

- Belloncle, Michel. *Les objets du fumeur*. Paris, France: Gründ, 1971.
- Brongers, Georg A. *Nicotiana Tabacum: The History of Tobacco and Tobacco Smoking in the Netherlands*. Amsterdam, Netherlands: H.J.W. Becht's Uitgeversmaatschappij, 1964.
- Collins, Philip. *Smokerama: Classic Tobacco Accoutrements*. San Francisco, Calif.: Chronicle Books, 1992.
- Faveton, Pierre. *Autour du Tabac. Tabatières, Pipes, Cigares, Allumettes et Briquets*. Paris, France: Editions Ch. Massin, 1988.
- Orhant, Alice. *Up in Smoke: The Art of Collectibles*. Paris, France: LAventurine, 2000.
- Rapaport, Benjamin. *Museum of Tobacco Art & History Guide Book*. Nashville, Tenn.: Museum of Tobacco Art and History, 1997.
- Wood, Neil. *Smoking Collectibles: A Price Guide*. Gas City, Indiana: L-W Book Sales, 1994.
- Yates, Sarah. *Miller's Smoking Accessories: A Collector's Guide*. London, England: Miller's, 2000.



Consumption (Demographics)

In 1753, Carl Linnaeus, a Swedish botanist, officially named a well-known plant *Nicotiana tabacum*. The name honored Jean Nicot de Villemain, France's ambassador to Portugal in 1560, who wrote of the new herb's wonderful medicinal properties and sent some ground-up leaves to Catherine de Medici, the Queen of France, to cure her son's migraine headaches. Catherine and her court became enamored of the product. However, the herb had already been used widely in Europe and elsewhere before this event. The word "Tobago" or "tobacco" appears to be the Native American name for the pipe or cylinder used by many to inhale smoke from the burning leaves of this plant—leaves that contain nicotine, a **psychoactive** and addictive drug.

Ways of Consuming Tobacco

The main ways of consuming tobacco have involved inhalation of smoke from burning tobacco leaves or the use of smokeless tobacco products (**snuff** and chewing tobacco), where nicotine from ground tobacco leaves is absorbed through membranes in the mouth or nose.

PIPES. In earliest times, tobacco smoke was inhaled through a long tube or pipe. American Indians used communal smoking of long, decorated clay pipes as a ceremony indicating good will. Long clay pipes were also used in Europe. British author Alfred Lord Tennyson liked to smoke clay pipes and kept handy a basket filled with them. He could only smoke one pipe for a few minutes because it soon became too hot and he would have to throw it away. Lord Tennyson would sit in this way all day: filling, smoking, breaking-up, and discarding pipes. Shorter wooden pipes such as **briar** pipes date mainly from the nineteenth century but there is some mention of earlier wooden pipes that closely resembled the long clay pipes.

In India and Arabia, smokers preferred **water pipes** (also known as *hookahs*, *gozas*, *narghiles*, and *sheeshas*), where the smoke cooled by passing through water before inhalation. These water-cooled pipes were typically used for social gatherings where the mouthpiece, at the end of the long, flexible snake-like pipe, was passed around. The lips would not touch the mouthpiece, but the smoke would be captured in cupped hands. Many British people in India engaged in this type of smoking, and it was given the nickname "hubble-bubble."

CIGARS. The Mayan term for smoking was *sik'ar*, which is probably the derivation of the word "cigar." Early cigars were a long thick bundle of twisted tobacco leaves wrapped in a dried palm or maize leaf. Cigars were produced in *tabacerias* in Spain in the seventeenth century and became the predominant form of tobacco use in Europe during the nineteenth century. Twenty-first-century cigars consists of filler, binder, and wrapper, all of which are made of **air-cured** and fermented tobacco. The modern cigar has a characteristic aroma and flavor that comes mainly



psychoactive having an effect on the mind of the user.



snuff a form of powdered tobacco, usually flavored, either sniffed into the nose or "dipped," packed between cheek and gum. Snuff was popular in the eighteenth century but had faded to obscurity by the twentieth century.



briar a hardwood tree native to southern Europe. The bowls of fine pipes are carved from the burl, or roots, of briar trees.


water pipe also called a hookah, a tobacco pipe in which the smoke is filtered through a bowl of water. The smoker inhales through a mouthpiece connected to the pipe by a flexible tube. Water pipes are traditional in the Orient.



air-cured tobacco leaf tobacco that has been dried naturally without artificial heat.

from the fermentation process. However, the word “cigar” refers to a wide range of products that are wrapped in tobacco leaf, reconstituted tobacco, or paper treated with tobacco extract. A small cigar made of heavy-bodied tobacco is called a *cheroot* in many parts of the world and a *chutta* in parts of Asia, especially India.

SMOKELESS TOBACCO. Prior to the invention of the phosphorous match in the mid-nineteenth century, two forms of smokeless tobacco were popular: snuff and chewing tobacco. Snuff became the preferred nicotine delivery system for the upper class in Europe in the seventeenth and eighteenth centuries, becoming popular in England after 1660 when the court of Charles II introduced it upon returning to London from exile in Paris. The tobacco leaf was ground up with a rasp into a fine powder that could be inhaled through the nose. An instruction manual from this **Rococo** period (c. 1750) laid out fourteen steps for the genteel use of snuff, including the manner for extracting snuff from the box and bringing it to the nose. Two of the final steps included “Take in the snuff evenly with both nostrils without making a grimace” and “Sneeze, cough, expectorate” (Schivelbusch, p. 13). Elegant habitués prided themselves on being able to stuff their noses with snuff without sneezing. An indication of snuff’s popularity can be seen from Marie Antoinette’s wedding presents; there were more than fifty gold snuff boxes, making them an even more popular gift than gold watches.



rococo an artistic and architectural style of the eighteenth century (1700s) characterized by elaborate ornamentation.

The preferred forms of smokeless tobacco among Americans of European decent were chewing tobacco and snuff used as a moist dip. To use snuff, a small instrument was needed to deposit moist dip on the gums or to place a pinch inside the cheek. Chewing tobacco needed no instrument and was a favorite of sailors and men who worked outdoors for use while working. Early on, chewing tobacco was sold in loose bulky bags. Later, sweeteners were added, and it was molded into lumps to fit into a pocket. Chewing, in particular, led to the mouth becoming filled with tobacco juice that could either be swallowed (often causing stomach problems) or, preferably, spat out. When the Catholic pope banned smoking in church in 1642, some prelates sought to maintain their nicotine habit by changing to chewing tobacco. British writer Sir Compton Mackenzie noted with amazement that he had encountered one particular prelate in Seville who would chew tobacco during his sermon and then “spit over the heads of pious women seated on the floor under his pulpit and each time hit the same flagstone with his tobacco juice” (Kiernan 1991).

CIGARETTES. Cigarettes are made from fine-cut tobacco and are wrapped in paper or some type of organic leaf. They typically measure between 60 and 120 millimeters in length and between 20 and 30 millimeters in circumference and have a weight that ranges from 500 to 1,200 milligrams. Cigarettes originated as *cigaritos* in Spain and Portugal in the seventeenth century and were made from the leftovers from cigar manufacturing. Significant improvements in cigarette paper were introduced in Barcelona around the end of the eighteenth century.

Cigarettes had advantages over other types of tobacco in that they could be consumed within a relatively short period of time. The lack of accompanying instruments or paraphernalia meant that they could be



White Cloud, Iroquois chief, with a calumet. American Indians used these long, decorated clay pipes in ceremonies to indicate good will among the participants.
© BETTMANN/CORBIS

smoked easily even while working, and they were less likely to soil clothes. Cigarettes became popular in France during the French revolution, and the French government began licensing cigarette manufacturing about 1840. Cigarettes started to be popular in England after the Crimean War (1854–1856). Mass production of cigarettes, however, was limited before the invention of the first successful cigarette manufacturing machine in 1884.

Despite the availability of manufactured cigarettes, hand-rolled cigarettes are popular in some parts of the world. For example, Indian **bidis** are slim, unfiltered cigarettes wrapped in tendu leaves instead of paper, the leaves being less permeable to air and requiring the smoker to inhale more deeply. Cheap labor in India has enabled these handmade cigarettes to be sold at a competitive price as a prerolled cigarette. However, in other places, some smokers appear to prefer the time-consuming ritual of rolling their own cigarettes from bulk tobacco that is sometimes perceived to have less additives.



bidis thin, hand-rolled cigarettes produced in India. Bidis are often flavored with strawberry or other fruits and are popular with teenagers.



Origins of Tobacco Consumption

Archeological studies of clay pipes and pottery indicate that there was widespread tobacco use in the Americas before explorer Christopher Columbus arrived. Clay pipes and Mayan pottery depicting smoking have been dated before the eleventh century. In 1492, Columbus mentions in his journal seeing a man carrying “dried leaves which are in high value among them for a quantity of it was brought to me at San Salvador” (Borio). When Hernan Cortez conquered the Aztec capitol in 1519, he found Mexican natives smoking tobacco stuffed inside perfumed reeds. A few years later in 1536, Jacques Cartier wrote of the Iroquois who lived near the St Lawrence River:

They have a plant of which a large supply is collected in summer for the winter's consumption. They hold it in high esteem, though the men alone make use of it in the following manner. After drying it in the sun, they carry it around their necks in a small skin pouch in lieu of a bag, together with a hollow bit of stone or wood. Then at frequent intervals, they crumble this plant into powder which they place into one of the openings of the hollow instrument, and laying a live coal on top, suck at the other end to such an extent that they fill their body so full of smoke that it streams out of their mouths and nostrils as from a chimney. (von Gernet, p.)

Similar behaviors were reported among Native-American tribes from differing parts of the Americas in the early years of European settlement.

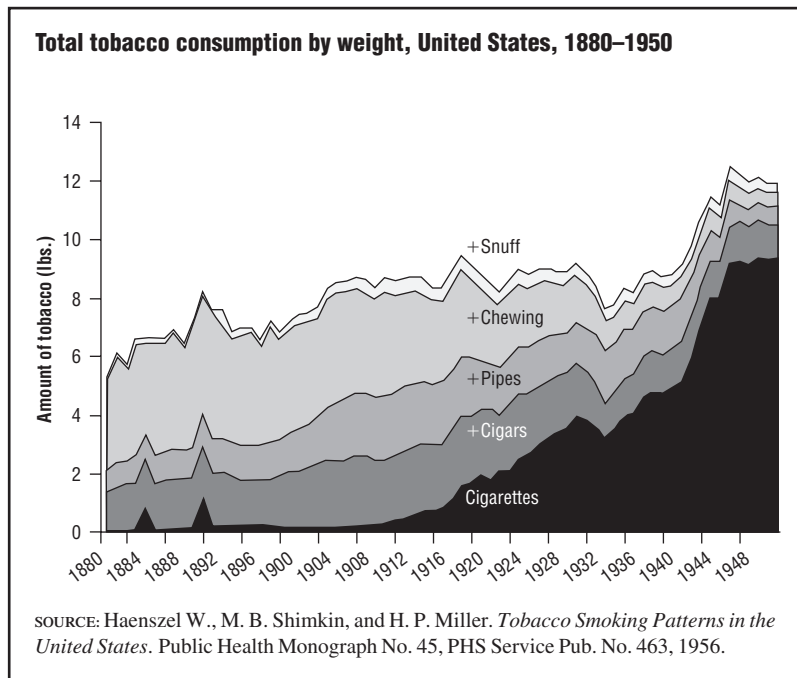
Worldwide Spread of Tobacco Consumption

It is clear from the writings of the time as well as from archaeological excavations that Europe did not consume tobacco prior to Columbus's voyage to the Americas. In the early years after the explorers and sailors introduced tobacco along trading routes and to home countries, most tobacco was smoked with a clay pipe. While there is much evidence that such pipes and other instruments related to smoking (for example, tongs used for obtaining embers from a fire to light a pipe) were found in Europe after Columbus's voyage, there are no such artifacts dated before the voyage. The rapid and widespread diffusion of tobacco consumption around the world has been attributed particularly to Portuguese sailors:

Before the end of the sixteenth century the [Portuguese] had developed these small farms to a point where they could be assured of enough tobacco to meet their personal needs, for gifts, and for barter (Brooks).

The Spanish from Mexico introduced tobacco to the Philippines, where it was cultivated before 1600. Around 1600, Asia and the Ottomans had begun to smoke. The Portuguese brought it to Japan before 1590, and by 1643 it was grown widely in both China and Japan. The Portuguese also introduced tobacco to West Africa by the early seventeenth century. Several Englishmen have been credited with introducing it to England, including explorers James Hawkins, Sir Francis Drake, and Sir Walter Raleigh, but historians agree that Raleigh was the first to make tobacco use fashionable in England, after he smoked at the execution of the Earl of Essex in 1601. In the 1790s, the Scottish explorer Mungo Park, during his attempts to find the source of the Niger River, found tobacco in demand wherever he went in Africa.

FIGURE 1



The rapidity with which tobacco consumption diffused across the world was fueled by the rapid expansion of its cultivation on large tracts of previously wild lands in the Americas. In 1614, the Spanish king acted to ensure an adequate supply of tobacco by mandating that all tobacco grown in the Spanish-controlled New World be shipped to Seville in Spain. Tobacco **plantations** in the English colonies of Virginia and Maryland, manned by a flourishing slave trade, were able to expand their tobacco exports sixfold to meet growing demand between 1663 and 1699. This success led to further expansion of tobacco growing into the new territories as the new nation expanded following the American Revolution.

Advertising Helps Cigarettes Become Dominant Mode of Consumption

In the United States and elsewhere, the Industrial Revolution created a wide range of economical mass-produced products, signaling the start of the consumer age. In the mid-1880s, James Duke assisted in perfecting the Bonsack machine for manufacturing cigarettes and negotiated a 25 percent lower price than any other cigarette manufacturer. He used the cost savings to start a marketing war (involving product packaging, advertising, promotional activities, and price), to build consumer demand and to consolidate the entire U.S. tobacco industry into a monopoly. However, it was not until the tobacco monopoly was dissolved through antitrust court action in 1911 that cigarette advertising started in earnest. In that year, U.S. annual per capita consumption (the average number of cigarettes smoked per member of the population above a specified age) was still less than 0.5 cigarettes per person (fourteen years of age and older), and cigarettes made up only 5 percent of the tobacco consumption market.



plantation historically, a large agricultural estate dedicated to producing a cash crop worked by laborers living on the property. Before 1865, plantations in the American South were usually worked by slaves.

The changes in tobacco consumption over the first fifty years of the twentieth century are presented in Figure 1. R.J. Reynolds, founder of the R.J. Reynolds Tobacco Company, understood the possibilities of cigarettes and introduced a new cigarette (Camel) made from a sweeter tobacco leaf, which he promoted with an innovative and well-funded advertising campaign aimed at men. Reynolds' advertising campaigns and business prowess were so effective that the company has been credited with the rapid increase in per capita consumption—more existing consumers switched to cigarettes and new consumers preferred them. Between 1911 and the start of World War I, cigarette consumption increased by a factor of 2.3, while total tobacco consumption declined.

This conversion to cigarettes increased during the war when nicotine was seen as helpful for handling stress and maintaining attentiveness, and because manufactured cigarettes were easy to carry and were the quickest way to get a nicotine effect. The nation responded when General "Black Jack" Pershing (then commander of the American Expeditionary Forces) indicated that in his view, to win the war, fighting men needed to be supplied with cigarettes as well as bullets. Organizations such as the Red Cross and the Young Men's Christian Association started a drive to provide free cigarettes to the troops. By 1920 cigarettes represented 23 percent of the total tobacco market, though the total market for tobacco products had increased by only 4 percent since before the war.

In the mid-1920s, the American Tobacco Company, with the lowest **market share** of the three major companies (ATC, R.J. Reynolds, and Liggett and Myers), was the first to successfully target women with its innovative Lucky Strikes advertising campaign. The slogan "Reach for a Lucky instead of a sweet" was associated with a major increase in the number of young women starting to smoke. Because the market leader, Camel cigarettes, was slow to follow this lead, by 1930 Lucky Strikes had become the leading cigarette brand in the United States. The large increase in smoking among women was associated with a doubling of per capita cigarette consumption between 1920 and 1930. By then cigarettes had captured 43 percent of the total tobacco consumption market. However, the weight of all tobacco sold in the United States grew by only 2 percent over this period, suggesting that the manufactured cigarette led to a lot less wastage than other methods of consumption.

Huge advertising campaigns for cigarettes continued throughout the 1930s, and the decade ended with little change in the overall weight of tobacco sold but with cigarettes sales at 56 percent of the total tobacco market. This situation changed with World War II when the provision of free cigarettes to the armed forces led to a marked 40 percent increase in the overall weight of tobacco consumed. By the end of the war, cigarettes accounted for almost 75 percent of the weight of all tobacco consumed.

As presented in Figure 1, the amount of tobacco sold per capita grew by 61 percent in this fifty-year period. However, the most important change was the emergence of cigarettes as the dominant form of tobacco consumption. At the start of the century only 2 percent of U.S. tobacco sales by weight were for cigarettes; at the half-century mark, this proportion had risen to nearly 80 percent. However, not all countries had the same advertising-driven rise in consumption of manufactured cigarettes. India is perhaps the best



market share the fraction, usually expressed as a percentage, of total commerce for a given product controlled by a single brand; the consumer patronage for a given brand or style of product.

example, where even as late as the 1990s an estimated 40 percent of tobacco consumption came from chewing tobacco, another 40 percent from hand-rolled bidi cigarettes, and less than 20 percent from manufactured cigarettes.

In the second half of the twentieth century advertising campaigns were also demonstrated to influence consumption behavior, although during this period overall per capita consumption was declining because of the public health campaign against smoking. Three important examples illustrate the effect of advertising on consumption. In the late 1960s, the tobacco industry introduced a group of cigarettes that were made for and advertised specifically to women, Virginia Slims being the most popular. The introduction of these brands was associated with a major increase in smoking initiation by adolescent girls, particularly those who were not college bound. There was no increase in initiation by young adult women or by adolescent or young adult males.

In the late 1970s, the tobacco industry launched a major promotional campaign for smokeless tobacco that was specifically targeted at young baseball players. Between 1978 and 1985, sales of moist snuff increased dramatically. By 1985, 40 percent of male college baseball players were using smokeless tobacco regularly compared to only 3 percent who were smoking cigarettes, in marked contrast to the consumption pattern in the 1950s and 1960s.

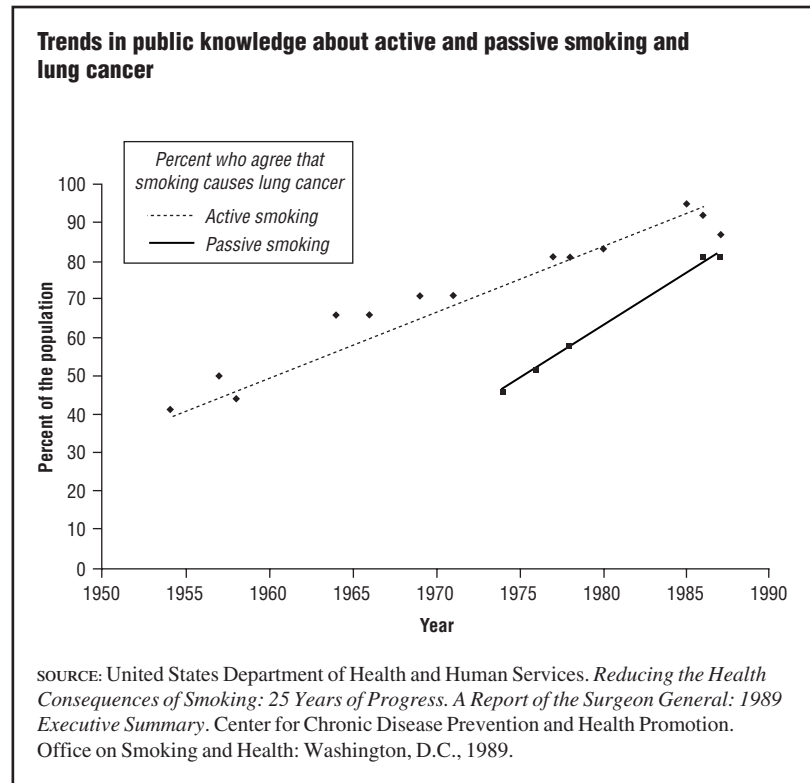
The third example is the “Joe Camel” character campaign of the R.J. Reynolds tobacco company introduced in 1987. Reynolds’ internal documents demonstrate the company was worried about declining market share and therefore was increasingly excited about the effect of this campaign on adolescents. That effect was a general surge in U.S. adolescent smoking from the start of this campaign until it was halted as part of a legal settlement between states attorneys general and tobacco companies in 1998. During the campaign, adolescent receptivity to tobacco marketing was a major predictor of who started smoking.

Tobacco and Health

Throughout history, the willingness of people to experiment with tobacco and to continue to consume at high levels has been influenced by beliefs about its medicinal properties and adverse health consequences. From the beginning, tobacco was seen as more than just a recreational drug. For example, the Peruvian natives limited tobacco use to medicinal purposes, generally in the form of snuff, and European medicine at the time readily adopted the idea that inhaling smoke could exert a positive influence. Before 1600 there were several treatises by physicians in different parts of Europe attesting to the widespread prescription of tobacco for numerous maladies. One treatise listed it as a cure for toothache, falling fingernails, worms, halitosis, lockjaw, and cancer; another listed it as a cure for colic, nephritis, hysteria, hernia, and dysentery. The first book written solely about tobacco appeared in 1587 in Antwerp, Belgium, and was titled *De Herbe Panacea*.

While the medical literature occasionally suggested that tobacco use was associated with harmful consequences, it was not until five key research papers were published in 1950 that medical researchers started to become convinced that the sudden rise in lung cancer deaths, beginning

FIGURE 2



in 1920, was caused by the increase in cigarette smoking. Throughout the 1950s, the scientific evidence continued to mount, particularly in the United Kingdom and the United States.

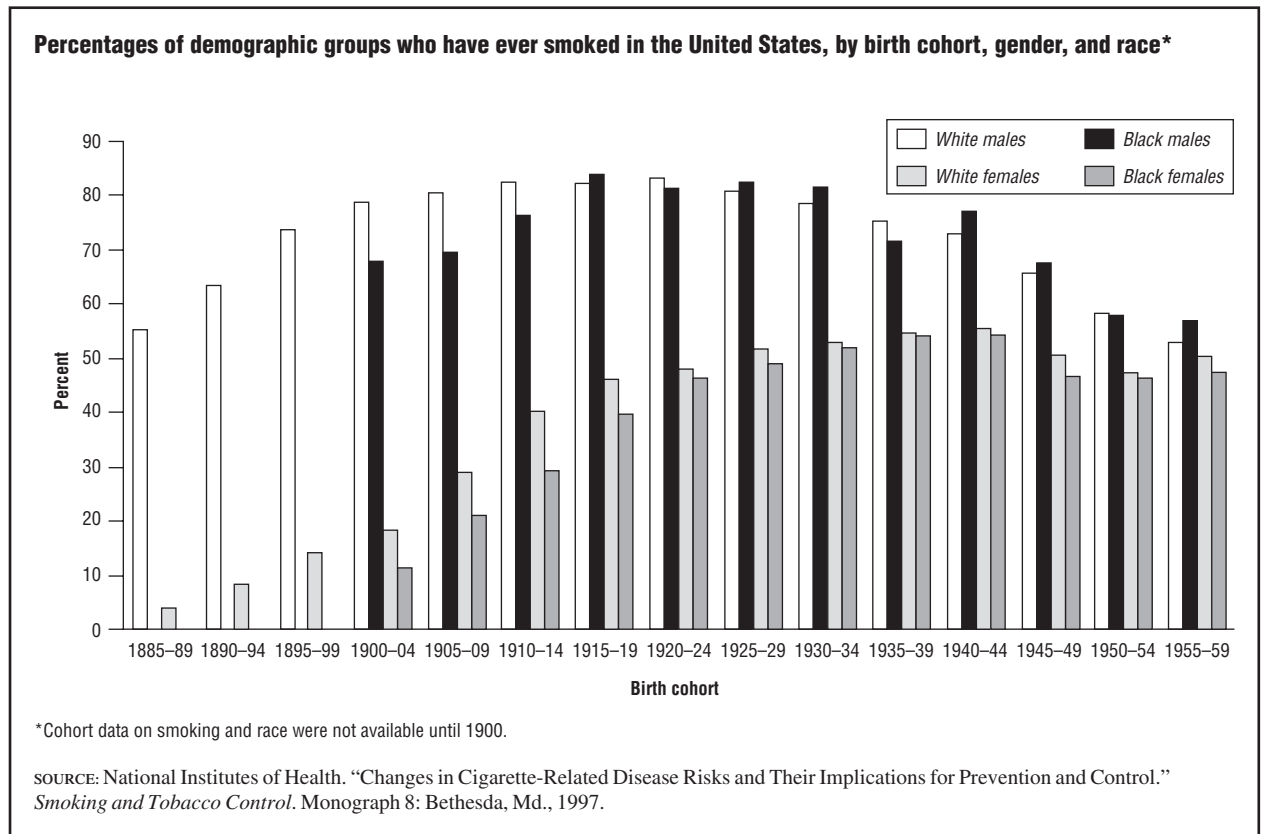
New findings linking smoking to lung cancer received substantial attention in the newspapers of the day and appeared to cause a small but short-lived surge in successful quitting. In response to this threat to cigarette consumption, the tobacco industry introduced filtered cigarettes with advertisements implying that they were less harmful. In addition, beginning in 1953 the industry used its own Tobacco Industry Research Committee (TIRC) to produce and promote scientific critiques of each new piece of evidence.

Public recognition of the dangers of smoking—and its consequent impact on consumption—has been a very gradual process. Even after the release of the 1964 Surgeon General’s report, only 66 percent of the population agreed with the statement that cigarette smoking caused lung cancer. In 1978, the tobacco industry introduced “low tar and nicotine” products with the promotional message that they would reduce the harmful effects of cigarette smoking. However, scientists have concluded that neither cigarette filters nor “low tar and nicotine” cigarettes result in any identifiable harm reduction for smokers. The power of this strategy was shown by the slow rise in the general acceptance of the link between cigarette smoking and lung cancer (see Figure 2). It was not until the mid-1980s that over 85 percent of the population agreed that smoking caused lung cancer, nearly twenty-five years after the public health community issued one of the most thorough presentations of evidence ever to indict a product.



tar a residue of tobacco smoke, composed of many chemical substances that are collectively known by this term.

FIGURE 3



U.S. Patterns in Starting and Quitting Cigarette Smoking

The two behavioral processes that influence smoking prevalence are smoking initiation and smoking cessation. Considerable evidence reveals an age window during which people are at much greater risk of starting to smoke. Influences on who starts to smoke are environmental. While the environment also influences desire to quit, successful quitting requires the smoker to overcome considerable **physiological**, psychological, and behavioral dependencies that are characteristic of smoking behavior. Thus environmental influences are expected to have a much stronger influence on initiation rates than on cessation rates.

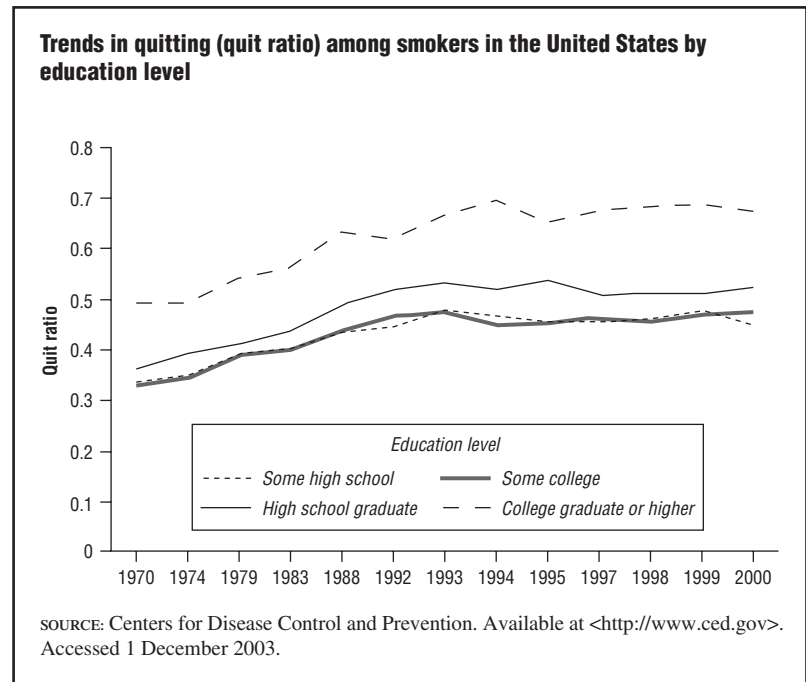


physiology the study of the functions and processes of the body.

MALE AND FEMALE DIFFERENCES IN THE UPTAKE OF CIGARETTE SMOKING. Although cigarette smoking was not very prevalent at the start of the twentieth century and was virtually nonexistent among women, this changed rapidly as the century progressed. The percentage of each U.S. birth cohort (those born during a defined time period, for example 1900–1904) who reported that they had currently or had previously been a smoker (referred to as “ever” smokers and defined as the consumption of at least 100 cigarettes in one’s lifetime) is presented in Figure 3.

Among men the highest percentage of ever smokers in a birth cohort was 80 percent. White men born between 1905 and 1929 and African-American men born between 1915 and 1929 reached this peak level.

FIGURE 4



The percentage of ever smokers in a birth cohort started to decline with men in the 1930–1934 birth cohort, that is, those who were under 21 years when the first definitive evidence of smoking and cancer was disseminated. The decline continued with each birth cohort so that among men born between 1955 and 1959 (aged 21 in the late 1970s), just over half (53%) reported ever smoking, one-third less than their parents’ generation (1925–1929). Importantly, this decline resulted from a major decrease in the uptake of smoking among adults over the age of 20 years and not from a decrease in uptake among teenagers. Thus, by the year 2000, the vast majority of people who started smoking had had their first cigarette before they were 18 years of age.

Less than 15 percent of women born before the turn of the twentieth century (those turning 21 before 1920) reported ever smoking. This percentage increased dramatically for women born in the first twenty years of the century to around 46 percent for the 1915–1919 birth cohort, coinciding with adolescent exposure to the advertising campaigns that targeted women. African-American women did not catch up to white women until the 1920–1924 birth cohort, after which the patterns were indistinguishable. The proportion of people who reported having smoked at least 100 cigarettes in their lives (“ever” smokers) peaked among women at approximately 55 percent in the 1940–1944 birth cohort and declined slightly to around 50 percent by the 1955–1959 birth cohort. Thus, the large male–female difference in the percentage of people who ever started smoking may have disappeared in cohorts born after 1960.

DEMOGRAPHIC DIFFERENCES IN QUITTING SMOKING. By 1965, of ever smokers, 27 percent of males and 19 percent of females in the United States were former smokers. The lower rate among women

Table 1: Countries by Percentage (Rate) of Males Smoking in 2000

Rate	Country
50% or greater	Belarus, China, Fiji, Indonesia, Kenya, Hungary, Mexico, Peru, Philippines, Republic of Korea, Romania, Russian Federation, Syria, Tunisia, Turkey, Uganda, Ukraine, Uruguay, Vietnam
40–49.9%	Bangladesh, Chile, Cote d'Ivoire, Egypt, Greece, Japan, Malaysia, Moldova, Myanmar, Nepal, Poland, Slovakia, South Africa, Trinidad and Tobago, Zimbabwe
35–39.9%	Brazil, Bulgaria, Czech Republic, Germany, Morocco, Pakistan, Spain, Thailand, Venezuela
30–34.9%	Argentina, Azerbaijan, Denmark, France, Ireland, Italy, Netherlands, Norway, Portugal
25–29.9%	Belgium, Columbia, Finland, Hong Kong, Iceland, India, New Zealand, Slovenia, Sri Lanka, Switzerland, United Kingdom, United States (overall)
20–24.9%	Australia, Canada, Dominican Republic, Iran, Singapore
10–19.9%	California (U.S.), Haiti, Nigeria, Saudi Arabia, Sweden

possibly reflects an initial perception that the lung cancer epidemic was peculiar to men and not women, due to the fact that all the early studies on smoking and cancer were completed on men. By 2000, quitting had increased markedly in both genders to 50 percent for men and 47 percent for women.

Differences in quitting are most pronounced between educational groups (see Figure 4). By 1970, almost half of college-graduated U.S. smokers had quit compared to one-third of all other smokers. By 1993, quitting had increased by 13 percent among those who had not attended any college (to 47%) and in 1994, by 21 percent (to 70%) among those who had graduated college. These figures suggest that the higher educated are either more motivated to quit or are more skilled at quitting. However, there were no further increases in quitting in any U.S. group (gender, race, educational) between 1993 and 2000. This halting of the increased trend for successful quitting is a major public health concern and is currently the subject of ongoing research.

WORLDWIDE SMOKING PATTERNS. At the turn of the twenty-first century, lung cancer had become the most common cancer in the world. There are estimated to be 1.2 million new cases each year, about half of which are in the developed countries. The pattern of lung cancer incidence and death follows the pattern of cigarette consumption that occurred about twenty years earlier. Thus, worldwide, lung cancer is three times more common in men than women, because cigarette smoking has historically been much more common in men.

Table 2: Countries by Percentage (Rate) of Females Smoking in 2000

Rate	Country
30% or greater	Argentina, Chile, Germany, Hungary, Ireland, Kenya, Norway, Uruguay
25–29.9%	Brazil, Denmark, Greece, Netherlands, New Zealand, Romania, Spain, United Kingdom
20–24.9%	Bangladesh, Belgium, Czech Republic, Fiji, Finland, France, Iceland, Italy, Myanmar, Nepal, Poland, Slovenia, Sweden, Switzerland, Venezuela, United States (overall)
15–19.9%	Australia, Bulgaria, California (U.S.), Canada, Dominican Republic, Egypt, Mexico, Moldova, Peru, Slovakia, Uganda
10–14.9%	Columbia, Japan, South Africa, Syria, Turkey, Ukraine, Zimbabwe
5–9.9%	Belarus, Haiti, Korea Republic, Pakistan, Philippines, Portugal, Russian Federation, Saudi Arabia, Trinidad and Tobago, Tunisia
Less than 5%	Azerbaijan, China, Cote d'Ivoire, Hong Kong, India, Indonesia, Iran, Malaysia, Morocco, Nigeria, Singapore, Sri Lanka, Thailand, Vietnam

The developed countries with the highest lung cancer incidence are the countries of Eastern Europe, North America, Australia/New Zealand, and South America. In developing countries, the highest rates are seen for countries in the Middle East, China, the Caribbean, and South Africa. For women, the highest incidence rates are in North America and certain European countries such as the United Kingdom, Iceland, and Denmark, with moderate incidence rates found in Australia and New Zealand.

MALE-FEMALE SMOKING RATES AT THE BEGINNING OF THE TWENTY-FIRST CENTURY. In 2000, according to World Health Organization (WHO) data, of the 72 countries selected for review in this chapter, there were 19 in which over 50 percent of men were current smokers (see Table 1). However, many of these countries include those with low annual per capita cigarette consumption levels (see Table 4), suggesting that consumption may be nondaily and even sporadic for many smokers, and the increase in lung cancer may not have been sufficient to galvanize the public health movement against smoking. A further 15 countries had male smoking rates between 40 percent and 50 percent, including South Africa, where there has been a steep decline in annual per capita consumption since the end of apartheid and the change of government to majority rule in 1994. There were only four countries and the U.S. state of California (considered as an autonomous unit since its consumption differs markedly from the rest of the United States) in which male participation was below 20 percent. One of these is Sweden, where there appears to have been a widespread substitution

Table 3: Countries by Year of Peak Cigarette Consumption, 1970–2000

Year	Countries
1970	Bangladesh, Columbia
1971	Fiji
1972	Jamaica, Mexico, Switzerland
1973	Morocco, Trinidad and Tobago, Uganda, United Kingdom, United States
1974	Argentina, Belarus, Congo-dem, Finland, Ireland, United Arab Emirates
1975	New Zealand, Zimbabwe
1976	Denmark, Dominican Republic, Germany, Sweden
1977	Canada, Japan, Honduras, Netherlands
1978	Belize, Ivory Coast, Guinea-Bissau, Liberia, Sri Lanka
1979	Austria, Malaysia, Spain
1980	Australia, Chile, Haiti, Hungary, Sierra Leone, Tajikistan
1981	Mozambique, Peru
1982	Algeria, Belgium, India, Pakistan, Philippines
1983	Azerbaijan, Iceland, Syria
1984	Albania
1990	China, South Africa
1991	Macedonia, Portugal
1992	Nepal
1993	Republic of Korea
1995	Greece, Solomon Island, Vietnam
1996	Cyprus, Thailand
1997	Kazakhstan
1999	Slovakia, Uzbekistan
2000	Bulgaria, Indonesia, Moldova, Russian Fed, Tunisia

of smokeless tobacco for cigarettes. California had a well-funded comprehensive tobacco control program throughout the 1990s.

While 52 countries had male smoking rates of 30 percent or greater in 2000 (see Table 2), only 8 countries (mainly in South America or Europe) had comparable female rates. Eight more countries had female smoking rates between 25 percent and 29.9 percent, including the United Kingdom and New Zealand, two countries that, while having

**Table 4: Peak Per Capita Consumption by Country
(Persons 15 Years and Older)**

Annual Per Capita Consumption	Selected Countries (Cigarette Sticks)
Over 3,000	Slovenia (5,862), Armenia (5,133), Georgia (4,789), Greece (4,252), Iceland (3,931), Switzerland (3,858), United States (without California) (3,672), Poland (3,684), Canada (3,670) Ireland (3,624), Japan (3,564), Bulgaria (3,407), Hungary (3,398), California (U.S.) (3,287), Australia (3,279), United Kingdom (3,187), Republic of Korea (3,103), Albania (3,102), Netherlands (3,058)
2,501–3,000	Spain (2,998), New Zealand (2,994), Russian Fed (2,919), Belgium (2,887), Belarus (2,680), Austria (2,676), France (2,556), Italy (2,551), Slovakia (2,550)
2,001–2,500	Germany (2,500), Philippines (2,425), Belize (2,365), Syria (2,360), Azerbaijan (2,260), Denmark (2,258), Portugal (2,203), Finland (2,194), Kazakhstan (2,145), Argentina (2,108), Malaysia (2,097), Tajikistan (2,095), Ukraine (2,055), Mauritius (2,055) Sweden (2,018), Trinidad and Tobago (2,012)
1,501–2,000	China (1,963), Brazil (1,923), Tunisia (1,855), South Africa (1,834), Columbia (1,699), Algeria (1,656), Egypt (1,615), Uruguay (1,615), Fiji (1,599), Mexico (1,564), Chile (1,554), Jamaica (1,504)
1,001–1,500	Vietnam (1,466), Indonesia (1,434), Morocco (1,401), Honduras (1,356), Sierra Leone (1,280), Thailand (1,168), Dominican Republic (1,146)
501–1000	Norway (976), Ivory Coast (898), Solomon Islands (845), Zimbabwe (819), Pakistan (737), Nepal (703), Uzbekistan (641), Sri Lanka (614), Congo-Dem (556), Mauritania (508)
Less than 500	Bangladesh (492), Liberia (459), Guinea-Bissau (452), Peru (382), Uganda (370), Haiti (351), India (207), Mozambique (192), Myanmar (155), Ethiopia (126)

made progress in reducing smoking prevalence, still had rather high rates. While none of the countries on the WHO list had male prevalence rates below 10 percent, in 25 countries the prevalence among women was, in fact, below this level.

In almost all the countries represented, male smoking rates at the turn of the twenty-first century were dramatically higher than female rates. The countries with the closest male-to-female rates consist of those considered closest to equality in other social areas as well (for example,

**Table 5: Countries by Per Capita Consumption in 2000
(Persons 15 Years and Older)**

Annual Per Capita Consumption	Selected Countries (Cigarette Sticks)
Over 3,000	Moldova (3,721), Bulgaria (3,407), Japan (3,023)
2,501–3,000	Greece (2,977), Netherlands (2,951), Russian Federation (2,919), Spain (2,909), Switzerland (2,809), Republic of Korea (2,686), Slovenia (2,658), Hungary (2,653)
2001–2500	Poland (2,395), Macedonia (2,310), Ireland (2,304), United States Overall (2,082), Italy (2,039)
1,501–2,000	Belarus (2,000), Portugal (1,997), Iceland (1,958), Kazakstan (1,881), Denmark (1,856), Tunisia (1,855), Germany (1,843), Belgium (1,837), China (1,779), Canada (1,777), France (1,594), Australia (1,568), Slovakia (1,529), Philippines (1,529), Austria (1,516)
1,001–1,500	Indonesia (1,434), Argentina (1,418), United Kingdom (1,374), Mauritius (1,373), Uruguay (1,298), Malaysia (1,274), Chile (1,268), Ukraine (1,242), Egypt (1,615), Armenia (1,207), Syria (1,205), Finland (1,123), Sweden (1,107), Albania (1,056), California (U.S.) (1,051), Honduras (1,044), Vietnam (1,025)
501–1,000	New Zealand (997), South Africa (933), Algeria (859), Brazil (858), Thailand (802), Belize (800), Fiji (745), Dominican Republic (743), Norway (721), Mexico (712), Morocco (708), Trinidad and Tobago (589), Azerbaijan (573), Pakistan (571), Columbia (567), Jamaica (565), Solomon Is (544), Nepal (520)
Less than 500	Zimbabwe (468), Uzbekistan (361), Sri Lanka (338), Mauritania (312), Ivory Coast (277), Bangladesh (234), Tajikistan (181), Peru (160), Uganda (147), Mozambique (138), Guinea-Bissau (133), Liberia (120), India (107), Congo-Dem (105), Myanmar (80)



job opportunity, status within the family), including Switzerland, Denmark, United Kingdom, Ireland, New Zealand, and Norway. There were 22 countries in which the male smoking rate was more than 5 times that of females, including a number with high annual per capita cigarette consumption rates (see Table 4 below) such as Indonesia, Russia, South Korea, and China.

TRENDS IN CONSUMPTION, 1970–2000. Since 1970, WHO has compiled comparable estimates of tobacco consumption from national trade statistics with consumption estimated as locally produced product plus

imports minus exports. Yearly census data are then used to estimate per capita cigarette consumption. However, these data can give a biased picture if there are significant population subgroups in which consumption trends are different (such as women). Another factor that can distort estimates is significant cigarette smuggling into or out of the country not reflected in the trade statistics.

PEAK CONSUMPTION. Between 1970 and 2000, annual per capita cigarette consumption in most countries peaked and started to decline. Table 3 presents the year of the highest recorded consumption in 84 countries. Approximately 20 percent of these countries peaked in each five-year period from 1970 through 1985. However, 15 percent of countries with such data available had not peaked before 1995. The United States and the United Kingdom, the countries first credited with identifying the health consequences of cigarette smoking, were among the first to show a decline in consumption.

The magnitude of peak consumption will be affected by whether there are any significant population subgroups that are not consumers (for example, women and some religious groups). However, it can also reflect a different pattern of consumption in a population (for example, nondaily smoking). Thus, differences between countries or a change within a country in per capita cigarette consumption may not correlate strongly with the incidence of disease. While there is very little data on the variation in blood nicotine concentrations in smokers of different countries, there is considerable evidence that different people extract different amounts of nicotine, carbon monoxide, and tar from the same number of cigarettes smoked because of differences in the way they smoke (for example, how many puffs they take or how deeply they inhale). With these caveats, the peak levels of consumption for different countries are presented in Table 4.

There are huge differences in the peak level of annual per capita cigarette consumption reached in differing countries. A total of 18 countries peaked at more than 3,000 cigarettes per capita—an average of approximately 8 to 9 cigarettes per day for every adult resident in the country, defined by the WHO as those aged 15 years and older. These countries include the predominantly English-speaking developed countries (United States, United Kingdom, Canada, and Australia), only a few Western European countries (Greece, Netherlands, Switzerland), and two Asian countries (Japan and South Korea). Most European countries (26) had a peak per capita consumption between 2,000 and 3,000. Of the 27 countries peaking at less than 1,500 cigarettes per capita, most are from the developing world with the exception of Norway, alone among Western European countries in having a very low peak per capita cigarette consumption.

PER CAPITA CONSUMPTION IN THE YEAR 2000. At the turn of the twenty-first century, only 17 countries had an annual per capita cigarette consumption over 2,000 cigarettes (see Table 5). Seven of these were from Eastern Europe (including Bulgaria, the Russian Federation, Poland, and Hungary) with 6 more from Western Europe (Greece, Netherlands, Spain, Switzerland, Ireland, and Italy). Two Asian countries (Japan and South Korea) and the United States (without California) were at the low end of these high-consuming countries. Sixteen countries and California had per capita consumptions between 1,000 and

Table 6: Change in Per Capita Consumption, 1990–2000

Percentage Change	Country
100% or greater increase	Cyprus, Guinea-Bissau, Mauritania, Myanmar, Russian Fed, Solomon Is, United Arab Emirates
11–99.9% increase	Bangladesh, Bulgaria, Chile, Indonesia, Kazakstan, Leone, Moldova, Netherlands, Pakistan, Sierra Liberia, Spain, Syria, Tunisia, Uruguay, Vietnam, Zimbabwe
0–10.9% increase	Egypt, Honduras, India, Italy, Mauritius, Mozambique, Uganda, Uzbekistan
0.1–10% decrease	Argentina, Belarus, China, Columbia, Denmark, Ireland, Ivory Coast, Japan, Portugal, Switzerland
10.1–20% decline	Canada, Germany, Hungary, Korea-Rep, Nepal, Norway, Philippines, Peru
20.1–30% decline	Belgium, Dominican Republic, France, Greece, Iceland, Malaysia, Morocco, Poland, Sri Lanka, Slovenia, Thailand, Ukraine, United States (overall)
30.1–40% decline	Algeria, Austria, Belize, Ethiopia, Fiji, Jamaica, Mexico, Slovakia, Sweden, Trinidad and Tobago, United Kingdom
40.1–50% decline	Australia, Brazil, California (in the U.S.), Congo (Dem), Finland, New Zealand, South Africa
50% or greater decline	Albania, Armenia, Azerbaijan, Georgia, Haiti, Macedonia, Tajikistan

1,500 cigarettes, including most of those that had declined the most since their peak (United Kingdom, Finland, Sweden, and California). There were 33 countries with per capita consumption below 1,000. These include Norway, the only developed country to have always had low consumption, and 2 countries with major reductions in consumption, New Zealand and South Africa.

CHANGES IN PER CAPITA CIGARETTE CONSUMPTION, 1990–2000.

Between 1990 and 2000, a total of 31 countries showed an increase in per capita consumption, while 56 countries had a decrease (see Table 6). However, the tobacco business appears to have been very stable. Annual global cigarette consumption increased by less than 1 percent between 1990 and 2000 to a total of 5,572 billion cigarettes (when considering those countries in the WHO Countries Study with data for approximately both time points). However, over this period, the population over the age of 15 years in these countries increased by 17 percent. Thus, the worldwide per capita cigarette consumption decreased from 1,492 sticks per year in 1990 to 1,283 per year in 2000, a 14 percent decline. Thus, while this appears to be a substantial success for tobacco control, the total number of smokers may not have changed.

Table 7: Estimated Minutes of Labor Required to Cover Cost of Pack of Cigarettes in 2000

Minutes of Labor	Country
Less than 20 minutes	Canada-Quebec, Netherlands, United States (19), Bahrain, Germany (18), Greece, South Korea (17), Switzerland (12), Taiwan (11), Japan (9)
20–29 minutes	Finland, Venezuela (29), Australia (28), Hong Kong, Korea (27), Portugal, Italy (26), Colombia (25), Greece (24), Denmark (23), Malaysia, Spain (21), Austria, Belgium, Turkey (22), Argentina, Canada-Toronto (21), France, South Africa, United Arab Emirates (20)
30–49 minutes	Russian Federation, Singapore (43), Mexico, United Kingdom (40), Chile, Norway (38), New Zealand (35), Ireland (31)
More than 50 minutes	Kenya (92), India (77), China (10), Indonesia (62), Poland (56), Hungary (54)

There were seven countries in which per capita cigarette consumption doubled between 1990 and 2000: Mauritania, Cyprus, Solomon Is, Guinea-Bissau, Russian Fed, United Arab Emirates (UAE), and Myanmar. The per capita consumption rates in Cyprus and the UAE are extremely high (more than 7000 per capita), strongly suggesting that these countries are a source of lower cost smuggled cigarettes for other countries. Three Western European countries, Italy, the Netherlands, and Spain, showed an increase, but only the latter two increased by more than 10 percent. Among the countries that decreased consumption over the decade, 14 experienced a major reduction (less than 40%). These include Finland, Australia, New Zealand, and South Africa, as well as California, all with active tobacco control programs. There were also large drops in per capita cigarette consumption in the United Kingdom and Sweden (less than 30%), with at least part of the Swedish decline attributed to the substitution of snuff for cigarettes among men.

Many of these large reductions in tobacco consumption can be linked to the presence of strong, ongoing tobacco control programs. One of the most successful programs has been conducted in California using numerous strategies to reduce demand for cigarettes, including increasing the price of cigarettes, mass media programs aimed at changing norms on smoking, and restrictions on where people can smoke. The price of cigarettes is comparatively easy to obtain and is one indicator of tobacco control activity. One group of investigators has compared prices between countries by estimating the minutes of labor required to purchase a pack of cigarettes (see Table 7). Cigarettes by this measure were cheapest in a number of the countries with the highest levels of per capita consumption, including Japan, South Korea, Switzerland, the Netherlands, and Greece, underscoring the fact that price is an important tobacco control tool.

See Also Age; Class; Sailors; Soldiers; Women; Youth Marketing; Youth Tobacco Use.

BIBLIOGRAPHY

- Borio, Gene. "Tobacco Timeline" Available: <<http://www.tobacco.org/resources/history>>.
- Brooks, Jerome Edmund. "The Mighty Leaf: Tobacco through the Centuries." Boston: Little, Brown, 1952.
- Gilpin, Elizabeth A., and John P. Pierce. "Demographic Differences in Patterns in the Incidence of Smoking Cessation: United States 1950–1990." *Annals of Epidemiology* 12 (2002): 141–150. Online. 2003. Centers for Disease Control. Available: <<http://www.cdc.gov>>.
- Haenszel, William, Michael B. Shimkin, and Herman P. Miller. *Tobacco Smoking Patterns in the United States*. Public Health Monograph No. 45, PHS Service Pub. No. 463. Rockville, Md.: U.S. Department of Health, Education, and Welfare, 1956.
- Haustein, Knut-Olaf-. *Tobacco or Health? Physiological and Social Damages Caused by Tobacco*. Germany: Springer-Verlag, 2001.
- Kiernan, Victor G. *Tobacco: A History*. London: Hutchison Radius, 1991.
- Kluger, Richard. *Ashes to Ashes: America's Hundred Year Cigarette War, the Public Health and the Unabashed Triumph of Philip Morris*. New York: Vintage, 1997.
- Leone, Mark P, and Parler B. Potter, eds. *An Historical Archaeology of Capitalism*. New York: Kluwer Academic/Plenum, 1998.
- National Institutes of Health. "Changes in Cigarette-Related Disease Risks and Their Implication for Prevention and Control." *Smoking and Tobacco Control Monograph* 8 (1997): 43–54.
- Pierce, John P., Choi, Won S., Gilpin, Elizabeth A., Farkas, Arthur J., Berry Charles C. "Tobacco Industry Promotion of Cigarettes and Adolescent Smoking." *The Journal of the American Medical Association* 279 (1998): 511–515.
- Pierce, John P, and Elizabeth A. Gilpin. "News Media Coverage of Smoking and Health Is Associated with Changes in Population Rates of Smoking Cessation but Not Initiation." *Tobacco Control* 10 (2001): 145–153.
- . "Impact of Over-the-Counter Sales on Effectiveness of Pharmaceutical Aids for Smoking Cessation." *The Journal of the American Medical Association* 288 (2002): 1,260–1,264.
- Report of the Advisory Group of the Royal College of Physicians. *Nicotine Addiction in Britain*. London: Royal College of Physicians, 2000.
- Schivelbusch, Wolfgang. *Tastes of Paradise. A Social History of Spices, Stimulants, and Intoxicants*. English translation. Pantheon Books: New York, 1992.
- Shafey, Omar, Suzanne Dolwick, and G. Emmanuel Guindon. *Tobacco Control Country Profiles*, 2nd ed. Atlanta: American Cancer Society, 2003.
- Sobel, Robert. *They Satisfy: The Cigarette in American Life*. Garden City, N.J.: Anchor Press, 1978.
- Social Sciences Humanities Library: Data, Government, and Geographic Information Services. Social Sciences Data Collection, University of California, San Diego. *Tobacco Use Behavior Research in California*. Online. 2003. Available: <<http://ssdc.ucsd.edu/tobacco>>.
- Tennant, Richard B. *The American Cigarette Industry: A Study in Economic Analysis and Public Policy*. New Haven, Conn.: Yale University Press, 1950. Reprint: Hamden, Conn.: Archon Books, 1971.
- Tilley, Nannie M. *The Bright Tobacco Industry, 1860–1929*. Chapel Hill: University of North Carolina Press, 1948.
- . *The R.J. Reynolds Tobacco Company*. Chapel Hill: University of North Carolina Press, 1985.
- U.S. Department of Health and Human Services. *Smoking and Health: Report of the Advisory Committee to the Surgeon General of the Public Health Service*. PHS

- Publication No. 1103. Washington, D.C.: U.S. Public Health Service. Office of the Surgeon General, 1964.
- . *Reducing the Health Consequences of Smoking: 25 Years of Progress. A Report of the Surgeon General*. Rockville, Md.: U.S. Department of Health and Human Services. DHHS Publication No. (CDC) 89-8411, 1989.
- U.S. National Cancer Institute. *Changes in Cigarette-Related Disease Risks and Their Implications for Prevention and Control*. Rockville, Md.: National Cancer Institute, Cancer Control and Population Science, 1997.
- . *Risks Associated with Smoking Cigarettes with Low Machine-Measured Yields of Tar and Nicotine*. NIH Pub. No. 02-5074. Bethesda, Md.: U.S. Department of Health and Human Services, National Institutes of Health, National Cancer Institute, 2001.
- Von Gernet, Alexander. "Origins of Nicotine Use and the Global Diffusion of Tobacco." In *Nicotine and the Public Health*. Edited by Roberta Ferrence, John Slade, Robin Room, and Marilyn Pope. Washington, D.C.: American Public Health Association, 2000.
- Warner, Kenneth. E. "The Effect of the Anti-smoking Campaign on Cigarette Consumption." *American Journal of Public Health* 67 (1977): 645–650.
- Weatherill, Lorna. *Consumer Behaviour and Material Culture in Britain 1660–1760*. London and New York: Routledge, 1996.
- World Health Organization. *Tobacco Smoking*. Lyon, France: International Agency for Research on Cancer, 1986.
- . *Evaluation of the Carcinogenic Risk of Chemicals to Humans: Tobacco Smoking*, Volume 38. Lyon, France: International Agency for Research on Cancer, 1986.



Cuba

Beginning about 1580, the port of Havana was a major center of the Spanish tobacco trade. Tobacco arrived into Havana from its outskirts and shipments also came from Jamaica, Nicaragua, the Yucatán, and elsewhere by sea. Within a short time, Cuban tobacco distinguished itself above all others and became the island's major export. Thus the early years of the colony saw the rise of an elite group of growers and merchants whose power was founded, to a large extent, on their participation in the tobacco industry. Until the end of the seventeenth century, this elite had few restrictions in its conduct of trade. The growers, who raised tobacco on small farms, depended on the merchants for the exportation of their harvests, and on the large landowners or the church for land to rent.

In the seventeenth century Cuban tobacco had already gained worldwide renown, based on its reputation for high quality and exquisite taste. As a consequence, it commanded international market prices two or three times greater than those of its competitors. The combined incentives of high prices, growing European demand, and a consolidated structure of production on the island made the metropolis determined to take advantage of this promising trade for its own commercial and legal benefit. From then on, at least until the early nineteenth century, the Spanish Crown's attempts at control left a marked imprint on the history of tobacco in Cuba.

Spanish Policies Toward Cuban Production

By the end of the seventeenth century, tobacco production within Cuba had spread significantly. The main market was Spain. The preferred method of consumption in Europe at this time was “polvo” (powder) or **snuff**, and its manufacture was the most important activity of the Tobacco Factory of Seville, a public enterprise owned by the monarchy. The factory’s products required a large supply of tobacco leaves, especially the Cuban ones most favored by consumers. In 1698, to guarantee that the supply serving the Seville factory did not falter, direct royal tobacco purchases in Cuba began. From the beginning, silver from New Spain (Mexico) financed these purchases.

In 1717, royal regulations were strengthened to make the treasury the sole buyer of Cuban production. In other words, a buyer’s monopoly was formed. In contrast to the liberties tobacco planters had enjoyed up until then, from this moment on they could sell their product only to the king, at prices fixed by the government. Even more affected, however, were the local merchants, who found themselves excluded from this profitable trade. Protests were not long in coming. The farmers staged an uprising, destroying and burning their own crops. The richest citizens of Havana, with capital in the tobacco business, instigated these revolts. Church officials, as beneficiaries of **tithes** and other taxes on land dedicated to tobacco, also agitated against the monopoly, even in their sermons.

Still, the royal representatives managed to buy some quantities of tobacco and send them to Spain. For several years, tobacco growing was caught between the competing interests of the Crown and local groups, and the island witnessed three rebellions against the monopoly. After the last of these, in 1723, the king abolished the monopoly, although he did not end the tobacco purchases made by the royal treasury (which had not, in any case, provoked opposition).

Nonetheless, the Spanish government continued to worry about supplies for the factory in Seville, as well as to fear the harm **contraband trade** could do to the official commerce. For the next several decades, various alternatives were developed to satisfy royal interests in this field, but none offered the expected results.

The Tobacco Monopoly

The definitive solution came in 1760 with the establishment of a new monopoly and of the *Real Factoría de Tabacos* (Royal Tobacco Agency) of Havana. The fundamental objective of the monopoly was still to supply raw material to the royal factory in Seville. The *Factoría* in Havana had the responsibility of guaranteeing this supply by controlling and regulating the products of Cuban planters.

The earlier experience had shown that if the growers were not satisfied, there could ensue uprisings that would obstruct the efficient establishment of the monopoly. For this reason, royal instructions were careful to send the message that the new regulations’ goal was to aid planters and stimulate production. The officials in charge of the *Factoría* were urged to be prudent and gentle with the population and especially with the growers. In the event of conflicts, they were to attempt persuasion, so that the islanders would be convinced that this institution was to their benefit.



snuff a form of powdered tobacco, usually flavored, either sniffed into the nose or “dipped,” packed between cheek and gum. Snuff was popular in the eighteenth century but had faded to obscurity by the twentieth century.



tithe a one-tenth portion of produce or income given to the church. Historically, tithes were sometimes levied without the consent of the population.



contraband trade traffic in a banned or outlawed commodity. Smuggling.



Men in tobacco field in Pinar del Rio, Cuba. Tobacco from Cuba is renowned for its flavor and quality. © ROBERT VAN DER HILST/CORBIS

The growers were instructed to hold regional meetings to determine the best method of planting and caring for tobacco, and to agree on the price they hoped to receive. These meetings discussed everything relevant to the reciprocal interests and obligations of the royal treasury and planters surrounding the purchase of tobacco. The instructions did not skimp on details about how production should be managed: They specified the time and manner in which the seedbeds should be prepared; the method of transplanting the seedlings; directions for the harvest and curing of the leaves, and their preparation into sheaves or bundles, and even procedures for the tobacco's delivery to the royal warehouse. To avoid the discontent of the farmers, the treasury offered prices higher than those paid by private merchants. It was also thought that *Factoría's* stringent demands as to methods of planting, care, and delivery of the tobacco justified a higher price as well.

On the other hand, the regulations establishing the *Factoría* also included mechanisms of supervision and legal control related to all aspects of the monopoly. Though cultivation of the plants and harvesting and drying of the leaves were in the hands of the growers, the *Factoría* bought the entire crop, of which it sent a part directly to Seville in leaf, and milled the other part on the island, which was later shipped as partially processed snuff. The latter required investments in technology and slaves. Though most of the ground tobacco was sent to the factory in Seville for still further refinement, small portions were also sold to other colonies within the Spanish Empire.

In Cuba, cultivation of a tobacco plant began with the preparation of a seedbed in uncut forest land. When the germinated seeds reached a length of one-quarter *vara* (about 20 centimeters) they were transplanted to tobacco fields near rivers, preferably subject to flooding. The growers were instructed to then care for the plants until they had matured, at which point they should carry out the harvest leaf by leaf, selecting those that were useful and of good quality. The harvested leaves were to be hung two by two from stout poles, tying them by their heads with the veins toward the top, with one finger's worth of space between every two leaves, and not more than 150 hung from any one pole, so that the tobacco should not be crushed and lose its quality. The poles, known as *cuges*, were to be mounted within barns (*estancias*), protected from both sun and air. After forty days, the time it would take the leaves to dry, they were to be wrapped in hides, pressed, and delivered to the *Factoría*.

Cuban growers had previously been accustomed to transporting tobacco during the night for protection from the sun. Under the administration of the *Factoría*, however, they were required to do so by day. In case for some reason this could not be done, the tobacco would not be accepted until 10:00 A.M. These restrictions were owing to the fact that the nighttime dew dampened the loads being transported, increasing their weight and therefore their price.

The *Factoría de Tabacos de La Habana* formally opened on 1 March 1761. A little more than a year later—in August 1762—its operation was interrupted by the English invasion. When Spain recovered the colony, the *Factoría* resumed its duties and continued to function until 1817. Between 1766 and 1773, the Cuban tobacco monopoly experienced its best years, a period of growth and **consolidation**, as evidenced by the high volumes of leaves received at the *Factoría* and sent to Spain.

Land Conflicts

As might be expected, however, not all was harmonious. In general terms, the agrarian structure of the island from the sixteenth century on was characterized on by the creation of large cattle ranches on the one hand and small agricultural plots on the other. With the intensification of the tobacco business in the seventeenth century, the practice of making room for small agricultural units within the cattle haciendas became preponderant. The ideal sites traditionally devoted to tobacco growing were the *vegas*, small riverside parcels of land. As tobacco production grew, the *vegas* became population centers, acquiring great demographic importance. The basic geographical element of natural *vegas* determined that their spread would follow the routes of the rivers. But because they were almost always located within large haciendas, these centers confronted obstacles that limited their growth.

As long as the tobacco *vegas* did not constitute the basis of a growing export trade, the hacienda owners permitted them. But in the mid-seventeenth century, the surge in tobacco exports made the *vegas* an expansive force that threatened the interests of the ranchers. This led to a plethora of disputes between hacienda owners and tobacco planters that lasted into the nineteenth century.



consolidation combining smaller units into a larger one. In agriculture, consolidating small farms into one large farm usually makes operations more efficient and profitable.



The conflict between these two groups also affected the woodlands within the jurisdiction of the haciendas. These woodlands, it will be recalled, were the sites of the seedbeds for the tobacco later transplanted to the *vegas*. The representatives of the tobacco growers argued that the use of woodlands for this purpose lasted no more than seven months, and that a given parcel was not used again for fifteen or twenty years, the recommended fallow period. Thus, they considered the hacienda owners' intransigence unjustified. But the latter persisted in prohibiting access to the woodlands. With the creation of the *Factoría*, royal officials tried to guarantee the growers' access to both *vegas* and woodlands, sometime through stringent legislation.

Tobacco Finance

From the time Spain's royal treasury first began buying tobacco in Cuba, such payments were financed with silver from New Spain. The establishment of the *Factoría*, through which the state bought the entire Cuban harvest, reaffirmed this practice. The purchases were paid for with fixed contributions sent from New Spain, called *situados de tabaco*, which totaled 400,000 pesos annually until 1767 and 500,000 thereafter.

For the Seville factory to be well supplied with raw material, the purchases in Cuba had to be assured. For this in turn to be accomplished, silver from New Spain was key. Thus, the whole mechanism depended to a great degree on the *situados*. Yet that revenue source was the greatest weakness of the monopoly because it meant the monopoly relied almost exclusively on the *situados* without being able to count on any other mechanisms of revenue or capitalization.

When war broke out, which was frequently in the last third of the eighteenth century, the shipments were interrupted. They were also interrupted whenever New Spain faced any financial problems. Thus, from 1779 on, the *situados* began to fail more and more often, so that the structure of the *Factoría* began to collapse. When Mexico launched its war of independence, the *situados* disappeared forever. The *Factoría* likewise ceased to function, and it was officially abolished in 1817.

By then, the sugar industry had already replaced tobacco as Cuba's principal economic activity. Tobacco production went through some crisis years in which its yield was insignificant. In the 1840s, however, it once again became apparent that Cuban tobacco had maintained its incomparable international prestige, which it still enjoys in the twenty-first century.

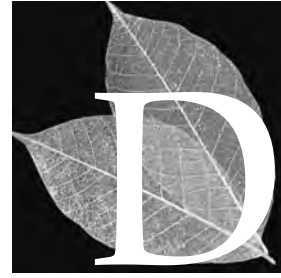
See Also British Empire; Caribbean; Dutch Empire; French Empire; Spanish Empire.

■ LAURA NÁTER

BIBLIOGRAPHY

- Guerra y Sánchez, Ramiro. *Manual de Historia de Cuba (económica, social y política)*. Havana: Cultural, 1938.
- Le Riverend, Julio. *Historia económica de Cuba*. Havana: Editorial de Ciencias Sociales, 1985.

- Náter, Laura. *Integración imperial: El sistema de monopolios de tabaco en el Imperio español. Cuba y América en el siglo XVIII*. Ph.D. diss., El Colegio de México, 2000.
- Ortiz, Fernando. *Contrapunteo cubano del tabaco y el azúcar*. Caracas: Biblioteca Ayacucho, 1987.
- Rivero Muñiz, José. *Las tres sediciones de los vegueros en el siglo XVIII*. Havana: Academia de la Historia de Cuba, 1951.
- . *Tabaco, su historia en Cuba*. Havana: Instituto de Historia, 1964.



Developing Countries

The global distribution of tobacco consumption is increasingly inequitable, meaning that the diverse social, economic, and health impacts are increasingly borne by developing countries. A marked shift in smoking patterns is occurring. As the percentage of people who smoke has been decreasing in most high-income countries over recent decades, it has been increasing substantially among low- and middle-income countries (LMICs). These countries already account for 82 percent of the world's smokers (Gajalakshmi et al. 2000). This change in smoking patterns is being followed by a change in patterns of tobacco-related disease and death. Around 4.9 million deaths were attributable to tobacco use worldwide in 2000, an increase of 45 percent since 1990, with the most rapid increase seen in developing countries which now account for 50 percent of these deaths (World Health Organization 2002). It is predicted that by 2030 the global total of annual tobacco related deaths will reach 10 million, or around one in six adult deaths; 70 percent of these deaths will occur in developing countries (Gajalakshmi et al. 2000).

Broader social and economic changes associated with globalization have facilitated this shift in smoking patterns, as have international agreements designed to free or liberalize trade. The opening of cigarette markets in LMICs to Western-based transnational tobacco companies is emerging as critical to the development of the global industry and has provided a foundation for the spread of the tobacco epidemic. The transnational tobacco companies, led by Philip Morris and British American Tobacco, targeted markets in Latin America in the 1970s and Asia in the 1980s. More recently countries in the former Communist bloc have been targeted including those in Central Asia, plus Africa, and the world's largest market, China. The impact of expansion into these markets is illustrated by research into the opening of the markets of Japan, South Korea, Taiwan, and Thailand following the threat of trade sanctions by the United States. It is estimated that the opening of these markets increased per capita cigarette consumption by an average of 10 percent by 1991 (Chaloupka and Laixuthai 1996).



Motorcycles are a common distribution method in low-income countries. This Marlboro cycle is delivering Philip Morris tobacco products to small shops like the one visible in the background. PHOTO BY ANNA WHITE

Whether viewed from a health or a development perspective, it is important to note that while trade liberalization has led to increased consumption of tobacco overall, the distribution of this rise has been uneven. There has been no substantive effect on consumption in high-income countries, but trade liberalization has had a large and significant impact on smoking in low-income countries and a significant, if smaller, impact on middle-income countries (Taylor et al. 2000). Such differential impacts seem likely to have further implications for health equity, with developing countries again assuming a disproportionate burden.

Consumption Patterns

Despite these core trends in the global tobacco epidemic, consumption patterns among developing countries remain diverse, differentiated for example by region, gender, and product. Consumption is estimated to be highest

in the Western Pacific, driven by the high rates in the Chinese market, and lowest in Africa, particularly sub-Saharan Africa (Gajalakshmi et al. 2000). The few reliable data do, however, indicate that smoking in Africa is rising significantly, particularly among the young (Shafey et al. 2003).

In contrast with the broad convergence of male and female smoking prevalence across much of Europe and North America, huge disparities in tobacco use by gender remain in many developing countries. Whereas the World Bank estimated smoking prevalence among men and women in high-income countries at 38 percent and 21 percent respectively, in LMICs these figures were 49 percent among men and 9 percent among women (Gajalakshmi et al. 2000). A particularly stark example is provided by China, where adult male smoking prevalence of 53 percent contrasts with only 4 percent among women.

The magnitude of difference in male and female consumption among developing countries does, however, need to be qualified. In many countries cultural barriers have traditionally served to prohibit smoking by women. Current figures are likely to underestimate actual tobacco use among women, due to under-reporting. More significantly, the primary emphasis on cigarette smoking ignores traditional widely practiced noncommercial forms of tobacco use. In India, for example, female cigarette use in urban centers is confined to between 2 percent and 5 percent, whereas up to 67 percent of rural women use chewing tobacco (Samet and Yoon, eds. 2001). It is also anticipated, especially in Asia, that increasingly targeted marketing by transnational tobacco companies, in combination with broader socioeconomic changes, are likely to lead to significant increases in smoking prevalence. Such increases among women have been reported in Cambodia, Malaysia, and Bangladesh (Shafey et al. 2003).

Varieties of Tobacco Consumed

In contrast to the almost exclusive use of manufactured white-stick cigarettes in the West, tobacco consumption in a variety of forms continues in developing countries. **Bidis**, which are typically hand-wrapped in **temburni leaf** and tied with string, deliver high levels of **tar** and carbon monoxide. This form of tobacco is commonly used in much of South East Asia, and in India seven are sold for every one cigarette. In Indonesia, consumption is predominantly of **kreteks**, a form of cigarette that blends tobacco with cloves. The latter ingredient gives off **eugenol**, which has an anesthetizing effect leading to deeper inhalation and high tar yields. The use of smokeless tobacco, predominantly chewing tobacco, is also widespread across much of South, Southeast, and Central Asia, North Africa, and the Eastern Mediterranean where tobacco is chewed in combination with a wide range of sweet flavorings. Additional regionally significant forms of tobacco use include the water pipe (*shisha*, *hookah*, or *hubbly bubbly*), which is common in many countries of North Africa, the Mediterranean, and parts of Asia; and the clay pipe (*chillum* or *hookli*) in South East Asia (Mackay and Eriksen 2002).

Health Impacts of Tobacco Use

Because of the cost and complexity of organizing **epidemiological** research, most of the evidence on the health impacts of tobacco use comes from high-income countries. Recent studies from China and India, however, suggest that although the overall risks of smoking are



bidis thin, hand-rolled cigarettes produced in India. Bidis are often flavored with strawberry or other fruits and are popular with teenagers.

temburni leaf a leaf used to wrap bidis cigarettes.

tar a residue of tobacco smoke, composed of many chemical substances that are collectively known by this term.

kretek a clove cigarette, originally of Indonesian origin.

eugenol an aromatic chemical derived from cloves. It is the active ingredient found in clove cigarettes.



epidemiological pertaining to epidemiology, that is, to seeking the causes of disease.



A street vendor selling cigarettes in Manila, Philippines, 2001. The percentage of people who smoke has been increasing substantially among individuals in low- and middle-income countries. © AFP/CORBIS



etiologi concerned with the origins of disease.

about as great as in high-income countries and the diseases caused by smoking are similar, the specific pattern of smoking-related diseases may differ (Chen et al. 1997; Gupta and Mehta 2000; Gajalakshmi et al. 2000). This occurs for a number of reasons including the type of tobacco used (with oral cancers more common in populations using smokeless tobacco), its tar and nicotine yields, the age of first smoking, the presence and prevalence of other **etiologi** and infective agents with which smoking may interact (Stewart 2003), the stage of the tobacco epidemic, and variations in underlying causes of illness.

The effects of smoking can kill by making diseases that are already common more so. In most developing countries, the epidemic is in a relatively early stage and the full impacts of tobacco on population health have yet to be realized. A key issue for countries yet to complete the epidemiological transition from external to internal causes of death is the additional burden of disease that tobacco will cause at a time when infectious and other causes of death have yet to decline.

Tobacco Cultivation

Cultivation of tobacco leaf is increasingly dominated by LMICs, with China, India, Brazil, Turkey, Zimbabwe, Indonesia, and Malawi all among the world's top ten producing nations in 2001. Tobacco is grown in over 125 countries, though substantial economic dependence on the crop is far less common; it accounts for over 1 percent of total export earnings in only 18 countries and for over 5 percent in just 4, namely

Kyrgyzstan, Macedonia, Zimbabwe, and Malawi (at 8%, 16%, 32%, and 58% respectively) (Campaign for Tobacco Free Kids 2001).

The prominence of LMICs among tobacco producers has, however, been used by the tobacco industry to present tobacco control initiatives as antithetical to development. An examination conducted for the World Health Organization of industry documents made available via litigation revealed the scale of efforts to portray such activities as a “First World” agenda carried out at the expense of developing countries. Documents have identified the explicit use of the International Tobacco Growers Association as a front group for industry lobbying. This organization has made concerted efforts to stop developing countries from becoming committed to tobacco control, to divide the World Health Organization from other United Nations agencies and restrict its funding, and to create an international consortium to mobilize officials from developing countries to advance pro-tobacco positions (Zeltner et al. 2000).

Impact of Tobacco Controls

Increasing evidence illustrates the potential contribution of tobacco control to development. Research in Bangladesh has demonstrated how expenditure of household income on tobacco can worsen poverty and diminish living standards among the poor. In Bangladesh, the poorest households are twice as likely to smoke as the wealthiest, and close to 10.5 million people currently suffering from malnutrition could have an adequate diet if such expenditure were spent on food instead (Efroymsen et al. 2001).

As a result of research led by the World Bank, it is increasingly clear that, for the vast majority of developing countries, increased taxation of tobacco products would not cause long-term job losses. Tobacco control actually presents policy makers with a virtuous circle, combining substantial benefits for public health through reduced consumption with an expansion in revenues via increased taxation. It is also worth noting that improved tobacco control is not going to result in a sudden collapse in demand for these products. Indeed the number of people using tobacco products is expected to increase by more than 500 million during the first quarter of this century (World Bank 1999).

Tobacco Control Policies

The later onset of the tobacco epidemic among developing countries, the complex and competing health priorities, and the continuing influence of the tobacco industry are reflected in generally weaker health regulation. This general pattern is, however, punctuated by a number of states with comprehensive legislation including Thailand, Singapore, and South Africa.

The recent completion of negotiations for the World Health Organization’s first public health treaty, the Framework Convention for Tobacco Control (FCTC), raises the opportunity for a broader expansion of regulation across developing countries. A distinguishing feature of the negotiations was the prominent role played by the African and South East Asian regions, their impact heightened by adopting regionally coordinated positions. These combined a powerful commitment to tobacco control, including calls for the FCTC to take priority over trade



A Dani child smokes a cigarette as a fire burns between the village's thatch-roofed huts, in the Baliem Valley, Indonesia, 1994.

© CHRIS RAINIER/CORBIS



diversification in agriculture, avoidance of overdependence upon one crop by producing several different crops.

agreements, with demands for financial resources to assist **diversification** for countries dependent on tobacco production (Shafey et al. 2003). Nevertheless, there remains an urgent need for implementation and enforcement of effective tobacco control policies in most developing countries.

■ JEFF COLLIN
 ■ ANNA B. GILMORE

BIBLIOGRAPHY

Chaloupka, Frank, and Adit Laixuthai. *United States Trade Policy and Cigarette Smoking in Asia*. Working Paper No.5543. Cambridge, Mass: National Bureau of Economic Research, April 1996.

Chen, Z. Z., Z. Xu, R. Collins, W. Li, and R. Peto. "Early Health Effects of the Emerging Tobacco Epidemic in China. A Sixteen-Year Prospective Study." *Journal of the American Medical Association*, 278 (12 November 1997): 1500–1504.

Efroymsen, D., et al. "Hungry for Tobacco: An Analysis of the Economic Impact of Tobacco Consumption on the Poor in Bangladesh." *Tobacco Control* 10 (September 2001): 212–217.

Framework Convention for Tobacco Control. *Golden Leaf, Barren Harvest: The Costs of Tobacco Farming*. Washington, D.C.: Campaign for Tobacco-Free Kids, 2001.

Gajalakshmi, C., et al. "Global Patterns of Smoking and Smoking-attributable Mortality." In *Tobacco Control in Developing Countries*, edited by Jha Prabhath and Frank J. Chaloupka. Oxford: Oxford University Press, 2000.

Gupta, P., and H. Mehta. "Cohort Study of All-Cause Mortality among Tobacco Users in Mumbai, India." *Bulletin of the World Health Organization*, 78 (2000): 877–83.

- Mackay, Judith, and Michael Eriksen. *The Tobacco Atlas*. Geneva: World Health Organization, 2002.
- Prabhat, Jha, and Frank Chaloupka. *Curbing the Epidemic: Governments and the Economics of Tobacco Control*. Washington, D.C.: World Bank, 1999.
- Samet, J., and S. Yoon, eds. *Women and the Tobacco Epidemic: Challenges for the Twenty-First Century*. Geneva: World Health Organization, 2001.
- Shafey, O., S. Dolwick, and G. Gunidon. *Tobacco Control Country Profiles*. Atlanta, Ga.: American Cancer Society, 2003.
- Stewart, B., and P. Kleihues, eds. *The World Cancer Report. World Health Organization and the International Agency for Research on Cancer*. Lyon, France: IARC Press, 2003.
- Taylor, A., Frank Chaloupka, E. Gundon, and M. Corbett. "The Impact of Trade Liberalization on Tobacco Consumption." In *Tobacco Control in Developing Countries*, edited by Jha Prabhat and Frank Chaloupka. Oxford: Oxford University Press, 2000.
- World Health Organization. *The World Health Report 2002: Reducing Risks, Extending Healthy Life*. Geneva: World Health Organization, 2002.
- Zeltner, T., D. Kessler, A. Martiny, and F. Randera. *Tobacco Company Strategies to Undermine Tobacco Control Activities at the World Health Organization*. Geneva: World Health Organization, 2000.



Disease and Mortality

Tobacco was used in the pre-Columbus Americas for medicinal and religious purposes. Following the first voyage of Columbus, within several centuries of the arrival of tobacco in Europe, as use of tobacco products became prevalent, tobacco was suspected as a cause of disease and mortality. In the 1900s, cigarette smoking became a common and widespread practice among men, probably because of the efficacy of cigarette smoking in delivering nicotine, now known to be addicting, and the powerful marketing of very large corporations. The first indications of the coming epidemic were apparent in the early 1900s as lung cancer death rates began to increase and doctors began to see increasing numbers of cases of this fatal disease.

Lung cancer, now the most common cause of cancer death in the United States, was a relatively rare disease prior to the widespread use of tobacco in developed countries in the first half of the twentieth century. One hypothesis attributed the epidemic increase in lung cancer to worsening environmental pollution from the fumes of motorcars, from industrial plants, from the surface of tarred roads, and from gas works (Doll and Hill 1950). Richard Doll, one of the foremost researchers to link smoking with cancer, later commented, "I was fascinated by the enormous increase in mortality from lung cancer. At first I thought it was more likely to have something to do with motorcars. But I used to go around the wards checking the notes after discharge to see whether the diagnosis [of lung cancer] was confirmed or not and what immediately struck me was that if a person was a nonsmoker the diagnosis was practically never confirmed, but if he or she was a smoker then it was



An anti-tobacco advertisement showing Joe Camel as “Joe Chemo” in a hospital bed.
AP/WIDE WORLD



epidemiology a branch of medicine that investigates the causes and contributing factors of disease.

almost always lung cancer” (Bower 1997). Lung cancer was not the only disease to increase during this period; rises were noted for other cancers, and for chronic heart and lung diseases.

These increases were investigated using **epidemiology**. Epidemiologic studies are designed to uncover the factors that lead one person to develop a disease while some others do not. Epidemiology, defined as the study of the occurrence and causes of disease and death in populations, has been central in tracking the epidemics of diseases related to both active and passive smoking and making the causal linkages to smoking. Typically, an epidemiologic study evaluates the risk for a disease in the exposed persons (smokers) and nonexposed persons (nonsmokers). The “relative risk” refers to the ratio of these two risks. The relative risk can be estimated through two different types of epidemiologic study. A cohort study involves following smokers and nonsmokers over time and comparing disease rates in the two groups. A case-control study involves comparing the smoking habits of people with the disease being studied, for example lung cancer, with smoking habits of similar people without the disease. Epidemiologists gauge the strength of a factor in causing a disease by the size of the relative risk; for lung cancer, they would also examine whether the relative risk is higher for those who have smoked more or longer.

By the early 1950s, landmark epidemiologic investigations provided irrefutable scientific evidence on smoking as a cause of lung cancer, and evidence for causation of other diseases also began to accumulate. To date, numerous scientific publications and summary reports have implicated cigarette smoking as a cause or contributing factor to an ever-lengthening list of diseases: stroke, heart attack, emphysema, chronic bronchitis, pregnancy complications, many types of cancers, and even cataract. Smoking harms nearly every organ of the body, causing not only many specific diseases, but also poorer health in general and a shortened lifespan for smokers as compared to nonsmokers. The scientific research on the many adverse effects of smoking is the largest and best-documented literature linking any behavior and environmental agent to disease in humans. Richard Doll writes, “That so

Calculating Risk of Lung Cancer from Smoking

In a cohort study, Richard Doll and Richard Peto tracked British doctors for 20 years. In the study population, death rates from lung cancer in smokers and nonsmokers were 140 and 10 per 100,000 respectively.

To calculate the *relative risk* of lung cancer:

$$\frac{\text{risk of exposed (smokers)}}{\text{risk of unexposed (nonsmokers)}} = \frac{140}{10} = 14$$

A relative risk of 14 means that smokers are 14 times more likely to die from lung cancer than nonsmokers.

To calculate the *attributable risk*, or the total risk of lung cancer in smokers that is attributable to smoking, we would subtract the risk in the unexposed group (nonsmokers) from the risk in the exposed group (smokers).

$$\text{Attributable risk} = \text{Risk of exposed} - \text{risk of nonexposed} \\ 140 - 10 = 130 \text{ per } 100,000$$

An attributable risk of 130 means that of the 140 lung cancer deaths in smokers, 130 are due to smoking.

To calculate the percent attributable risk, or the percent of lung cancer attributable to smoking, we would divide the attributable risk by the risk in smokers.

$$\text{Percent Attributable risk} = \frac{(140 - 10)}{140} = 92.9\%$$

A 92.9 percent attributable risk means that of the lung cancer deaths in smokers, 92.9 percent is caused by smoking.

■ FROM DOLL, RICHARD, AND RICHARD PETO. "MORTALITY IN RELATION TO SMOKING: TWENTY YEAR'S OBSERVATION ON MALE BRITISH DOCTORS." *BRITISH MEDICAL JOURNAL* 2 (1976): 1525–1536.

many diseases—major and minor—should be related to smoking is one of the most astonishing findings in medical research in this century; less astonishing perhaps than the fact that so many people have ignored it" (Doll 1999).

Health Effects from Active Smoking: A View from Across the Centuries

The extent to which active smoking damages health and causes disease is remarkable. Active smoking results in most of the leading causes of death worldwide: cancers, cardiovascular diseases, chronic respiratory diseases, and respiratory infections. The risks for most of these diseases increase with the number of cigarettes smoked and the length of smoking, and decrease after quitting. Filters on cigarettes do not greatly reduce the risk of smoking, nor are the cigarettes labeled "light" or "mild" any safer than regular cigarettes (NIH 2001). Since 1964 the U.S. Surgeon General has published periodic reviews of the health effects of smoking. The following table lists the diseases that have been linked to smoking and provides the U.S. Surgeon General's highest-level conclusion concerning the causation of the disease by smoking:

Disease	Highest-Level Conclusions from Previous SGR Reports (Year)
Atherosclerosis/ Aortic Aneurysm	"Cigarette smoking is the most powerful risk factor predisposing to atherosclerotic peripheral vascular disease." (1983)



Bladder Cancer	“The decline in risk of bladder cancer with cessation further supports the conclusion that cigarette smoking causes bladder cancer.” (1990)
Breast Cancer	“Neither smoking nor smoking cessation is associated with the risk of cancer of the breast.” (1990)
Cerebrovascular Disease	“Cigarette smoking is a major cause of cerebrovascular disease (stroke), the third leading cause of death in the United States.” (1989)
Cervical Cancer	“Smoking has been consistently associated with an increased risk for cervical cancer.” (2001)
Chronic Obstructive Pulmonary Disease (COPD)	“Cigarette smoking is the most important of the causes of chronic bronchitis in the United States, and increases the risk of dying from chronic bronchitis.” (1964)
Coronary Heart Disease	“In summary, for the purposes of preventive medicine, it can be concluded that smoking is causally related to coronary heart disease for both men and women in the United States.” (1979)
Endometrial Cancer	“[C]urrent smokers are at lower risk of endometrial cancer than never smokers, but it is not clear whether this protective effect of smoking on endometrial cancer risk might be reversed soon after cessation of cigarette smoking.” (1990)
Esophageal Cancer	“Cigarette smoking is a major cause of esophageal cancer in the United States.” (1982)
Kidney Cancer	“Cigarette smoking is a contributory factor in the development of kidney cancer in the United States. The term ‘contributory factor’ by no means excludes the possibility of a causal role for smoking in cancers of this site.” (1982)
Laryngeal Cancer	“Cigarette smoking is causally associated with cancer of the lung, larynx, oral cavity, and esophagus in women as well as in men. . . .” (1980)
Leukemia	“Leukemia has recently been implicated as a smoking-related disease . . . but this observation has not been consistent.” (1990)
Liver Cancer	“Women who smoked may have increased risks for liver cancer. . . .” (2001)

Lung Cancer	“Additional epidemiological , pathological, and experimental data not only confirm the conclusion of the Surgeon General’s 1964 Report regarding lung cancer in men but strengthen the causal relationship of smoking to lung cancer in women.” (1967)
Oral Cancer	“Cigarette smoking is a major cause of cancers of the oral cavity in the United States.” (1982)
Ovarian Cancer	“[T]here is little evidence that smoking is associated with cancer of the ovary.” (1990)
Pancreatic Cancer	“Smoking cessation reduces the risk of pancreatic cancer, compared with continued smoking, although this reduction in risk may only be measurable after ten years of abstinence.” (1990)
Peptic Ulcer Disease	“The relationship between cigarette smoking and death rates from peptic ulcer, especially gastric ulcer, is confirmed. In addition, morbidity data suggest a similar relationship exists with the prevalence of reported disease from this cause.” (1967)
Stomach Cancer	“Data on smoking and cancer of the stomach . . . are unclear.” (2001)
Diminished Health Status/Morbidity	“Relationships between smoking and cough or phlegm are strong and consistent; they have been amply documented and are judged to be causal. . . . Consideration of evidence from many different studies has led to the conclusion that cigarette smoking is the overwhelmingly most important cause of cough, sputum, chronic bronchitis, and mucus hypersecretion.” (1984)



epidemiological pertaining to epidemiology, that is, to seeking the causes of disease.

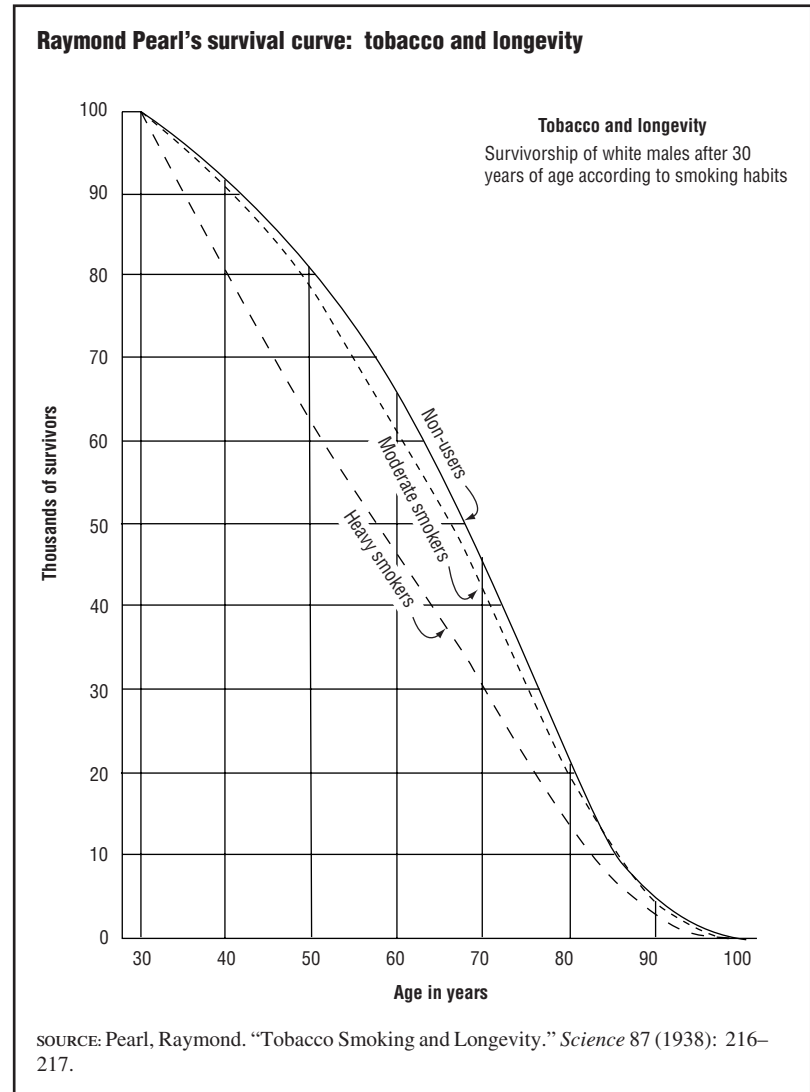


This man, photographed in 1997 at age sixty-four, suffers from emphysema and throat cancer. Today, it is well accepted that cigarette smoking causes cancer, but the dangers of smoking were not well known before the 1950s. © ED KASHI/CORBIS

Reduced Life Span—Mortality from All Causes

Not surprisingly, smokers have a substantially reduced life span in comparison with people who have never smoked. One of the first studies on the health effects of tobacco was conducted in 1938 by Dr. Raymond Pearl, a biostatistician at the St. Johns Hopkins School of Public Health. Dr. Pearl collected medical histories, complete with smoking habits, of 6,813 men living in Baltimore. He found a sharp decrease in the number of survivors after the age of thirty-five years in male heavy users compared to nontobacco users. Figure 1 shows survival curves for nonsmokers, moderate smokers, and heavy smokers. At the 50 percent point (median) there is an eight-year difference between nonsmokers and heavy smokers. For the time, Pearl offered the controversial conclusion

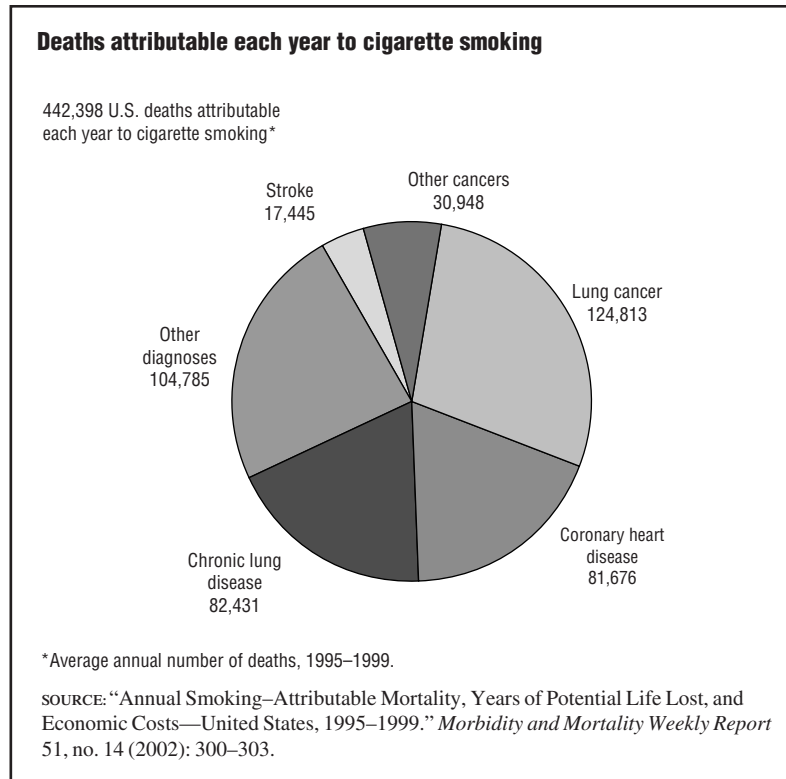
FIGURE 1



that smoking “is associated with a definite impairment of longevity” (Kluger 1997).

Numerous other studies have also documented reduced life span in smokers compared to nonsmokers. In a study of 34,000 male British physicians tracked for forty years from 1951–1991, the median life expectancy after age thirty-five years was seven and one-half years shorter for smokers compared to nonsmokers (Doll, Peto, and Wheatley 1994). The decrease in survival was inversely related to the length and intensity of smoking: those who smoked more cigarettes per day and over a greater period of years had shorter life spans. Calculations in the 1990 U.S. Surgeon General’s Report indicate that for those who quit smoking before the age of fifty, it is possible to avert nearly fifteen years of life lost compared to those who continue to smoke (DHHS 1990). The World Health Organization (WHO) estimates that smoking will prematurely kill half of all lifetime smokers. (WHO 2002).

Today, smoking ranks as the largest cause of avoidable premature death in the developed world. In the United States, smoking deaths that

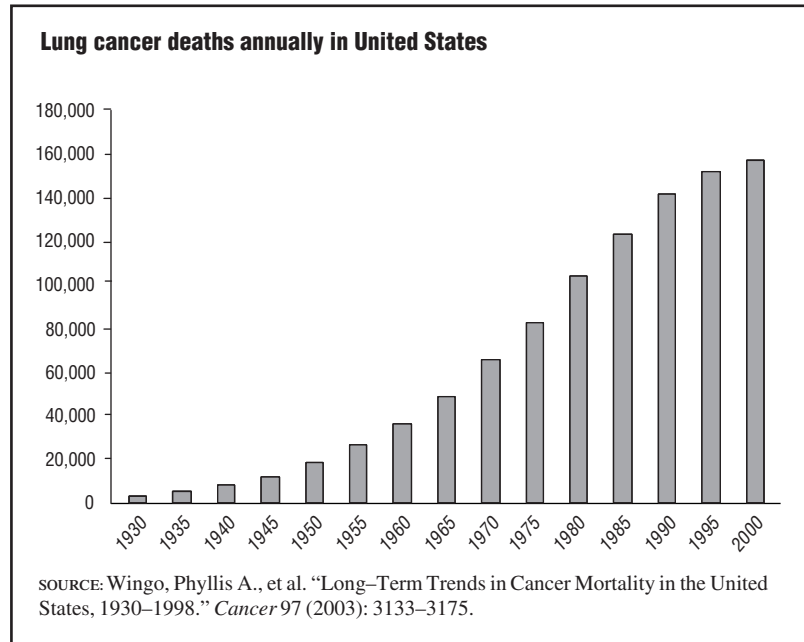
FIGURE 2

are attributable to tobacco have increased dramatically in both men and women, from 70,000 in 1950 to 440,000 in 2000 (MRC). Each year, smoking contributes to deaths from lung cancer, coronary heart disease, chronic lung disease, stroke, and other cancers (see Figure 2). Even in developing countries, smoking is a major contributor to mortality. Studies in India and China have confirmed findings from earlier studies in the United States and the United Kingdom that overall death rates among tobacco users are about twice those of nonusers (Liu, et al. 1998; Niu, et al. 1998; WHO 2001). In India alone, smoking caused an estimated 700,000 deaths in the year 2000 (Gajalakshmi et al. 2003).


Cancer

In the United States, death rates from lung cancer began increasing rapidly around the mid-twentieth century (see Figure 3). At the time, the causes of many cancers were still unknown and lack of sophisticated treatment options meant that many cancers were fatal. An epidemiological approach—a novel method at the time—was used to look for the underlying causes. Some German studies conducted in the 1930s and 1940s pointed towards tobacco as a factor but the first definitive studies are generally considered to have been published in 1950—five case-control studies.

In one of these studies, Morton Levin at Roswell Park, a cancer hospital, asked his hospital staff to begin collecting data on the smoking habits of every entering patient. Levin compared cancer patients who had smoked to cancer patients who had not smoked. The lung cancer rate in long-term smokers (twenty-five years or more) was 20.7 percent compared to 8.6 percent among nonsmokers (Levin 1950). Using a

FIGURE 3

similar case-control study design, Ernst Wynder, a medical student, and Everts Graham, a thoracic surgeon, interviewed patients with lung cancer and patients without lung cancer. Smoking histories for all study participants were ranked into 5 categories, ranging from nonsmokers to chain smokers. Wynder recalls, "After twenty or so interviews I knew I had something" (Kluger 1997). The results incriminated smoking as a strong causal factor: 96.5 percent of the 605 lung cancer patients were moderate to heavy chain smokers for several years compared with 73.7 percent of the nonsmoking controls (Wynder and Graham 1950). Also in 1950, Austin Bradford Hill and Richard Doll published results from a smoking study comparing cancer patients in 20 hospitals with noncancer patients. They reported that heavy smokers were 50 times more likely than nonsmokers to contract lung cancer and cautiously concluded "that cigarette smoking is a factor, and an important factor, in the production of carcinoma in the lung." Several animal studies conducted in the 1950s also supported the epidemiologic evidence: cigarette **tar** applied regularly to the skin of mice over time caused tumors (Wynder et al. 1953).



tar a residue of tobacco smoke, composed of many chemical substances that are collectively known by this term.

Together, the combination of the human and animal evidence provided a powerful indication of causation. These studies launched a great variety of follow-up research examining the link between tobacco and disease and sparked substantial media reporting. The tobacco industry was so threatened by the emerging scientific evidence and the resulting drop in cigarette sales that they responded by establishing the Tobacco Industry Research Committee (TIRC), composed of 14 leading tobacco manufacturers and allied groups. The stated objective of the TIRC was to fund independent scientific research about the health effects of smoking. However, tobacco industry documents brought forward from recent litigation show that the TIRC was originally created for the purpose of public relations. The TIRC took out a full page announcement in January 1954 in over 400 newspapers headlined, "A Frank Statement to Cigarette Smokers" aiming to calm consumer fears over the emerging

Two Revolutionary Articles

Five epidemiologic studies were published in 1950 directly associating cigarette smoking with lung cancer. But two studies in particular, from opposite sides of the ocean, caught the attention of the medical research world. Young German-born medical student Ernst L. Wynder and the esteemed surgeon and medical educator, Everts Graham, reported finding that, of the 605 male patients in their study with bronchogenic carcinoma (lung cancer), 96.5 percent had been heavy smokers (at least 25 cigarettes a day for 20 years), while among male hospital patients without cancer only 73.7 were heavy smokers (at the time, cigarette smoking was much more common among the U.S. population). Their paper, published in the *Journal of the American Medical Association*, also

suggested that men with lung cancer smoked more heavily and for more years than male patients without cancer. In that same year in England, medical professor Richard Doll and famed epidemiologist and statistician Austin Bradford Hill concluded that heavy smokers had a fifty times greater chance of getting lung cancer than non-smokers. Their influential paper, which appeared in the *British Medical Journal*, described in detail how they collected information from patients about their smoking history in a way that was reliable and unbiased. Although cigarettes were previous suspects as a link to cancer, the diligence and level of expertise connected with these two studies, in addition to the convincing findings, resonated volumes within the medical community.

■ DONALD LOWE

evidence that cigarette smoking is linked to lung cancer. The announcement by the TIRC said that the recent evidence produced was merely statistical and “could be applied with equal force to any one of many aspects of modern life . . . We believe the products we make are not injurious to health” (<<http://www.tobacco.org>> 1998). Despite industry efforts, by the mid-1960s, research on smoking and disease led to major pronouncements on the health hazards of smoking from authorities on both sides of the Atlantic.

Today, it is well accepted that cigarette smoking is without question the most important preventable cause of cancer. Many ingredients in tobacco and tobacco smoke have been found to be carcinogens (cancer-causing substances), some added by tobacco manufacturers to enhance flavor and addictiveness (WHO 2001). The 1982 U.S. Surgeon General’s Report states, “Cigarette smoking is the major single cause of cancer mortality in the United States.” This statement is still true today, not only for the United States, but for many other developed countries. As the above table shows, cigarette smoking has been found to be associated with cancer at many sites. For lung cancer, the risk is particularly great with smokers experiencing an approximately twenty-fold increased risk for lung cancer when compared to lifelong nonsmokers (Doll et al. 1994). Cancers of the larynx, mouth, pharynx, and esophagus are also much more common in smokers than in nonsmokers.

Cardiovascular Disease

Reports on the links between smoking and cardiovascular disease date back to the beginning of the twentieth century. Today, the epidemiologic evidence on smoking and cardiovascular diseases is massive. Cardiovascular disease encompasses heart diseases such as coronary heart disease, “heart attack,” stroke, arteriosclerosis, and diseases of the blood vessels. The burden of cardiovascular disease is enormous: Together heart disease and stroke account for approximately 40 percent of all deaths annually in the United States (CDC 2004).

A Nation's Emerging Awareness of Tobacco Dangers

The public's attention on the dangers of smoking was captured in the 1950s through the media. In 1952, *Reader's Digest*, one of the most popular magazines in the United States and the United Kingdom, published an article titled "Cancer by the Carton." The article described the dangers of smoking, detailing the risks of lung cancer and heart disease. The article also accused the tobacco industry of covering up the perils of smoking through its advertising claims of "mildness" and references to reduced health risks. The publication of "Cancer by the Carton" instigated a series of similar attacks of the tobacco industry in other magazines. Media attention and exposure of the tobacco industry significantly began a shift in society's attitude towards tobacco.

In 1964, the Surgeon General of the United States Public Health Service released a landmark report titled, "Smoking

and Health." Although there were earlier statements that had been released in 1957 and 1959, the report was an exhaustive literature review of over 7,000 articles, including 3,000 research reports. Conducted by an independent body of scientists, it was the United States' first widely publicized official recognition that smoking causes cancer and other diseases. After much study, the report committee concluded that smoking caused lung and laryngeal cancer in men, probably caused cancer in women, and was the major cause of chronic bronchitis. The report also highlighted that smokers were much more likely than non-smokers to contract coronary heart disease. Renowned for its clarity and unassailable review of scientific evidence, the 1964 report of the Surgeon General defined the clear beginning of a national tobacco control agenda in the United States. From the time the report was published to the early 2000s, forty years later, the smoking rate in the United States decreased from 46 percent to 23 percent of adults, a reduction of 50 percent.

Framingham, Massachusetts, has been called the town that changed America's heart. In 1948, 5,000 study participants from Framingham were enrolled in a large-scale cohort study to investigate why cardiovascular disease, in particular coronary heart disease and stroke, had become the nation's number one killer. By tracking disease progression over time in study participants, the Framingham Heart Study uncovered some of the biological and environmental determinants of heart disease and gave public health experts leads for establishing prevention guidelines. The Framingham study examined some key lifestyle behaviors that were possibly contributing to heart disease including diet, physical activity, and smoking. Results soon demonstrated that smokers were at increased risk of having myocardial infarction (sudden death) and coronary heart disease, and the risk was found to be related to the number of cigarettes smoked each day (DHHS 1990). The study showed that modifying lifestyle habits, such as smoking, physical inactivity, and diet could significantly alter disease progression and reduce disease severity: smoking cessation was found to promptly halve the risk compared to those who continued to smoke.

Another well-known study, the Nurses' Health Study, which began in 1976 (Stampfer et al. 2000), gave similar and powerful results for women. In the Nurses' Health Study the rate of fatal coronary heart disease among participants who never smoked was 5 per 100,000 person-years (a measurement combining persons and time as the denominator in the rate). This rate increased to 8, 19, and 27 deaths per 100,000 person-years for current smokers who smoked 1–14, 15–24, and >25 cigarettes per day, respectively. For women who smoked >25 cigarettes per day, it was reported that 81 percent of the coronary heart disease deaths among these heavy smokers were attributable to cigarette smoking (Willett et al. 1997).

Despite the scientific advances in cardiovascular disease research, heart disease and stroke remain the first and third leading causes of death in the United States, with cancer the second leading killer of Americans. Cigarette smoking has been found to be causally associated and an important risk factor for heart disease, cancer, and stroke—the nation’s top three leading killers.

Adverse Effects on Reproduction

The adverse effects of smoking begin even before birth. Maternal smoking reduces fertility and adversely affects pregnancy outcomes. Smoking during pregnancy reduces birth weight by approximately 200 grams on average (DHHS 1990). The degree of birth weight reduction is related to the amount smoked. If a mother who smokes gives up this behavior by the third trimester, much of the weight reduction can be avoided. Smoking also increases rates of other adverse effects on reproduction including spontaneous abortion, and smoking during pregnancy is now considered to be a cause of Sudden Infant Death Syndrome (SIDS). There is more limited evidence suggesting that smoking by the mother may increase risk for congenital defects, especially cleft lip and palate (Scientific Committee on Tobacco and Health, et al. 1998).

Health Effects of Secondhand Smoke

Because a third of the world’s population are smokers, the remaining two-thirds, nonsmokers, often inhale secondhand smoke (SHS) involuntarily or passively. SHS is the combination of smoke emitted from the burning tip of a cigarette and smoke components in the air exhaled by smokers. Research on SHS began to accumulate in the 1970s, and today there is consensus in the scientific community that no level of exposure to SHS is safe. The Environmental Protection Agency has classified secondhand smoke as a **carcinogen**, meaning that it causes cancer in humans. Despite the strength of the evidence, the tobacco industry has devised many strategies for discrediting the science to convince the public that there remains a “controversy” as to whether SHS is dangerous.

The adverse effects of passive smoking begin before birth and extend across the lifespan. Historically, epidemiologic studies first found adverse effects in infants and children in families with smoking parents. In infants and preschool children, most studies have found a significant association between exposure to SHS (especially when the child’s mother smokes) and respiratory symptoms (wheezing, coughing, phlegm, and shortness of breath) in children. These associations are consistent throughout different geographic areas, including Japan, Korea, the People’s Republic of China, Europe, and North America. A 1999 World Health Organization publication evaluated the findings on passive smoking and the health of children. Exposure to SHS was found to be a cause for slightly reduced birth weight, lower respiratory disease, chronic respiratory symptoms, middle ear infection, and reduced lung function (WHO 2001). There is more limited evidence suggesting that SHS exposure of the mother adversely affects child development and behavior (Eskenazi and Castorina 1999). The following table lists the health effects causally linked with SHS for children and adults:



carcinogen a substance or activity that can cause cancer. Cigarette smoking has been proven to be carcinogenic, that is, cancer causing.

In Infants and Children	Low birth weight or small for gestational age; Sudden Infant Death Syndrome (SIDS); acute lower respiratory tract infections; asthma induction and exacerbation; chronic respiratory symptoms; middle ear infection
In Adults	Eye and nasal irritation in adults; lung cancer; nasal sinus cancer; heart disease; mortality; acute and chronic heart disease morbidity

In adults, lung cancer was the first fatal disease shown to be causally associated to SHS. Subsequent studies have linked SHS to heart disease and other adverse health effects. Published in 1981, Takeshi Hirayama's cohort study in Japan was a landmark in SHS research. Hirayama tracked deaths in over 90,000 nonsmokers and compared mortality in those married to smokers and those married to nonsmokers. He found increased risk for lung cancer in women who had never smoked and were married to smokers compared with women who had never smoked and were married to nonsmokers. The tobacco industries responded by arranging for many scientists to criticize and attempt to discredit the study. However, Hirayama's results have been confirmed by many additional studies, and major international consensus reports have concluded that passive smoking causes lung cancer. To date, the association of SHS with lung cancer has now been evaluated in over 50 epidemiological studies. All told, the increased risk for a nonsmoker married to a smoker is on the order of 20 percent for women and 30 percent for men. (IARC 2002).

Epidemiological data first raised concern that passive smoking may cause coronary heart disease with a study in California conducted in 1985 (Garland et al. 1985). Over 20 studies have now been reported on the association between SHS and cardiovascular disease risk. These studies cover a wide range of populations, both geographically and racially. While many of the studies were conducted within the United States, some were also conducted in Europe, Asia, South America, and the South Pacific. Most studies measured the effect of secondhand smoke exposure due to smoking by the spouse; however, some studies also assessed exposures from smoking by other household members, or occurring at work, or in transit. Since the 1985 report, as the evidence has subsequently mounted it has been systematically reviewed by the American Heart Association (1992) and the California Environmental Protection Agency (NCI 1999). These expert groups and others have concluded that heart disease is causally associated with SHS exposure. Evidence also links SHS to other adverse effects, including exacerbation of asthma, reduced lung function, and respiratory symptoms, but SHS has not yet been judged to be a cause of these effects (NCI 1999).

The Global Tobacco Epidemic: A View into the Future

Cigarette addiction has been widespread in many developed countries for over a century and mortality statistics from these countries chart the resulting epidemics of heart disease, lung disease, and cancer. Dr. Gro Harlem Brundtland, the Director-General of WHO, writes, "it is rare, if



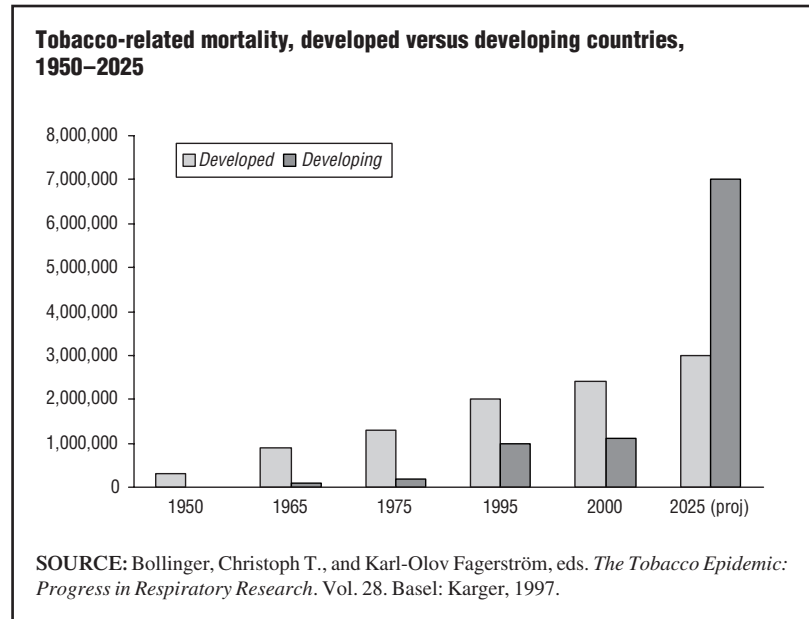
not impossible, to find examples in history that match tobacco's programmed trail of death and disease" (WHO 2001). Most alarming is that the epidemic is growing. If smoking trends continue along the estimated trajectory, in 2020 tobacco use will be responsible for 10 percent of all disease globally (WHO 2001).

While smoking rates have decreased in the United States, the United Kingdom, and other affluent Western countries since the mid-twentieth century, globally, smoking rates are on the rise along with tobacco related deaths. Today there are an estimated 1.1 billion smokers (World Bank 1999). By 2025 it is estimated that there will be 1.6 billion smokers. Not only are more people smoking, but they are smoking more cigarettes per day than previously (World Bank 1999).

Aggressive marketing tactics by the tobacco industry have extended the tobacco epidemic from the developed to the developing regions of the world. The mortality rates have been projected and they are enormous, especially for developing countries. By 2025, there will be an estimated 10 million tobacco deaths globally, of which 70 percent will be in current developing countries (see Figure 4). This is in contrast to the 1 million tobacco deaths globally in 1965, of which only 100,000 were in developing countries (Bollinger and Fagerström 1997). Half of those who die will be middle-aged, losing 20–25 years of life (Peto and Lopez 2000).

If current smoking patterns persist, developing countries will face enormous epidemics of premature death. The tobacco epidemic in China is a case in point. China has the highest cigarette consumption per capita in the world. One out of every three cigarettes smoked in the world today is smoked in China by its 300 million smokers. In 2000, annual smoking deaths in China were estimated at 1 million. In 2050, China is anticipated to face 3 million tobacco deaths per year. Not surprisingly, many other countries that have high smoking rates, such as India and Russia, face a similar epidemic if preventive action is not taken. Future tobacco deaths can be avoided through two means: increasing the rate of smoking cessation (quitting) and decreasing smoking uptake (starting) by young adults (Peto and Lopez 2000).

Health Canada tobacco product packaging warning. Regulations allowing images in warning labels became law in June 2000. Health officials hope that the images will reinforce awareness the dangers of smoking. GETTY IMAGES

FIGURE 4

Tobacco deaths are preventable and can be averted through public health action. The challenge remains for governments to accelerate public health action to protect the health of their populations. If appropriate policy and program responses are not implemented today, the prediction of 10 million deaths a year by 2030 will become a tragic reality.

See Also Doctors; Insurance; Toxins.

■ MAI-ANH HOANG
■ JONATHAN M. SAMET

BIBLIOGRAPHY

- "Annual Smoking–Attributable Mortality, Years of Potential Life Lost, and Economic Costs—United States, 1995–1999." *Morbidity and Mortality Weekly Report* 51, no. 14 (12 April 2002): 300–303.
- Bollinger, Christoph T., and Karl-Olov Fagerström, eds. *The Tobacco Epidemic (Progress in Respiratory Research)*. vol. 28. Basel, Switzerland: S. Karger Publishers, 1997.
- Bower, Hilary. "No Sign of Slowing Down: Sir Richard Doll." *British Medical Journal (BMJ)* 314 (8 March 1997): 700.
- Centers for Disease Control and Prevention (CDC). Preventing Heart Disease and Stroke: Addressing the Nation's Killers, 2004. At a Glance Available: <http://www.cdc.gov/nccdphp/aag/aag_cvd.htm>.
- Doll, Richard. "Tobacco: A Medical History." *Journal of Urban Health: Bulletin of the New York Academy of Medicine* 76 (September 1999): 289–313.
- Doll, Richard, and Austin B. Hill. "Smoking and Carcinoma of the Lung: Preliminary Report." *British Medical Journal* 2 (30 September 1950): 739–748.
- Doll, Richard, and Richard Peto. "Mortality in Relation to Smoking: Twenty Year's Observation on Male British Doctors." *British Medical Journal* (1976): 1525–1536.
- Doll, Richard, Richard Peto, and K. Wheatley. "Mortality in Relation to Smoking: Forty Years' Observation on Male British Doctors." *British Medical Journal* 309 (8 October 1994): 901–911.

- Eskenazi, Brenda, and Rosemary Castorina. "Association of Prenatal Maternal or Postnatal Child Environmental Tobacco Smoke Exposure and Neurodevelopmental and Behavioral Problems in Children." *Environmental Health Perspective*. 107, no. 12 (December 1999): 991–1000.
- Gajalakshmi, Vendhan, Richard Peto, Thanjavur Santhanakrishna Kanaka, Prabhat Jha. "Smoking and Mortality from Tuberculosis and Other Diseases in India: Retrospective Study of 43,000 Adult Male Deaths and 35,000 Controls." *The Lancet* 362 (16 August 2003).
- Garland, C., et al. "Effects of Passive Smoking on Ischemic Heart Disease Mortality of Nonsmokers. A Prospective Study." *American Journal of Epidemiology* 121, no. 5 (May 1985): 645–650.
- Hirayama, Takeshi. "Nonsmoking Wives of Heavy Smokers Have a Higher Risk of Lung Cancer: A Study from Japan." *British Medical Journal* 282 (1 January 1981): 183–185.
- International Agency for Research on Cancer (IARC). Tobacco Smoke and Involuntary Smoking. Monograph 83. International Agency for Research on Cancer. Lyon, France, 2002.
- Kluger, Richard. *Ashes to Ashes: America's Hundered-Year Cigarette War, the Public Health, and the Unabashed Triumph of Philip Morris*. New York, N.Y.: Vintage Books, 1997.
- Levin, M. L., H. Goldstein, and P. R Gerhardt. "Cancer and Tobacco Smoking." *Journal of the American Medical Association* 143 (1950): 336–338.
- Liu, B. Q., Richard Peto, and Z. M. Chen, et al. "Emerging Tobacco Hazards in China: 1. Retrospective Proportional Mortality Study of One Million Deaths." *British Medical Journal* 317 (21 November 1998): 1411–1422.
- Lopez, A. D. "Measuring the Health Hazards of Tobacco: Commentary." *Bulletin of the World Health Organization*, 77 (1999): 82–83.
- Mackay, Judith L. "The Fight against Tobacco in Developing Countries." *Tuberculosis and Lung Disease* 75 (1994): 8–24.
- MRC/Cancer Research UK/BHF Clinical Trial Service Unit and Epidemiological Studies Unit. Available: <<http://www.ctsu.ox.ac.uk>>
- National Cancer Institute (NCI). Health Effects of Exposure to Environmental Tobacco Smoke. The Report of the California Environmental Protection Agency. Monograph 10. NIH Pub. No. 99–4645. Bethesda, Md.: United States Department of Health and Human Services (USDHS), 1999.
- . Risks Associated with Smoking Cigarettes with Low Machine-Measured Yields of Tar and Nicotine: Smoking and Tobacco Control. Monograph 13. NIH Pub. No. 02–5074. Bethesda, Md.: United States Department of Health and Human Services (USDHS), 2001.
- Niu, S. R., Yang, G.H, Z. M. Chen, et al. "Emerging Tobacco Hazards in China. 2. Early Mortality Results from a Prospective Study." *British Medical Journal* 317 (21 April 1998): 1423–1424.
- Ong, E., and Stanton A. Glantz. "Hirayama's Work Has Stood the Test of Time." *Bulletin of the World Health Organization* (2000): 938–939.
- Pearl, Raymond. "Tobacco Smoking and Longevity." *Science* 87 (1938): 216–217.
- Peto, Richard, and A. D. Lopez. "The Future Worldwide Health Effects of Current Smoking Patterns." Geneva, Switzerland: World Health Organization, 2000.
- Scientific Committee on Tobacco and Health. *Report of the Scientific Committee on Tobacco and Health*. London, UK, 1998.
- Stampfer, Meir J., et al. "Primary Prevention of Coronary Heart Disease in Women Through Diet and Lifestyle." *New England Journal of Medicine*. 343, no. 1 (July 2000).
- Tobacco News and Information. Available: <<http://www.tobacco.org/History/540104frank.html>>.



- U.S. Department of Health and Human Services (DHHS). *Health Consequences of Smoking: The Changing Cigarette. A Report of the Surgeon General: 1981*. Washington, D.C.: U.S. Government Printing Office, 1981.
- U.S. Department of Health Services (DHHS). *The Health Benefits of Smoking Cessation. Report of the Surgeon General*. United States Department of Health and Human Services, Rockville, Md.: 1990.
- Willett, Walter C. et al. "Relative and Absolute Excess Risks of Coronary Heart Disease among Women Who Smoke Cigarettes." *The New England Journal of Medicine*. 317, no. 21 (November 1987).
- Wingo, Phyllis A., Cheryl T. Cardinez, and Sarah H. Landis, et al. "Long-Term Trends in Cancer Mortality in the United States, 1930–1998." *Cancer (Supplement)* 97 (15 June 2003): 3133–3175.
- World Bank. *Curbing the Epidemic: Governments and the Economics of Tobacco Control*. Washington, D.C.: World Bank Organization, 1999.
- World Health Organization. *Advancing Knowledge on Regulating Tobacco Products*. Geneva, Switzerland: World Health Organization, 2001.
- . *Women and the Tobacco Epidemic*, Geneva, Switzerland: World Health Organization, 2001.
- . *The Tobacco Atlas*. Geneva, Switzerland: World Health Organization, 2002.
- Wynder, Ernst, L., and Evarts A. Graham. "Tobacco Smoking as a Possible Etiologic Factor in Bronchogenic Carcinoma: A Study of Six Hundred and Eighty-five Proved Cases." *Journal of the American Medical Association* 143 (1950): 329–336.
- Wynder, Ernst L., Evarts A. Graham, and A. B. Croninger. "Experimental Production of Carcinoma with Cigarette Tar." *Cancer Research*, 13 (1953): 854–864.



Doctors

From the first introduction of tobacco into European societies in the sixteenth century, physicians made public assertions about the effects of tobacco use. Some condemned it on moral and social grounds as a support to idleness and wasting money; others condemned using tobacco on general hygienic grounds. By the early nineteenth century, physicians were reporting cases in which very young children died from tobacco emulsions administered as a medical treatment. Some physicians claimed that tobacco use caused or at least exacerbated specific diseases, particularly respiratory afflictions and dental conditions.

At the same time, for centuries physicians tended to use tobacco themselves in the same ways and in the same proportions as the rest of the adult population—a fact that undercut their authority when they advised patients or the public not to smoke or chew.

Hygienic enthusiasts, including the famous Seventh-Day Adventist physician John Harvey Kellogg, gained ground in the opening years of the twentieth century. On the basis of **physiological** tests (conducted mostly on college students), they could show that smoking affected heart and lung and possibly nervous system performance on a temporary basis. In addition, as disease entities became more exact in medical thinking, physicians used clinical impressions to assert that specific



physiology the study of the functions and processes of the body.



A U.S. doctor checks a Navy recruit's heart during World War II. While doctors in Nazi Germany were prohibiting tobacco use, physicians elsewhere in the world tended to encourage recreational smoking by soldiers as a source of comfort.

© UPI/CORBIS-BETTMANN

circulatory and eye disorders as well as oral lesions could be blamed on smoking. However, because hygienists' injunctions against tobacco use tended to appear in a moralistic framework, most physicians did not take them seriously.

By the 1930s, a small international circle of physician antitobacco enthusiasts, including Angel H. Roffo of Buenos Aires, were in communication with each other. Some of them, such as Fritz Lickint and Franz H. Müller, gained enough influence in Nazi Germany to affect public policy significantly. But elsewhere in the world physicians tended to endorse recreational smoking—for example as a comfort to soldiers, especially wounded soldiers, during both world wars.

The final phase of physician involvement with tobacco came in the 1950s, when **epidemiological** studies revealed a statistical association between cigarette smoking and lung cancer. In 1954, a British study of doctors, led by Richard Doll and A. Bradford Hill, showed that smokers had dramatically higher rates of lung cancer deaths than did non-smoking physicians. A decade before the general public showed much reaction, physicians in substantial numbers started to cut back on cigarettes and, ultimately, tobacco use. Evidence about tobacco's harmful effects was gained through novel statistical research methods, rather



epidemiological pertaining to epidemiology, that is, to seeking the causes of disease.

than traditional laboratory animal studies. Despite the validity of these research methods, many doctors did not accept the connection between smoking and lung cancer.

The Royal College of Physicians in 1962 and the Advisory Committee to the U.S. Surgeon General in 1964 produced reports connecting tobacco use with specific diseases. Despite the appearance of these reports, some parts of the medical profession in many countries resisted those conclusions; others were afraid of alienating their patients by confronting smokers with the possible consequences of their actions. In the United States, leaders of organized medicine for decades traded their silence for political support from important politicians from tobacco areas who voted against health proposals. Rather, official medical condemnation of smoking came from specialist groups. From the mid-twentieth century on, the majority of physicians everywhere gradually converted to a more or less active antitobacco stance.

See Also Lung Cancer; Medical Evidence (Cause and Effect).

■ JOHN BURNHAM

BIBLIOGRAPHY

- Burnham, John C. "American Physicians and Tobacco Use: Two Surgeons General, 1929 and 1964." *Bulletin of the History of Medicine* 63 (1989): 1–31.
- Proctor, Robert N. "The Nazi War on Tobacco: Ideology, Evidence, and Possible Cancer Consequences." *Bulletin of the History of Medicine* 71 (1997): 435–488.
- Stewart, Grace G. "A History of the Medical Use of Tobacco, 1492–1860." *Medical History* 11 (1967): 228–268.



Documents

In 1994 CEOs of the seven largest tobacco companies testified under oath before Congress that they believed that the evidence that cigarette smoking caused diseases such as cancer and heart disease was inconclusive, that cigarettes were not addictive, and that they did not market to children. Less than one month after this testimony, a box containing several thousand pages of confidential documents from the Brown & Williamson Tobacco Corporation was delivered to the University of California at San Francisco (UCSF). The box contained reports of internal industry studies that had been copied by a paralegal who had worked for a law firm representing Brown & Williamson.

Despite Brown & Williamson's demand through the courts for the return of these documents, the UCSF Library posted them on the Internet, and public health scientists disclosed the contents of the documents in a series of published articles and a book titled *The Cigarette Papers* (1996). These secret documents revealed that for at least forty years, leading executives in the tobacco industry considered tobacco addictive and harmful and had conducted and directed marketing efforts to beginning smokers.



These previously secret documents provided the first glimpse into the inner workings of the tobacco industry. Disclosure even attracted the attention of President William J. Clinton, who commented in 1996 that it affected his decision to ask the Food and Drug Administration (FDA) to regulate nicotine as an addictive drug and to define cigarettes and smokeless tobacco as drug delivery devices.

Courtroom Evidence

Industry documents started appearing as evidence in lawsuits filed against tobacco manufacturers beginning in the early 1990s. However, up until that time, industry lawyers had blocked disclosure of most of their documents under the claim of attorney–client privilege, a legal principle that holds that communication between a client and his or her lawyer should be confidential.

This situation changed when Judge H. Lee Sarokin of the U.S. District Court, New Jersey, ordered the release of a small set of internal documents as part of a case filed on behalf a lung cancer victim. The documents pertained to the tobacco industry’s Council for Tobacco Research (CTR) program, which cigarette makers had represented as an independent research program set up to support scientific research into questions related to smoking and health. However, the documents told a different story, indicating that the CTR was established as an industry shield primarily for public relations purposes. Budget documents reveal that money earmarked for independent research instead was directed to researchers who were hand picked by industry lawyers to provide

In 1994 heads of seven major U.S. tobacco companies testified before Congress. Among other testimony, each man stated his belief that nicotine was not addictive. Being sworn in before a hearing of the House Energy and Commerce Committee Subcommittee on Health and the Environment are (left to right) Robert S. Sprinkle, Executive Vice President for Research and Quality Assurance, American Tobacco Company; Donald S. Johnston, President and CEO, American Tobacco Company; Thomas E. Sandefur, Brown & Williamson Tobacco Corporation; Edward A. Horrigan, Chairman and CEO, Liggett Group; Andrew H. Tisch, Chairman and CEO, Lorillard Tobacco Company; Joseph Taddeo, President, U.S. Tobacco Company; James W. Johnston, Chairman and CEO, R.J. Reynolds; and William Campbell, President and CEO, Philip Morris, USA.AP/WIDE WORLD PHOTOS

Tobacco Document Websites

Several websites feature accessible collections of tobacco documents. Three notable sites follow.

Centers for Disease Control and Prevention

<<http://www.cdc.gov/tobacco/industrydocs/docsites.htm>>

Tobacco Documents Online

<<http://tobaccodocuments.org>>

Legacy Tobacco Documents Library at UCSF

<<http://legacy.library.ucsf.edu/>>

findings that would be helpful to defend the industry in court. In his ruling the judge commented that facts disclosed in the newly released documents showed that “the tobacco industry may be the king of concealment and disinformation.” The release of these documents provided a roadmap for future discovery of industry documents.

At about the same time, industry whistleblowers began to come forward to tell their stories. Among them was Dr. Jeffrey Wigand, the vice president for research and development at Brown & Williamson Tobacco Corporation from December 1988 to March 1993, who came forward to tell how the cigarette industry had lied to the American public.

The result of these disclosures was a first-ever jury verdict against a cigarette company in 1996, when Brown & Williamson was required to pay \$750,000 to the family of a lung cancer victim. Dozens of additional lawsuits were subsequently filed, including several suits by states seeking recovery of public monies spent on treating tobacco-caused illnesses. In 1996 the Liggett Group, the smallest of the major U.S. tobacco companies, settled lawsuits with the states of West Virginia, Florida, Mississippi, Massachusetts, and Louisiana. Through this settlement, the Liggett Group agreed to make cash payments to the states, accept limitations on cigarette advertising, and to drop its opposition to the FDA regulation of tobacco.

The Liggett settlement encouraged other states to enter into lawsuits, which eventually resulted in the 1998 Master Settlement Agreement (MSA) between the nation’s major tobacco companies and the attorneys general of forty-six states. A key provision of the MSA includes the requirement for the tobacco industry to post approximately 33 million pages of tobacco documents on the Internet.

A separate but related lawsuit filed by New York State resulted in a 1998 agreement to release all files of two industry organizations: the Tobacco Institute and the Council for Tobacco Research. Another 8 million pages of documents from the British-American Tobacco Company (BATCo) are held at the Guildford Document Depository in Guildford, England. These documents provide insights into international marketing by BATCo (<<http://www.library.ucsf.edu/tobacco/batco>>).

Documents Online

Industry-sponsored websites present a variety of research challenges. Each company is permitted to sponsor its own website, which means that subject-related searches (such as cancer or nicotine) have to be done separately for each company. The company websites also differ in how documents are organized, further complicating efforts to search for information.

Fortunately, several groups created virtual libraries of the various document collections, easing research (see sidebar). Public health officials are using the documents to understand how cigarettes are designed and marketed. For example, the documents reveal how companies designed their cigarettes and marketing campaigns to deceive smokers into thinking that “light” cigarette brands were safer than others. As a result of this disclosure, on 30 September 2003 the European Union banned the use of advertising labels such as “light” and “mild.” In Australia, an inquiry issued a report in May 2002 concerning possible policies to eliminate such terms. That inquiry is also considering removing **tar** and nicotine yields from packs, the basis on which claims of reduced delivery are based.



tar a residue of tobacco smoke, composed of many chemical substances that are collectively known by this term.

The documents also reveal how the tobacco industry used its vast resources to manipulate the political process to avoid regulation and oversight. For example, the Tobacco Institute hired scientific consultants to defeat ETS regulations and routinely gave out large contributions and donations to politicians and organizations that would oppose tobacco control measures. In 1984, Philip Morris threatened to withdraw business from Dow Chemical because they were involved in marketing nicotine gum as a stop-smoking aid. Ongoing national efforts to regulate lobbying and donations to political campaigns were stimulated in part by revelations about tobacco industry influence over government officials.

The tobacco documents provide a simple lesson—the industry will always put its profits ahead of public health. The tobacco documents are a great resource for students to learn first hand what the tobacco industry is all about so that the mistakes of the past do not have to be repeated in the future.

See Also Antismoking Movement From 1950; “Light” and Filtered Cigarettes; Litigation; Lobbying; Public Relations.

■ K. MICHAEL CUMMINGS
 ■ ANTHONY BROWN
 ■ CRAIG STEGER

BIBLIOGRAPHY

- Cummings, K. M., C. P. Morley, and A. Hyland. “Failed Promises of the Cigarette Industry and Its Effect on Consumer Misperceptions about the Health Risks of Smoking.” *Tobacco Control* 11 (1 March 2002): 110–117.
- Glantz, S. A., et al. “Looking through a Keyhole at the Tobacco Industry: The Brown & Williamson Documents.” *Journal of the American Medical Association* 274, no. 3 (19 July 1995): 219–224.
- Glantz, Stanton A., et al. *The Cigarette Papers*. Berkeley: University of California Press, 1996.
- Kessler, David A. *A Question of Intent: A Great American Battle with a Deadly Industry*. New York: Public Affairs, 2001.
- Latshaw, R. D. “Suspension of Dow Purchases.” 7 May 1984. Philip Morris. Bates: 2023799799–2023799800.
- Malone, Ruth E., and Edith D. Balbach. “Tobacco Industry Documents: Treasure Trove or Quagmire?” *Tobacco Control* 9 (2000): 334–338.
- Morley, C., et al. “Tobacco Institute Lobbying at the State and Local Levels of Government in the 1990’s.” *Tobacco Control* 11 (suppl 1) (2002): i102–i109.



Dutch Empire

Introduced into the United Provinces (the Dutch Republic) in the late sixteenth century, tobacco conquered Dutch markets in the seventeenth century as imports grew and prices dropped. By the early eighteenth century, all social classes smoked. While tobacco cultivation employed many families in the central and eastern parts of the country, processing



Tobacco—seen in leaf form, held by the man, and rolled onto spindles for export—was a boon to colonial business throughout the colonies, as is seen in this seventeenth-century depiction from the island of Manhattan. I. N. PHELPS STOKES COLLECTION, MIRIAM AND IRA D. WALLACH DIVISION OF ART, PRINTS, AND PHOTOGRAPHS, THE NEW YORK PUBLIC LIBRARY, ASTOR, LENOX, AND TILDEN FOUNDATIONS

and finishing domestic and foreign tobacco became an important industry in several Holland towns. As Dutch merchants carved out a niche for themselves in international trade as middlemen for varieties from Virginia and Spanish America, tobacco became a significant source of tax revenue.

Tobacco and Colonialism

Tobacco was inextricably linked to Dutch colonialism. The first Dutch forays into South America took place in Guiana and on the Amazon River, where the Dutch witnessed Indian tobacco production firsthand around 1600. Along with the English, the Irish, and the French, the Dutch founded small colonies in the area between Venezuela and Brazil for the purpose of producing tobacco themselves, but they had no chance of success due to disease, attacks by the Portuguese, and the lack of immigrants. Tobacco was also one of the rationales behind starting settlements on the Caribbean islands. During a short period around 1630, the Dutch successfully planted the crop on Tobago, and the leader of the expedition that settled St. Eustatius in 1636 wrote in his first letter to his superiors in the mother country that he intended “to plant good tobacco and make substantial profits” (Attema 1976). Small-scale tobacco cultivation was also taken up in New Netherland in the 1630s,

where twenty-seven **plantations** were counted by the end of the decade. Likewise, employees of the VOC (the Dutch East India Company) introduced tobacco cultivation in Ceylon in the 1620s and at the Cape colony in South Africa in 1656.

However, in no Dutch colony did tobacco become an important settlers crop. In most parts of their far-flung empire, the Dutch were traders rather than producers of crops and commodities, and tobacco was no exception. As a trade item, the crop contributed to the growth of the Dutch Caribbean colonies of Curaçao and St. Eustatius, whose primary function was commerce. Curaçao handled the varieties from Spanish America, including the exquisite leaf from Barinas, Venezuela, while St. Eustatius absorbed large quantities of Chesapeake tobacco in times of war, especially during the Revolutionary War. Dutch merchants also sold tobacco to African customers in Elmina, the Dutch regional headquarters in West Africa, in return for slaves. Brazilian traders supplied this tobacco, a third-grade variety from Bahia.

Tobacco Trade and Industry

Caribbean tobacco had the largest **market share** in the United Provinces until the Chesapeake emerged as a producer in the 1630s. Varieties from Virginia and Maryland would dominate the market throughout the early modern period, making Amsterdam Europe's premier tobacco market until the first half of the eighteenth century. While the Merchant Adventurers from England handled early Dutch tobacco imports from Virginia, native Dutchmen soon arranged shipments themselves. During the English civil war (1642–1647), they formed ties with middlemen and planters in the Chesapeake, but they lost direct control after the implementation of the **Navigation Acts** in the late 1600s. Henceforth, a large part of Chesapeake tobacco went to the United Provinces via England and Scotland.

Spain's American colonies provided other varieties for sale in Amsterdam. Due to relatively high transport costs, Dutch merchants decided to specialize in the import of high-grade and more expensive New World varieties, cultivated in Cuba, Puerto Rico, and Venezuela. At the same time, the high prices garnered by American tobacco stimulated Jewish and gentile entrepreneurs to organize domestic tobacco cultivation, in particular in the Amersfoort area, starting around 1615. From the outset, Amsterdam merchants assumed the marketing of this leaf.

Native as well as foreign tobacco was finished, which involved spinning and blending, in Amsterdam. Before it was re-exported, most American tobacco was blended with cheap homegrown leaves, thus creating an affordable quality product. In the late seventeenth and early eighteenth centuries, Amsterdam had 30 to 40 spinning mills, 40 rolling mills, and 10 cutting workshops, together employing 3,000 men. After 1750, 3,500 workers made a living in Rotterdam spinning and blending tobacco, as the city replaced Amsterdam as the center of the Dutch tobacco industry. Other industries in the United Provinces benefiting from tobacco imports were the **snuff** manufacturers in the Zaan region north of Amsterdam, which ground Cuban tobacco leaves to powder and blended the leaves with domestic ones, thus producing "Cuban snuff," and the pipe-making industry of Gouda, in which 7,000 people were directly involved around 1750.



plantation historically, a large agricultural estate dedicated to producing a cash crop worked by laborers living on the property. Before 1865, plantations in the American South were usually worked by slaves.



market share the fraction, usually expressed as a percentage, of total commerce for a given product controlled by a single brand; the consumer patronage for a given brand or style of product.

Navigation Acts laws passed by the British Parliament that subjected the American colonies to sell only to Britain, buy only from Britain, and ship only in British vessels. The Navigation Acts were one of the background causes of the American Revolution.



snuff a form of powdered tobacco, usually flavored, either sniffed into the nose or "dipped," packed between cheek and gum. Snuff was popular in the eighteenth century but had faded to obscurity by the twentieth century.



duty a tax, usually a tax on certain products by type or origin; a tariff.

Taxation

In 1621 the Estates of Holland introduced a 6 stuivers (30 cents) import **duty** on every half kilogram of tobacco, irrespective of quality or provenance. It was the first such duty levied on tobacco in the United Provinces. After the duty was halved three years later, customs duties were made dependent on the imported varieties in 1644, when the Estates substantially reduced the tax on all leaves except Barinas. Although Holland's policies were usually in the interest of Amsterdam's mercantile sector and at times the town's spinning mills, the Estates hardly ever sided with domestic tobacco planters. A proportional consumer tax was introduced in 1678, charging wholesale tobacconists, shopkeepers, innkeepers, and spinners. Because this tax was farmed out, data on revenues is scarce. However, historians project that income from tobacco taxes must have been significant, given the impressive cargoes that were daily disembarked in Dutch ports. According to one estimate, Amsterdam alone imported 57 million pounds around 1670, including 7 million pounds of very fine tobacco from South America and the Caribbean.

Decline

Increased competition from German countries and the start of domestic spinning in Sweden, Denmark, Prussia, and Russia, coupled with a ban in those countries on the import of processed tobacco, led to the decline of Amsterdam's tobacco industry. An additional problem was the price decline of American tobacco dropped, obviating the need to blend New World and native Dutch tobacco. Dutch dominance in the international tobacco trade thus gradually eroded in the eighteenth century. While the trade in tobacco had once contributed to Amsterdam's rise as Europe's foremost staple market, the loss of foreign markets hastened its demise.

See Also British Empire; Caribbean; French Empire; Spanish Empire.

■ WIM KLOOSTER

BIBLIOGRAPHY

- Attema, Ypie. *St. Eustatius. A Short History of the Island and Its Monuments*. Zutphen, The Netherlands: De Walburg Pers, 1976.
- Herks, J. J. *De geschiedenis van de Amersfoortse tabak* (The history of Amersfoort tobacco). Den Haag, The Netherlands: Martinus Nijhoff, 1967.
- Klooster, Wim. *Illicit Riches: Dutch Trade in the Caribbean, 1648–1795*. Leiden, The Netherlands: KITLV Press, 1998.
- Roessingh, H. K. *Inlandse tabak: Expansie en contractie van een handelsgewas in de 17e en 18e eeuw in Nederland* (Indigenous tobacco: Expansion and contraction of a commercial crop in the 17th and 18th centuries). Zutphen, The Netherlands: De Walburg Pers, 1976.
- Schwartz, Stuart B., and Johannes Postma. "The Dutch Republic and Brazil as Commercial Partners on the West African Coast during the Eighteenth Century." In *Riches from Atlantic Commerce: Dutch Trans-Atlantic Trade and Shipping, 1585–1817*. Edited by Johannes Postma and Victor Enthoven. Leiden and Boston: Brill, 2003.
- Vries, Jan de, and Ad van der Woude. *Nederland 1500–1815. De eerste ronde van moderne economische groei* (The Netherlands, 1500–1815: The first round of modern economic growth). Amsterdam: Balans, 1995.



English Renaissance Literature

When tobacco took England by storm in the late sixteenth century, it quickly permeated all arenas of cultural activity, and literature was no exception. References to both medical and recreational uses of tobacco soon began to appear throughout a wide range of literary forms, with a particular concentration in comic genres such as satire, epigram, and city comedy. Just as broader responses to tobacco ranged from euphoric acclaim to cynical derision, poets and playwrights similarly portrayed the plant as medicinal, magical, even divine, but also as comically absurd, wasteful, and dangerous.

Although the boundaries between medical and recreational use were unstable, and frequently blurred, literary depictions of tobacco from the English Renaissance tend to focus primarily on either one or the other. For the most part, references to tobacco in earlier literary works tend to be positive and to emphasize its role in improving health. As the drug's popularity grew, however, and its role in English culture became more recreational than medical, writers began to portray it more as a social pastime, and accordingly depicted its use in increasingly irreverent and sardonic ways.

Tobacco as Medicine

Tobacco first entered England as a medicine, a “panacea” that could heal all ills. The first English writings devoted to it, such as the translation of Nicholas Monardes’s treatise on New World medicines, titled in English *Joyfull Newes Out of the New Founde Worlde* (1577), discussed its curative properties. Appropriately, its earliest literary appearances also emphasized its miraculous potential to improve health. In Edmund Spenser’s *Faerie Queene* (1590), Belphoebe turns to “divine tobacco” as a medicinal herb to treat the wounded squire Timias. Notions of tobacco’s medical value run through literary writings from many genres, both seriously and as parody. A song in Barten Holiday’s play *Technogamia or The Marriage of the Arts* (1618) describes tobacco as “a Physician, /

“Epigram 82. Of Tobacco”

Tobacco is a Weed of so
great powre,
That it (like Earth) doth what
it feedes deuoure.

■ JOHN DAVIES (*THE SCOURGE
OF FOLLY*, 1611)


Good both for sound and sickly/. . . [it] expells cold rheume, / And makes it flow downe quickly.”

Early reports on Native American uses of tobacco emphasized not only its medical use but also its association with religious ritual, and these two traits merged in depictions of the “miracle drug” as magical, supernatural, or even divine. Spenser’s description of tobacco as “divine” became a popular epithet, and other writers explored variations on this idea. Thomas Nashe, in *Nashe’s Lenten Stuffe* (1599), describes tobacco as a heavenly panacea and claims that this “divine drug proclaimeth miracles. “Sir John Beaumont, in his *Metamorphosis of Tobacco* (1602), refers to “this herbes celestiall qualitie,” and calls it “the fountaine whence all pleasure springs,/ A potion for imperiall crowned Kings. “Michael East, similarly, praises “Metaphysical Tobacco” in *The Second Set of Madrigales* (1606). Tobacco even acquires its own mythological genealogy in Richard Brathwaite’s *The Smoaking Age* (1617), a prose romance that portrays the drug as the bastard son of the Roman goddess Proserpine. Tobacco’s association with divinity earned it some controversy—its detractors identified it with paganism, Catholicism, and idolatry—but it reflected the awe and wonder associated with the drug.

Tobacco as Recreation

As tobacco became more popular and smoking became more widely perceived as a social pleasure akin to drinking, literary representations of tobacco took a less reverent turn. In particular, smoking tobacco seems to have had an irresistible comic appeal for early modern dramatists; a seemingly artificial and alien habit, it was associated with young gallants, who were already stock comic characters, and the extravagant claims made for tobacco could easily be turned to parody. Tobacco was on sale in theaters, and a number of writers refer to gallants smoking at plays, and, at the indoor theaters, on the stage itself. In Edward Guilpin’s *Skialetheia* (1598), Cornelius, “that braue **gallant** youth,” “sits o’re the stage, / With the Tobacco-pipe now at his mouth,” while the prodigal in Joseph Martin’s *New Epigrams, and a Satyre* (1621) “desires a Page, / To light Tobacco for him on the Stage.”

Within the plays, dramatic smokers, who are nearly always young men, tend to fall into two groups. Firstly, there are the prodigals, central characters for whom taking tobacco marks their downward spiral into debt and depravity. Polymetes in John Day’s *Law Tricks* (c. 1604) at first spurns smoking, but a sign of his later prodigality is his new-found love for “the Indian punck Tobacco.” The other, larger group of smokers are comic stereotypes, foolish gallants for whom smoking is the most absurd of a collection of outlandish habits. The most fully developed of these include Bobadill in Ben Jonson’s *Every Man in his Humour* (1598); Fastidious Brisk in Jonson’s *Every Man Out of his Humour* (1599), who takes tobacco “as a parenthesis”; Asinius in Thomas Dekker’s *Satiromastix* (1601–1602); the title character in George Chapman’s *Monsieur D’Olive* (1605); Petoune in Edward Sharpham’s *The Fleer* (1606), named after a variety of tobacco; and Laxton in Thomas Middleton and Thomas Dekker’s *The Roaring Girl* (c. 1610). In the satiric playlet *Wine, Beer, Ale and Tobacco* (1616), Tobacco is personified as “a swaggering Gentleman” who swears and brags in the manner of his adherents.



gallant a well-dressed, well-spoken gentleman, attentive to the needs and concerns of ladies, but in a proper way. Rhett Butler is a gallant.

Nondramatic comic genres, such as satire and epigram, tended to follow city comedy in their treatment of tobacco. Poets such as John Davies of Hereford, Sir John Davies, John Harington, Joseph Hall, Henry Parrott, Samuel Rowlands, and John Taylor littered their work with references to tobacco. Their poems have titles such as “Siegnor Tobacco that brave Cavalier” (Jo. Cooke, *Epigrammes* [1604]), “Of a Drunken Tobacconist” (Harington, *The Most Elegant and Witty Epigrams of Sir J. H.* [1618]), “Tobacco Carted to Tyburne” (Rowlands, *More Knaves Yet?* [1613]) and “Of a Tobacco-taking Horse” (John Davies of Hereford, *The Scourge of Folly* [1611]). As in drama, tobacco was usually a comic prop for the gallant, signifying the extent of his urbane depravity. Parrot’s “*Usus Natura*” is typical: its feckless subject takes tobacco “in’s bed till noone,” eats, gets drunk, plays at dice, sees a play, goes to a bawdy house, has his pocket picked, and finally “Drinks more Tobacco, spues, and goes to bed” (*Cures for the Itch* [1626]). Many poems mock the inflated claims made for tobacco: Sir John Davies’s “Of Tobacco,” for example, lists all the ailments which tobacco is supposed to cure, revealing in its conclusion the real reason why young men cultivate the habit: “it the pox wil cure: / This were inough, without discoursing more, / All our brave gallants in the towne t’alure” (*Epigrammes and Elegies* [1599]).

Tobacco and Gender

Because of tobacco’s association with the hot and dry humors linked with men, it was widely identified with masculinity, and its promoters claimed that it could increase manly vigor. Although conflicting accounts suggested that the intoxication it induced could effeminate, enervate, and even bring about impotence, the association of smoking with taverns, drinking, and other arenas of malebonding underlined its status as a firmly masculine activity. Literary representations of tobacco, accordingly, generally attributed it to men and portrayed female smokers as aberrant or excessive. Notable examples include Moll Cutpurse in *The Roaring Girl*, who is pictured smoking a pipe on the title-page of the play (the anonymous author of Moll’s 1662 “autobiography,” *The Life and Death of Mrs. Mary Frith, Commonly Called Mal Cutpurse*, claims that she was the first Englishwoman to enjoy tobacco) and Ursula the pig-woman in Jonson’s *Bartholomew Fair* (1614). The title character in John Davies of Hereford’s epigram “Of Doll’s Taking Tobacco” is sexually incontinent, whereas the “blown-up Fatling” Ebbrezza in Thomas Bancroft’s *The Heroical Lover* (1658) sits “Smoking and quaffing still alternately; / That so being moist and dry by turnes, she might / Tast her Delights with greater appetite.” Despite indications that tobacco was smoked by men and women in the period, tobacco is often portrayed as being disdained by “normal” women. Rosaline in John Marston’s *Antonio and Mellida* (c. 1600), for instance, declares that she will marry “when men abandon jealousy, forsake taking of tobacco, and cease to wear their beards so rudely long” (5. 2. 43-5).

As these examples demonstrate, tobacco played a visible and colorful role in the literature of the time. It appeared throughout contemporary writings as an object of admiration, awe, concern, skepticism, annoyance, and especially irreverent humor. The prominence, ubiquity,

from “On Tobacco”

Pernicious Weed (should not
my Muse offend,
To say Heav’n made ought
for a cruel end)
I should proclaim that thou
created wer’t,
To ruin Man’s high, and
immortal part.
Thy Stygyan damp obscures
our Reason’s Eye,
Debauches Wit, and makes
Invention dry;
Destroys the Memory, con-
founds our Care;
We know not what we do,
or what we are:
Renders our Faculties, and
Members lame
To ev’ry office of our
Country’s claim.
Our Life’s a drunken Dream
devo’y’d of Sense,
And the best Actions of our
time offence.

Our Health, Diseases,
Lethargies, and Rhume,
Our Friendship’s Fire, and all
our Vows are Fume.
Of late there’s no such things
as Wit, or Sense,
Councel, Instruction, or
Intelligence:
Discourse that should distin-
guish Man from Beast,
Is by the vapour of this Weed
supprest;
For what we talk is inter-
rupted stuff,
The one half English, and the
other Puff:
Freedom, and Truth are things
we do not know,
We know not what we say,
nor what we do:
We want in all, the
Understanding’s light,
We talk in Clouds, and walk
in endless Night.

■ CHARLES COTTON (*POEMS ON SEVERAL OCCASIONS*, 1689)

“Tobacco”

Tobacco, Tobacco
Sing sweetly for Tobacco,
Tobacco is like love,
O love it
For you see I will prove it

Love maketh leane the fatte
mens tumor,
So doth Tobacco,
Love still dries uppe the
wanton humor
So doth Tobacco,
Love makes me sayle fro[m]
shore to shore
So doth Tobacco
Tis fond love often makes
men poor
to doth Tobacco,
Love makes men scorne a
Coward feare,
To doth Tobacco
Love often sets men by the
eares
So doth Tobacco

Tobaccoe, Tobaccoe
Sing sweetely for Tobaccoe,
Tobaccoe is like Love,
O love it,
For you see I haue provde it.

■ TOBIAS HUME (*THE FIRST
PART OF AYRES*, 1605)

and variety of its forms in the literature of the time offer a fitting reflection of its complex status in English Renaissance culture.

■ LUCY MUNRO
■ TANYA POLLARD

BIBLIOGRAPHY

- Dickson, Sarah Augusta. *Panacea or Precious Bane: Tobacco in Sixteenth Century Literature*. New York: New York Public Library, 1954.
- Knapp, Jeffrey. “Elizabethan Tobacco.” *Representations* 21 (1988): 27–66.
- Linton, Joan Pong. *The Romance of the New World*. Cambridge: Cambridge University Press, 1998.
- Pollard, Tanya. “The Pleasures and Perils of Smoking.” In *Smoke: A Global History of Smoking*, edited by Sander Gilman and Zhou Xun. London: Reaktion Press, 2004.
- Rustici, Craig. “The Smoking Girl: Tobacco and the Representation of Mary Frith.” *Studies in Philology* 96:2 (1999): 159–179.

Eroticism See Film; Visual Arts.**Ethnicity**

Ethnicity is generally defined as a learned behavior that is transmitted through cultural and social patterns such as norms, values, traditions, social networks, and adaptation to environmental conditions. Although the term “ethnicity” is often used synonymously with the word “race,” a major distinction is that ethnicity emphasizes culture rather than genetic or biological factors to explain disease risks or health outcomes. An **epidemiological** overview of tobacco use among ethnic and minority groups in the United States shows the role of the tobacco industry in promoting consumption among targeted groups.

African Americans

According to the Centers for Disease Control and Prevention, the smoking prevalence among African Americans is approximately 22 percent, and these smokers consume on average twelve cigarettes per day. Smoking prevalence among African Americans is comparable to smoking among all U.S. adults (22.8% among the general population). African Americans born in the United States, however, are more likely to smoke than their foreign born counterparts.

Smoking-related health problems, such as cancers, cardiovascular diseases, and respiratory illnesses, have disproportionately affected African Americans compared to other ethnic or racially classified social groups. African American adolescents are more likely to begin smoking

epidemiological pertaining to epidemiology, that is, to seeking the causes of disease.

at later ages, and smoking prevalence among African American youth is significantly lower than that of white, Hispanic American, or American Indian adolescents. However, as adults African Americans smoke at rates similar to whites, but are less likely to quit smoking over their lifetime. These, and other factors, contribute to tobacco-related health disparities (unequal health status).

Asian Americans

Seven of the 10 leading causes of death in Asian Americans are related to smoking. Smoking prevalence has generally decreased among Asian Americans since 1980 (including Pacific Islanders) and was 12.4 percent in 2001 (excluding Pacific Islanders). Similar to the general U.S. population, Asian American smoking prevalence tends to be highest in the twenty-five- to forty-four-year age group.

Asian American women consume considerably fewer cigarettes than Asian American men. However, substantial variation in smoking occurs among Asian American subgroups. Studies indicate that Chinese Americans have the lowest (11.7%) and Korean Americans have the highest (23.5%) overall smoking prevalence among Asian Americans.

Hispanic Americans

Hispanic Americans are the largest ethnic minority group in the United States, and their smoking prevalence is approximately 17 percent, which is due primarily to low cigarette use (12%) among Hispanic American women. Hispanic Americans consist of several diverse cultural groups of which Mexican Americans comprise the largest proportion. Cuban Americans and Puerto Ricans are more likely to be smokers than Mexican Americans.

Hispanic men smoke at rates slightly lower than white men (21.6% and 25.4% respectively). Hispanic Americans are more likely to smoke during adolescence (26.6%) compared to African Americans (14.7%) and Asian Americans (12.6%). Studies have found that acculturation (preferred language and ethnic self-identification) is associated with increased smoking among Hispanic women, but not men.

Native Americans

Among the main ethnically or racially classified social groups in the United States, Native Americans (including Alaskan Natives) have the highest prevalence of cigarette smoking (32.7%), and this proportion has been steadily increasing since 1983. Native American populations also show a significantly higher prevalence of smokeless tobacco use than other groups.

Native American adolescents smoke in greater proportions than all other youth (approximately 41.1% of boys and 39.4% of girls by twelfth grade). Less stringent laws governing the sale and promotion of tobacco products on reservations have contributed to greater access by minors to tobacco products and a lower average age of initiation for Native American youth than other populations.

The importance of tobacco in the Native American culture (excluding Alaskan Natives) often presents an enormous challenge in promoting



African-American couple in advertisement for R.J. Reynolds product Uptown menthol cigarettes, a brand made specifically with black smokers in mind. Opposition to the campaign in Philadelphia in 2003 forced Reynolds to cancel plans to test market the cigarettes there. AP/WIDE WORLD PHOTOS



conventional antitobacco messages. In this regard, some studies have suggested that antismoking messages from family members may be most effective in curbing adolescent smoking.

Tobacco Industry Marketing and Ethnic Minority Groups

The tobacco industry has a long history of targeting ethnic and racial minority groups through advertising and funding of community events and organizations. A study of leading African American magazines revealed that tobacco company advertisements appeared more frequently when compared to other types of magazines. Targeted advertising has been employed to promote the use of mentholated (**menthol**) cigarettes by African Americans. Researchers estimate that approximately 75 percent of African American smokers prefer mentholated cigarettes.

Japan Tobacco Inc. has marketed its top-selling brand to Asian Americans as being the cigarette manufactured “by Asians for Asians.” For the Hispanic American community, tobacco companies have created



menthol a form of alcohol imparting a mint flavor to some cigarettes.

products with Spanish brand names. According to the Centers for Disease Control and Prevention, the tobacco industry has been highly effective in promoting smoking among Native Americans by funding cultural events such as powwows and rodeos, as well as by using Native American cultural symbols to promote certain tobacco products. By associating their product with positive images of ethnic pride, history, and aspirations, tobacco companies attempt to secure a market niche, increase social acceptability, and expand the use of their products.

Other ethnic populations whose rates of smoking and use of tobacco products are substantial include Pacific Islanders and Alaska Natives. These groups are often classified with either Asian Americans or Native Americans. Additional research that focuses on these smaller populations, as well as social differences within the larger ethnic or racially classified social groups, is needed.

See Also Advertising; Consumption (Demographics); Menthol Cigarettes; Women.

■ GARY KING
 ■ TAMIKA GILREATH
 ■ STEPHANIE MOLLER

BIBLIOGRAPHY

- Griesler, Pamela C., and Denise B. Kandel. "Ethnic Differences in Correlates of Adolescent Cigarette Smoking." *Journal of Adolescent Health* 23 (1998): 167–180.
- King, Gary, et al. "Cigarette Smoking Among Native and Foreign-Born African Americans." *Annals of Epidemiology* 9 (1999): 236–244.
- Ma, Grace X., and George Henderson, eds. *Ethnicity and Substance Abuse: Prevention and Intervention*. Springfield, Ill: Charles C. Thomas, 2002.
- Perez-Stable, Eliseo J., et al. "Cigarette Smoking Behavior Among U.S. Latino Men and Women from Different Countries of Origin." *American Journal of Public Health* 91 (2001): 1,424–1,430.
- U.S. Department of Health and Human Services. *Tobacco Use Among U.S. Racial/Ethnic Minority Groups—African Americans, American Indians and Alaska Natives, Asian Americans and Pacific Islanders, and Hispanics: A Report of the Surgeon General*. Atlanta, Ga: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 1998.

Europe See British Empire; Caribbean; Chesapeake Region; Cuba; Dutch Empire; French Empire; Globalization; Portuguese Empire; Spanish Empire; Trade.



Film

Backstage, hair falling flirtatiously into her face, Louise Brooks (as Lula in *Die Büchse der Pandora*, 1929) smokes, poised to expose her current lover. She is a woman who ruins men by sheer force of feminine wiles. Marlon Brando wields a cigarette with equal power in *The Wild One* (1954) as a gang leader who terrorizes a small town, charting anxiety both about the opaque discontent of youths and about masculinity run amok. In countless films throughout cinema history, smoking highlights the **hyperbolic** construction of gender that creates stars and sex symbols. But smoking is not gender specific, signaling femininity, masculinity, and androgyny, the latter most famously encapsulated by Marlene Dietrich. Likewise, smoking—tobacco’s most **ubiquitous** and visual form—can represent all kinds of opposing characteristics and social relationships, even within the same film.

In *The Big Heat* (1953), a classic of **film noir** (a genre known for its atmospheric use of smoking), cigarettes are signs of both servitude within the criminal chain of command and domestic happiness and equality. Fat cigars dangle from the mouth of the hands-on hit man, marking his illegitimate power and wealth. And cigarette burns appear on the corpse, signaling the sadistic thrill that accompanied the murder. The cigarette burns on the dead body, the disfiguring coffee burns on the hit man’s girl, and the titular “heat” (or attention) focused on the investigation further extends the metaphorical reach of tobacco, emphasizing it as a product that burns. Tobacco is transformed from a material substance to smoke, an abstract signifier of indeterminate meanings.

One might be tempted to conclude that tobacco is cinema’s floating signifier, malleable enough to mean anything. If this were true, one would expect the use of tobacco to be historically determined, having different meanings, for example, when women smoke in the silent era, prior to ratification of the nineteenth amendment in 1920 guaranteeing women universal suffrage, and when they smoke in the blockbusters of the 1990s and 2000s. One would expect tobacco to have one meaning before the dangers of smoking have been exposed, and another meaning after 1950 when a major **epidemiological** study definitively linking smoking to lung cancer was published in the *Journal of the*



hyperbolic exaggerated; overstated.
ubiquitous being everywhere; commonplace; widespread.



film noir (literally “black film”) refers to the dark looks and themes of many American gangster and detective movies of the 1940s and 1950s. Wreaths of cigarette smoke were a common characteristic of these films.



epidemiological pertaining to epidemiology, that is, to seeking the causes of disease.



German-born actress Marlene Dietrich smokes a cigarette while wearing top hat and tails. In film, smoking is used to suggest rebelliousness, femininity, masculinity, and even androgyny. Dietrich famously embodied all of these characteristics.

© HULTON-DEUTSCH COLLECTION/CORBIS

American Medical Association. But this does not turn out to be the case. Although tobacco depiction in cinema fell through the 1970s and 1980s, it increased significantly after 1990 despite questionable tobacco industry claims that its campaign to place their products in movies had ended.

One might expect the cinematic uses of smoking to shift with fluctuations in product placement trends, becoming more “positive” to satisfy industry demands. However, treatments of smoking in cinema have changed more in degree than in kind. Big tobacco has been mostly concerned with preventing antismoking groups from positioning smoking as unfashionable, with preventing Hollywood from presenting tobacco as a cause of health-related suffering, and with preventing Hollywood from portraying smoking as an activity practiced among people in the lower socioeconomic sphere. Indeed, films regularly used stars to glamorize smoking. However, films that depict criminals and destructive rebels as smokers can be “positive” (that is, sexy) even when linked to death and destruction. The tobacco industry’s involvement in promoting its products in film has not resulted in significant shifts in the meanings it generates, no more than the scientific knowledge about its dangers has altered smokers’ perceptions that tobacco was addictive or

compromised health, though the industry's efforts have been linked to increased numbers of smokers.

Therefore, the tobacco industry's influence in determining the meaning of smoking in cinema history remains speculative. Yet, smoking has consistently been one of cinema's most efficiently evocative props, motifs, structuring devices, and emblems because smoking always occupies a range of easily legible meanings that have been surprisingly stable throughout its history. It operates in completely predictable ways, functioning as a cliché, confirming conventional wisdom and received knowledge. From the beginning of cinema history, tobacco flags weakness, power, rebellion, destruction, glamour, and sex. What cautions against concluding that tobacco can mean anything is that all of the meanings on this list share something in common, namely a certain relationship to limits and borders, the special relationship to death that smoking possesses, which has been so elegantly articulated by Richard Klein in *Cigarettes Are Sublime* (1993) as the intimation of mortality.

The Femme Fatale

Tobacco and smoking have played a role in films that span 100 years of history, as many U.S. and foreign films show. Perhaps the most noteworthy cinematic example is the character of the "vamp," a figure whose smoking flags the same set of meanings in films from 1915 through 2003. The term *vamp* was coined to describe the silent film star Theda Bara, in her first appearance in the silent film *A Fool There Was* (1915). The word itself is an abbreviation of the word "vampire," a creature that drains another's vital resources, a creature whose curious ontological status—the undead—challenges the limits of mortality toward which smoking always hints. Although tobacco makes just two appearances in this film, they are significant, especially considering how heavily silent film relies on props.

The "fool" of the title, John Schuyler (Edward José), is one of the film's only smokers. Walking cheerfully arm in arm with the vamp, he is utterly unaware of his fate. The viewer, however, has been forewarned: He is smoking, generating clouds of smoke signaling pleasure. The vampire casts a kind of spell over him (the trance typical of vampire narratives), causing him to forget everything he held dear. While his wife waits and wonders, the vampire drains him financially. She is eventually installed as his official mistress, and not even the sight of his child can rouse him from his stupor. He loses both family and position.

The other smoker in the film is the vampire herself, who smokes with the same kind of casual, indifferent deliberateness (in the face of social indignation) that characterizes her destruction of men. However, she does not smoke throughout the film, but in a particular location, forging a link between smoking and the townhouse in which the fool "keeps" her; smoking belongs to the illicit dwelling for which he has sacrificed life as he has known it. Further, it is an attribute of weak men and the women who destroy them by manipulating their desire both here and in femme fatale films over the entire course of cinema history.

In 1932, in Josef von Sternberg's *Blonde Venus*, the vamp plot was modified, but tobacco still signifies weakness, power, desire, and destruction, differently wielded by different characters, but always configured



Cinema assigns malevolent and benevolent meanings to cigarette smoking, and even to the smoke itself. The villainess Cruella De Vil (voiced by Glenn Close) of Disney's 1996 film *101 Dalmatians* uses the smoke from her cigarette holder to symbolically envelop her canine targets (left). Real-life star Miriam Hopkins (right) also sports a cigarette holder, but represents the desirable glamour of 1950s Hollywood.

THE KOBAL COLLECTION

around the exchange of money and sex. The millionaire Nick Townsend (Cary Grant), to whom Helen Faraday (Marlene Dietrich) prostitutes herself to pay for her husband's medical treatment, smokes confidently, with easy, calm self-satisfaction. The husband (Herbert Marshall), on the other hand, has real needs, medical and emotional. He smokes desperately and frantically. Helen, who, in her final stage performance—in her famous androgynous costume of white suit, top hat, and cigarette in long holder—is icy, detached, shut down, and smoking as part of her act. How one smokes and what one smokes is important in determining meanings, but the range of possible meanings remains limited.

By 1979, in Rainer Werner Fassbinder's *Die Ehe der Maria Braun* (*The Marriage of Maria Braun*), the use of tobacco had been enhanced and extended, but its meanings remained stable. This film uses tobacco to show that the economic and political and even emotional recovery from fascism relied on prostitution. Maria Braun (Hannah Schygulla) has been married to Hermann Braun exactly a half a day and a single night before he is sent to war. His absence enables every sort of sexual intrigue. The role of tobacco as a marker for prostitution, moral and economic, is established early on, as Maria finds herself the object of insulting insinuations by a group of American soldiers. The offense, of course, is the suggestion that Maria is an available sexual object. Confronted by Maria, one soldier makes amends, giving her a pack of cigarettes. But in his attempt to mitigate the offense the soldier repeats it, proving, with the cigarettes, the implicit claim that Maria can in fact be bought. Maria then literally sells herself to the appetites of foreign men first as a dancer in an American nightclub, and afterward as the secretary/mistress of a French businessman.

The weakness of the men, evidenced by their desperate, addictive, compensatory relationship to Maria and tobacco (Hermann diving toward the pack of cigarettes at the very moment that he catches his wife with another man), stands in contrast to Maria's own use of cigarettes, which is deliberate and controlled. Maria tells men that she doesn't smoke, withholds when necessary, and smokes as she likes. As the

postwar German, Maria reverses her nation's xenophobic principle but not its ill effects, getting close enough to foreign men to use them up and dispense with them. Fassbinder punishes her at the end, when, finally reunited with her husband, she explodes as she lights a cigarette from her gas stove.

The Rebel

Smoking mobilizes the same set of meanings to describe the rebel as it does to describe the vamp. In *Rebel Without a Cause* (1955) tobacco is used as sparingly, pointedly, and significantly as in *A Fool There Was*. Jim Star (James Dean), the bravest kid in town, is a milk-drinker, not a chain smoker. *Rebel* depicts a world in which no one gets what he or she needs. The generation gap is insurmountable. Gender roles are in crisis. The social order depends on both repressing sexuality on the one hand and exaggerating its danger on the other. Against the background of the desperation that the 1950s ethos provokes, tobacco appears three times. Once, it appears to characterize Star's heartthrob as a "bad girl." Later, the father's rejected cigars mark the weakness of the paternal position. Finally, tobacco appears as a symbol of reckless abandon in a world where kids risk their lives both as a point of honor and to alleviate boredom. A cigarette dangles casually on Star's lips as he prepares to drag race to the cliff's edge, in a test engaging the absolute border between life and death.

This border is explicitly invoked in the best-known film of the French New Wave. The first and last shot of Jean-Luc Godard's *À bout de souffle* (*Breathless*, 1960) are of cigarettes. The gangster rebel, Michel Poiccard (Jean-Paul Belmondo), smokes in imitation of his hero, Humphrey Bogart, one of the most famous smokers of all time. In the last scene of this film, he runs from the law, cigarette in mouth. Falling to the ground as he is shot, Michel exhales smoke with his last breath. David Lynch's *Wild at Heart* (1990) chooses the other side of the border, reversing *Breathless*. Chased down by thugs, Sailor Ripley (Nicholas Cage) lights up. Armed with the cowboy brand, Marlboro, he provokes his attackers, has an epiphany, and runs from the fight to deliver his marriage proposal.

The Vamp as Rebel

In *Basic Instinct* (1992) tobacco has a central role in propelling the plot, in defining the characters, and in presenting the overarching themes of the film. The first scene in which Catherine Tramell (Sharon Stone) appears shows her smoking as the police approach her for questioning about a murder. The way she smokes—drawing on the cigarette and flicking it away—immediately establishes her character in terms of taking and extinguishing pleasure, taking and extinguishing a life. As the film progresses, the use of tobacco marks the endpoint of defiance, destruction, and self-abandon pushed to their limits in both homicidal and suicidal gestures. As a writer of murder mysteries whose fictions become enacted, Tramell's authorial power is given a demonic slant. She knows that police detective Nick Curran (Michael Douglas) has smoked before, but her prediction that he will smoke again makes her erotic power, like the addictive power of tobacco, mechanistic and inevitable.



Actor James Dean smokes a cigarette in a scene from *Rebel Without a Cause*, 1955. Although Dean actually smokes infrequently in the film, the dangling cigarette of promotional posters helps construct Dean as the unforgettable icon of youthful rebellion. © BETTMANN/CORBIS

Humphrey Bogart and the Double Masculine Ideal

Actors like Humphrey Bogart helped to glamorize smoking by forging the link between cigarettes and a double masculine ideal, that of the gangster and that of the soldier. On the one hand, Bogart is always partly the gangster of his first breakthrough role in *The Petrified Forest* (1936), above or outside the law, unconstrained by fear. On the other hand, Bogart is the soldier whose actual experience in the Navy left him with a scarred and partly paralyzed upper lip to which his smoking drew attention. In this case, masculinity is aligned with law, nationalism, and the ideal of manly self-control. *Casablanca* (1943), where Bogart's smoking is as relentless as his appeal, contains both versions of masculine glamour. When the film opens, Bogart embodies the amoral, or apolitical, gangster model. At its close, he has adopted the manly ideal of self-restraint, renouncing a woman to struggle against the Nazi occupation. He navigates this range with a cigarette clasped firmly in his fist.

"Killing isn't like smoking; you can quit," says Tramell, whose flippant remark proposes smoking as a basic instinct. But the question is not whether a person can quit (smoking, desiring, or killing) but *who* is smoking, desiring, or killing. Given the importance of identity and identification in this film, the question of tobacco as a marker for homosexual identity is also relevant, especially given the intense criticism leveled against the film by gay and lesbian communities. Smoking flags the danger that comes from defying social rules. That is, Tramell's smoking in the police station where it is expressly forbidden is analogous to her rejection of the heterosexual imperative. That her lesbian and bisexual objects both end up dead casts her crossing of social-sexual borders, marked by smoking, as a matter of life and death.

The "Human"

This is the border to which each use of tobacco refers, here and across the spectrum: in silent film, in classical narrative cinema, in European art film, and in the Hollywood blockbuster. In each allusion to this border, achieved by a puff of smoke, a deep inhalation, or the flick of an ash, a standard set of meanings is flagged. Sex, destruction, and rebellion announce themselves as having independent and self-sufficient meanings. But the limitation of life and death that tobacco addresses can be further specified as the limit of what it means to be human. Von Sternberg's blonde Venus begins with such a specification when, in the first sequence, a young man asks his friends, "Anyone around here human enough to give me a cigarette?"

In one of the most important examples of product placement in film by the tobacco industry, *Superman II* (1980) uses cigarettes to delineate the human. Although the Lois Lane of the comics was never a smoker, she becomes one in this film. Despite her role as Kent/Superman's (Christopher Reeve) love object, Lois's (Margot Kidder) smoking does not propose her as desirable to the viewer. But it makes her desirable to Kent by signifying her absolute otherness as a sophisticated, neurotic, big-city, chain-smoking journalist, while he is shy, awkward, naïve, and wholesome. Lane indulges in risky, unhealthy, delicious behaviors: spying on terrorists and eating hamburgers with all the condiments at 9:00 A.M. But her smoking also marks her difference from Superman by signaling her humanness, the difference of her body's fragility from Superman's invulnerability.

Similarly, in a film permeated by an atmosphere of smoke and mist, *Blade Runner* (1982) blurs the limits between the android and the human. In the most advanced "replicant" model, memories are implanted into Rachael (Sean Young), constructing a history for her that makes her believe that she is human. The fact of her smoking is evidence of her belief in her own humanity, a humanity in which the viewer too becomes convinced, faced with her soulful expression, and her deep inhalation of smoke. Here, as elsewhere, the sexuality, rebellion, and destruction that emerge with each act involving tobacco are an eruption of vulnerability and a refusal of limits against which one establishes one's identity, a refusal that establishes what the limits, for the moment, still are.

If the films of the last decades of the millennium employ tobacco to ask about ultimate limits and borders, between life and death, and

between the human and the non-human, tobacco now has another purpose. Now that smoking is banned from public places in New York City, as well as California, Hollywood produces a movie that uses tobacco to ask if we really know what we think we know. Sophia Coppola's *Lost in Translation* (2003) returns us to the inquiries that were left in abeyance half a century ago. It is a film in which smoking is arguably the main action, a film where nothing really happens except recasting the moral question "What is good for you?" as an existential one. The story is told from the point of view of two Americans, Charlotte (Scarlett Johansson) and Bob Harris (Bill Murray), who cross paths in Japan, where their cultural alienation magnifies their existential alienation. The characters for whom health is cast as a moral question are made to seem simplistic to the point of absurdity. Charlotte's photographer husband John (Giovanni Ribisi) introduces the health question in what seems to be a reasonable, if conventional, way: "Would you please stop smoking? . . . It's just so bad for you" But the reasonableness of his position is quickly undermined by the ridiculousness of the value of "health" as articulated by an attractive blond starlet whom he has shot. While the starlet explains how good it feels to get rid of toxins by "power cleansing," and how flattering it is to be mistaken for an anorexic, Charlotte, who majored in philosophy, smokes thoughtfully.

Less interested in health than in the philosophical question of what is good for you, *Lost in Translation* also asks whether being good is good for you, and even whether feeling good is good for you. The sympathy in this film is reserved for the smokers, who, without moralizing about "health," take care of each other with great tenderness. Charlotte and Bob use smoking in a conventional way (to mediate a kind of seduction, and eroticism, to indicate the possibility of adultery) in order to emphasize an inquiry that is somewhat less conventional, at least today. Smoking, an activity that marks the passage between exterior and interior, is still a good metaphor for subjectivity. It is both a sign of alienation and a momentary cure for it. *Lost in Translation* exposes "health" as a fantasy about happiness and control that occludes the inwardness, nothingness, longing, and loss that enable unlikely moments of connection. Smoking is the film's vehicle for appreciating a border less dramatic than that of life and death, but no less human: the border between abandon and restraint where intimacy plays out, where little nothings of events, like wisps of smoke, move us, make a claim on us, and change us.

See Also Literature; Visual Arts.

■ DAWN MARLAN

BIBLIOGRAPHY

- Gately, Iain. *Tobacco: The Story of How Tobacco Seduced the World*. New York: Grove Press, 2001.
- Isenberg, Noah. "Cinematic Smoke: Notes on a Cultural Icon from Weimar to Hollywood." In *Smoke: A Global History of Smoking*. Eds. Sander L. Gilman and Zhou Xun. London: Reaktion Press, 2004.
- Klein, Richard. *Cigarettes Are Sublime*. Durham, N.C.: Duke University Press, 1993.



- Marlan, Dawn. "Emblems of Emptiness: Smoking as a Way of Life in Jean Eustache's *La Maman et la Putain*." In *Smoke: A Global History of Smoking*. Eds. Sander L. Gilman and Zhou Xun. London: Reaktion Press, 2004.
- Mast, Gerald, and Bruce F. Kawin. *A Short History of the Movies*. Boston: Allyn and Bacon, 2000.
- Mekenson, C., and S. A. Glantz. "How the Tobacco Industry Built Its Relationship with Hollywood." *Tobacco Control* (11 March 2002): i81–i91.–.
- Shields, D. L., et al. "Hollywood on Tobacco: How the Entertainment Industry Understands Tobacco Portrayal." *Tobacco Control* 8 (Winter 1999): 378–386.
- Stockwell, T., and S. Glantz. "Tobacco Use in Increasing Popular Films." *Tobacco Control* 6 (1997): 282–284.



Fire Safety

Every year, fires caused by cigarettes result in billions of dollars in property damages, health care costs, lost productivity, and fire and emergency services. These fires burn homes, killing children and families; burn buildings and factories; and devastate city blocks, entire villages, and enormous tracts of forestland and other wilderness. Many cigarette-induced fires occur when a mattress or furniture is ignited while people are asleep or intoxicated. As a result, cigarette fires are disproportionately responsible for fire-related deaths. Cigarettes are the leading cause of fire death among the industrialized western nations. An estimated 30 percent of fire deaths in the United States (approximately 1,000 people a year) and 10 percent of all fire deaths globally are attributable to smoking.

The call to develop a fire-safe cigarette dates back more than a hundred years, as a result of the common association between smoking and fire-related disasters, but was intensified in the 1970s with increasing public awareness and press coverage of the issue. A fire-safe cigarette would be designed either so that it would be less likely to ignite materials with which it remained in contact as it burned or so that it would self-extinguish when left unused for an extended period. Internal industry documents demonstrate that the tobacco industry has pursued fire-safe research for decades and developed dozens of prototype cigarettes. According to internal research made public by the U.S. television program *60 Minutes*, the cigarette manufacturer Philip Morris embarked on a fire-safe program in the 1980s called Project Hamlet (in reference to an internal company joke, "To burn or not to burn"), which ultimately resulted in a consumer acceptable fire-safe cigarette. This product and others developed by tobacco manufacturers internally never reached the commercial market, most likely due to cost and product liability concerns.

A three-year review by a fifteen-member panel convened through U.S. legislation, including representatives of the federal government, public health community, fire safety groups, and the tobacco industry, concluded in 1987 that a fire-safe cigarette was both technically and economically feasible. The report also identified several cigarette design factors important to reducing the likelihood of ignition, including the use of **expanded tobacco**, reduced **citrate** in cigarette paper, low paper permeability, and decreasing cigarette circumference.



expanded tobacco a term used to describe cut tobacco leaf that is treated by an expansion process, usually using dry ice, to increase its bulk.

citrate a derivative of citric acid. Many citrates such as magnesium citrate, potassium citrate, and aluminum citrate are present in cigarettes and cigarette smoke.



Smoked tobacco, especially cigarettes, is a major cause of household fires. New York is one state that has used fire safety as a rationale for enacting product safety standards for cigarettes. © LAYNE KENNEDY/CORBIS

Publicly, the tobacco industry has opposed fire-safe cigarette legislation, claiming that fire-safe cigarettes are unacceptable to consumers, that no testing method can accurately predict whether a cigarette is fire-safe, and that proposed changes would likely increase product toxicity. According to internal documents, the industry successfully neutralized political opposition by making generous grants to fire service organizations and fire departments, supporting fire safety programs, and shifting public discussion to broader fire safety issues. Because much of the information distributed on fire deaths originates from fire department and fire safety organizations, tobacco industry influence on these organizations has had a large effect on the dissemination of information within the general media.

The state of New York passed legislation requiring sale of fire-safe cigarettes starting in July 2003. However, enforcement of the law has since been delayed, with no clear indication of when manufacturer compliance can be expected. In 2000 Philip Morris introduced a fire-safe paper technology to their Merit cigarettes, which caused the cigarette to self-extinguish when left to burn on its own. Although initial market surveys were extremely positive, the company now claims that the product has been a commercial failure, resulting in increased complaints and reduced purchases.

Overall, little progress has been made. New regulations are being considered in Canada, Australia, and the European Union, but these countries face similar challenges to those demonstrated in the United States. In the absence of enforced legislation, it is unlikely that a fire-safe cigarette will ever become standard commercially.

See Also Cigarettes; Product Design.

■ GEOFFREY FERRIS WAYNE

BIBLIOGRAPHY

Gunja M., et al. "The Case for Fire Safe Cigarettes Made through Industry Documents." *Tobacco Control* 11, no. 4 (December 2002): 346–353.

Leistikow, Bruce N., Daniel C. Martin, and Christina E. Milano. "Fire Injuries, Disasters, and Costs from Cigarettes and Cigarette Lights: A Global Overview." *Preventive Medicine* 31, no. 2 (2000): 91–99.

McGuire, Andrew. "How the Tobacco Industry Continues to Keep the Home Fires Burning." *Tobacco Control* 8 (March 1999): 67–69.

Fitness See Appetite; Body.




French Empire

The French cleric and colonial traveler André Thevet, returning from Brazil, introduced tobacco seeds into France in 1556. The plant, however, was already being smoked and chewed in the port cities of France, not by wealthy seekers of exotic New World luxuries, but by sailors. Even after spreading beyond the ports, tobacco was at first associated with peasant herbal cures and remedies, particularly for its power to stave off hunger. Tobacco became popular among the French aristocracy when Jean Nicot, the French ambassador to Portugal, prescribed **snuff** for Catherine de Médicis's headaches in 1561. Shortly thereafter, tobacco quickly became a staple of French gardens.

The omnipresence of tobacco in the early 1600s allowed the habit of its consumption to take firm root in France at the dawn of the **colonial age**. The French Crown's desire to exploit this market in addition to a growing export market of tobacco products manufactured in France drove French colonial policy for two centuries, often at the expense of prosperity in the colonies themselves.


The First French Tobacco Colonies: 1631–1664

The profits reaped from tobacco among French Caribbean traders convinced France's prime minister under Louis XIII, Cardinal Richelieu, to charter Compagnie Des Isles d'Amérique in 1631 to develop Caribbean bases of tobacco production. The Compagnie Des Isles d'Amérique dues to the Crown were to be paid in kind, specifically in tobacco leaves of the first quality. The first French settlers at Saint Christopher (1628) and Martinique (1635) were tobacco farmers, and French colonists who could not pay for their passage from France were required to reimburse the company upon arrival with two to three years of labor preparing and rolling tobacco leaves. To promote these French colonial settlements, Richelieu instituted a new and heavy tax on tobacco originating from non-French colonies in 1629, but frustration with the **contraband trade** together with the crown's financial needs and the allure of tobacco profits drove Richelieu to promulgate a more comprehensive tobacco tax in 1632, this time imposing taxes and other duties on all tobacco of any origin whatsoever. Nonetheless, producers could often get higher prices by selling illegally to Dutch and English traders rather than to the Crown's company, resulting in a contraband trade that quickly overtook legitimate sales to French vessels, and thus tobacco cultivation grew rapidly on the islands in spite of the heavy taxation.



snuff a form of powdered tobacco, usually flavored, either sniffed into the nose or "dipped," packed between cheek and gum. Snuff was popular in the eighteenth century but had faded to obscurity by the twentieth century.

colonial age generally, the period of European colonization in the New World, circa 1490s–1820s. In United States history, c. 1580s–1780s.



contraband trade traffic in a banned or outlawed commodity. Smuggling.



Gauloises is an international brand of the French company SEITA. In 1999, SEITA merged with the Spanish national tobacco company Tabacalera to form a new multinational company, Altadis. PHOTO BY ANNA WHITE

By 1638, with French **plantations** in Guadeloupe and English production spreading in Virginia, the European market became satiated, sparking a decline in prices. In an effort to maintain tax revenues, the Crown set a limit on the maximum area planters could cultivate, at one point demanding that planters on Saint Christopher destroy all their tobacco plants. In 1664 various taxes accounted for 50 percent of the retail cost of Antilles tobacco. These limitations to the profitability of tobacco curbed its appeal for colonists, and new crops such as sugar and indigo slowly supplanted tobacco in the French Caribbean, with twice as much cultivated land devoted to sugar as to tobacco in 1671. While French planters in Madagascar, Guinea, and Senegal found that tobacco acclimatized well, the Crown preferred to supply Africa with American tobacco in exchange for slaves.

The Royal Monopoly: 1664–1718

In 1664 the French minister of finance under Louis XIV, Jean-Baptiste Colbert, as part of his reorganization of France's economic system, created the French West India Company, which held a monopoly on colonial production and trade. In 1674, after the French West India



plantation historically, a large agricultural estate dedicated to producing a cash crop worked by laborers living on the property. Before 1865, plantations in the American South were usually worked by slaves.

Company folded, Colbert established a tobacco monopoly, farmed to a private director and carrying the exclusive rights of purchase and the power to set prices, which lasted until 1791. Domestic commercial tobacco production, which had begun in the 1620s and had grown throughout the first half of the seventeenth century, allowing France to actually export tobacco, notably to Holland, by the 1660s, was banned in most of the country, excepting limited production in the newly acquired provinces of Alsace, Franche-Comté, Artois, Flanders, Hainaut, Cambrésis, and Corsica. This funneling of tobacco production to the colonies was aimed at making it easier to control and tax by placing production in the hands of colonists, thought to be more beholden to the Crown than were the entrenched landowning nobility in the French provinces. Because it limited tobacco's legal entry into the kingdom to a small number of ports, the monopoly enraged French growers and locked the colonies into a tobacco trade that was designed and administered not for their well-being but for the profit of the Crown.

Production on the islands was so severely restricted in order to drive up prices that in 1680 Guadeloupe and Martinique, once hubs of European tobacco production, actually had to import tobacco for local consumption. In the same year, the tobacco monopoly was transferred to the *fermes générales* (united farms), the central system of five state-controlled monopolies, and leased to a succession of collectors. The settlers of Saint Domingue, who had escaped earlier royal regulation and thrived on tobacco production, revolted in the first year of the monopoly, and many immigrated to English, Portuguese, and Spanish islands. These conflicts, combined with high shipping costs due to distance and the bulky nature of the tobacco leaves, led to the near complete disappearance of tobacco in the French West Indies by 1700. In France, even a 50 percent **duty** on tobacco imported from English colonies was not enough to stem the tide of tobacco from Virginia and Maryland into the country, both legal and contraband. During Colbert's ministry, smuggling accounted for no less than two-thirds of the tobacco consumed in France.



duty a tax, usually a tax on certain products by type or origin. A tariff.

Tobacco in French North America: 1718–1763

In 1718 the French royal government fixed its colonial ambitions in the Mississippi Valley, and a universal French monopoly on tobacco production was ceded to the Scottish financier John Law for his Louisiana venture, the *Compagnie d'Occident* (becoming the *Compagnie des Indes Orientales* in 1719). Though potentially the most profitable crop for the new colony, tobacco in Louisiana followed the pattern of the colony as a whole. As the French colonial philosopher Abbé Guillaume Raynal noted in 1770, the private monopoly of Law and his agents led to transient and shortsighted development strategies. The resulting patchwork of fields and settlements were handed out to the hodgepodge of colonial settlers arriving from France, and no system of centralized supply and control was established. Combined with the major losses from spoilage on the long crossing from New Orleans, these problems led to a net loss to the *Compagnie des Indes Orientales* from tobacco trade of between 7 and 8 million livres between 1721 and 1731.

After a failed attempt in 1728 to sow Virginia seed in Louisiana resulted in a disastrous crop, Law's company admitted defeat and ceded the tobacco monopoly back to the united farms. The French Crown continued to promote tobacco cultivation in the colonies until the loss of Canada to

England and Louisiana to Spain in the Seven Years' War (1754–1763), but the essential problems that had driven tobacco out of the French Caribbean continued to hamper these efforts. From 1731 to 1763, Louisiana produced merely one shipload of tobacco per year, in spite of the Crown's increasing reliance on tobacco revenues, now overwhelmingly from taxing Chesapeake tobacco imported by English merchants. This is evident in the following table (Price), which shows percent of total revenues of the French Crown from tobacco during the eighteenth century:

1715	1.2%
1756	5.0%
1763	7.0%
1768–1769	7.3%
1776	6.4%
1788–1789	6.4%

The Revolutions and French Tobacco Policy: 1765–1830

French tobacco interests had for so long been beholden to the English colonial producers that they saw the American Revolution as a unique opportunity to gain control of the American tobacco trade. In 1785, the French Crown granted a monopoly for the American tobacco trade to Robert Morris, financier of the American Revolution and signer of the Declaration of Independence. By 1787 the United States dwarfed all other sources of tobacco in France, as is evident in the following table (Price) showing the origin of French tobacco in 1787 in millions of French pounds:

U.S.A.	Great Britain	Holland	French Colonies
32,043	3,814	3,613	803

Indeed, 80 percent of tobacco sold by the French tobacco monopoly in its last years came from the United States, and tobacco alone amounted to 76.4 percent of French imports from the United States, accounting for 25 percent of American tobacco production.

Americans, led by Thomas Jefferson, negotiated throughout the 1780s to eliminate the tobacco monopoly, which they believed hindered Franco-American trade, but only on 29 January 1791, after a year of debate at the National Assembly, was the tobacco monopoly, hated symbol of the old regime's brutal taxation of the peasantry, eliminated. Napoleon Bonaparte replaced the revolutionary tax with a direct state monopoly called the *régie* in 1810. Napoleon, himself an avid snuffer, saw the tobacco tax as a crucial resource for rebuilding the state and enforced it with an effectiveness never before achieved in France. The spread of Napoleon's empire through Europe created a broader market for French tobacco products, and revenues from tobacco fuelled the expansion.

After 1830: A Colonial Business Comes Home

Beginning in 1816, tobacco cultivation was reauthorized in France, first in selected regions but growing steadily to 105,000 producers in fifty-five departments by 1950. Though tobacco cultivation had ceased to be a motive in French colonial development or a significant import from French colonies, tobacco manufacture and distribution became central to France's



colonial economy throughout the nineteenth century. In 1843 control of every phase of cigarette manufacture was added to the state monopoly, guaranteeing an unobstructed revenue stream as well as products of notoriously poor quality. By 1868 the *Regie* controlled the entire tobacco industry in France and its colonies, producing 400 million cigarettes a year.

After the French defeat in the Franco-Prussian War in 1870, France redoubled its colonial expansion in Africa, building on the colonies of Algeria and Senegal and adding Morocco and Tunisia, as well as numerous West African territories. During this period of expansion, lasting until the 1920s, French African colonies served not primarily as producers but as sources of labor for the manufacture of tobacco products, especially cigarettes. The industrialization of tobacco products encouraged cigar and cigarette consumption over pipe and other forms less amenable to centralized, mass production and distribution.

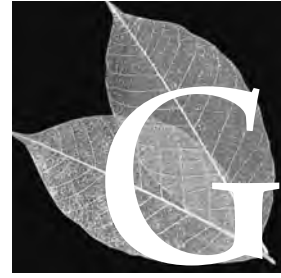
As cigarette manufacture was gradually mechanized in the 1880s and worldwide consumption skyrocketed, the primary role of the colonies shifted to consumption. In 1926, French Prime Minister Poincaré created SEIT (Société d'Exploitation Industrielle des Tabacs), becoming SIETA (with the addition of *Allumettes*) in 1935, which sought to maximize state profit from growing tobacco consumption throughout France and its colonies by focusing on cigarette distribution and sales. SEITA was privatized in 1995, and merged with the principal Spanish tobacco company, Tabacalera, in 1999 to form Altadis, now the largest tobacco manufacturer and distributor in France and Spain. On 6 June 2003, in a final irony of the post-colonial globalization of tobacco markets, Altadis purchased 80 percent of France's former colony Morocco's own state tobacco monopoly, *Regie des Tabacs*, a primary Moroccan economic engine after decolonization begun in 1956, and now valued at \$800 million.

See Also British Empire; Caribbean; Dutch Empire; Portuguese Empire; Spanish Empire.

■ JORDAN KELLMAN

BIBLIOGRAPHY

- Cole, Charles Woolsey. *Colbert and a Century of French Mercantilism*, 2 vols. Hamden, Conn.: Archon Books, 1964.
- Gondolff, Etienne. *Le tabac sous l'ancienne monarchie: La ferme royale, 1629–1791* [Tobacco under the Old Monarchy: The Royal Farm, 1629–1791]. Vesoul, France: Ancienne Imprimerie Cival, 1914.
- Price, Jacob M. *France and the Chesapeake: A History of the French Tobacco Monopoly, 1674–1791, and of Its Relationship to the British and American Tobacco Trades*, 2 vols. Ann Arbor: University of Michigan Press, 1973.
- Raynal, Abbé (Guillaume-Thomas-François). *Philosophical and Political History of the Settlements and Trade of the Europeans in the East and West Indies*, 2d ed., 6 vols. Trans. by J. O. Justamond. New York: Negro Universities Press, 1969.
- Tobacco Institute. *Louisiana and Tobacco: A Chapter in America's Industrial Growth*. Vol. 7. Tobacco History Series. Washington, D.C.: Tobacco Institute, 1970–1973.
- Vigié, Marc, and Muriel Vigié. *L'herbe à nicot: Amateurs de tabac, fermiers généraux et contrebandiers sous l'Ancien Régime* [The Nicotian Herb: Tobacco Enthusiasts, United Farmers and Smugglers under the Old Regime]. Paris, France: Fayard, 1989.



Genetic Modification

Genetic modification of tobacco began with traditional agricultural breeding and selection practices. The use of modern **biotechnology** to develop tobacco for commercial purposes, which began in the early 1980s, is only the most recent research and development endeavor. A strain of tobacco that is fundamentally altered at the level of its DNA—its genetic makeup—is said to be “genetically modified,” “genetically altered,” or, more popularly, “genetically engineered,” especially when biotechnology is used. A tobacco strain that is created by the transplantation of a gene from another organism, such as bacteria, is referred to as “transgenic tobacco” and falls under the popular term, “genetically modified organism.”

Tobacco is relatively easy to work with for breeding purposes. The plant has a simple flower structure, seeds that are numerous and easily stored, and a ready ability to self-pollinate and cross-pollinate. In addition, it readily incorporates transgenic material to create new reproducible strains of transgenic tobacco. For these reasons, the tobacco plant has been a common organism to use in basic biological research throughout the twentieth century. Moreover, it has been a critical test ground in the general development of transgenic crops. The first transgenic crop, in fact, was a noncommercial variety of tobacco that the biotechnology company Calgene genetically modified to resist the common herbicide glyphosate. The company discovered the resistant bacterial gene in 1983 and first field-tested it in tobacco in 1987. Recent discussions of tobacco genetics highlight the potential of harnessing the plant’s biological machinery to organically generate pharmaceutical proteins and industrial enzymes, much the way that bacteria are currently used.

Commercial Efforts

Although productive for research purposes, the commercial importance of tobacco lies in the complex chemical composition of its leaves. Innumerable attempts to improve on tobacco’s consumer appeal and profitability for the highly competitive cigarette market have occurred during the last several centuries. Innovations often have come in the form of changes to



biotechnology a scientific process, often genetic in character, to enhance desirable characteristics of plants and animals. Through biotechnology, tobacco has major potential for producing medicines to replace currently expensive drugs for several devastating diseases.



New tobacco products are the result of intensive scientific research and development efforts. The most advanced tools of genetic research are used to create tobacco with altered biochemical properties. © ED YOUNG/CORBIS



hybridization the practice of cross-breeding different varieties of plants or animals to produce offspring with desired characteristics.

ecology the interrelationships of a natural environment. For example, the ecology of a forest includes animals, plants, water, atmosphere, weather, and land forms.

cultivation methods and manufacturing processes. Genetic modifications of tobacco strains by **hybridization** (cross-breeding) and selection have been less commercially successful. Attempts to improve on its growth and other characteristics have often been at the expense of taste, aroma, and color qualities of importance in the final cured tobacco leaves. Breeding for disease and pest resistance has historically achieved only limited success as well. One major addition to the family of economically important tobacco varieties was the White Burley variety in 1864; and it is believed to have been the product of a naturally occurring mutation.

Recent advances in biotechnology have offered the promise of a more targeted approach to overcoming longstanding agricultural challenges and fulfilling product development interests, but also have raised public concerns about uncertain **ecological** and health safety consequences as well as numerous complex regulatory issues for national and

international discussion. Europe has been the center of much of the public debate, and the first transgenic organism to be put on the European market, in 1994, was a commercial tobacco that was resistant to the herbicide bromoxynil. A genetically modified tobacco with a viral resistance and a greater yield was reported to have been cultivated on almost one million hectares in China in 1994. Still, commercial development of transgenic tobacco has been smaller compared to other crops because of its lower overall acreage due to lower overall demand for tobacco than for staple agricultural food crops such as corn or wheat.

Controlling of Nicotine Levels

Nicotine content is central to tobacco's identity as a commercial product, and it has been heavily investigated by the tobacco industry. The concentration of nicotine can be highly variable, and it is known to be very susceptible to the agricultural and environmental conditions in which the tobacco is grown. Controlling nicotine levels in tobacco is, thus, a complicated act. Breeding and selection work on high and low nicotine strains dates to the early twentieth century, with two low nicotine strains being isolated in 1907.

In the United States, a strain of tobacco called Y-1, which was genetically modified to be higher in nicotine, became the source of a controversy in 1994 when the Food and Drug Administration publicly revealed Y-1's existence during its attempt to regulate tobacco on the grounds that the tobacco industry manipulated nicotine levels. The FDA found that the Brown & Williamson tobacco company had grown Y-1 in Souza Cruz, Brazil—the export of the seed raising separate legal questions—and used the tobacco, at least temporarily, in several of its brands. Speculation followed on whether the tobacco industry was involved in developing a product to keep smokers addicted. Brown & Williamson maintained that the tobacco was used for blending the product to consumer taste; still, as internal documents reveal, the company was competing with Philip Morris' enormously successful methods for controlling nicotine levels in smoke.

The desire to create a "safe" cigarette has also been a driving force in tobacco genetic research. The Y-1 tobacco had its origin in conventional breeding research conducted during the 1970s by the United States Department of Agriculture in its effort to develop a less hazardous cigarette. The theory was that a cigarette with the same amount of nicotine, but lower in **tar**, would be desirable but less harmful to the smoker. At various times attention has turned to low nicotine tobacco, and in 2003, the American company Vector Tobacco introduced a reduced nicotine cigarette called Quest. It is produced from tobacco genetically modified to block nicotine **synthesis**, and the product is being marketed to assist smokers with smoking cessation. Vector is also the manufacturer of the Omni brand, which claims to use a genetically modified tobacco with reduced levels of carcinogens. Other tobacco companies have been involved in biotechnology research to develop less harmful products; however, they have yet to be formally introduced, and none of these products has been scientifically proven to reduce health risks or treat addiction.



tar a residue of tobacco smoke, composed of many chemical substances that are collectively known by this term.

synthesis the blending of several elements into a coherent whole.

See Also Chemistry of Tobacco and Tobacco Smoke; Nicotine.

■ JOSHUA DUNSBY

BIBLIOGRAPHY

- Garner, Wightman W. *The Production of Tobacco*. Rev. 1st ed. Philadelphia: Blakiston, 1951.
- Kessler, David. *A Question of Intent: A Great American Battle with a Deadly Industry*. New York: Public Affairs, 2001.
- Miki, B.L.A., et al. "Transgenic Tobacco: Gene Expression and Applications." In *Biotechnology in Agriculture and Forestry*, vol. 45. Edited by Y. P. S. Bajaj. New York: Springer, 1999. Pp. 336–354.
- United States Department of Agriculture, Agricultural Marketing Service. "Tobacco in the United States. Miscellaneous Publication No. 867." Washington, D.C.: U.S. Government Printing Office, 1979.




Gitanes/Gauloises


Gitanes and Gauloises are the two oldest brands of cigarettes still manufactured in France. They were created at the same time, in 1910. The name for the Gauloises brand was given, instead of Hongroises à la place, in a tense **nationalist** context. In fact, the blue color of the packs is reminiscent of the famous blue line of the Vosges Mountains that separate France from the provinces it lost to Germany. The cigarettes were originally made up of black, ordinary Caporal tobacco, which is grown in France. Conversely, the brand Gitanes, which was fashioned to target a richer clientele, was named such to evoke the exoticism of neighboring Spain. Gitanes are made from a mix of black tobaccos (ordinary Caporal, mild Caporal, and Maryland).

These brands became popular during World War I; the men gladly smoked Gauloises, while their officers favored Gitanes. The fact that cigarettes were free for the soldiers only aided their growth in popularity. But it was not until after the war that the two brands truly took off. Their producer, SEITA (for Société d'Exploitation Industrielle des Tabacs et Allumettes), which was founded in 1811, belonged to the French government until it was privatized in the mid-1990s. After World War I, SEITA helped pay off the government's debts by increasing sales through a considerable publicity campaign. In 1925 the artist Maurice Giot decorated the Gauloises pack with a drawing of a winged helmet. In 1936 Marcel Jacno modernized Giot's work, giving the Gauloises logo the appearance it has kept to this day; Jacno's purer, edgier stripe added more volume and substance to the winged helmet.

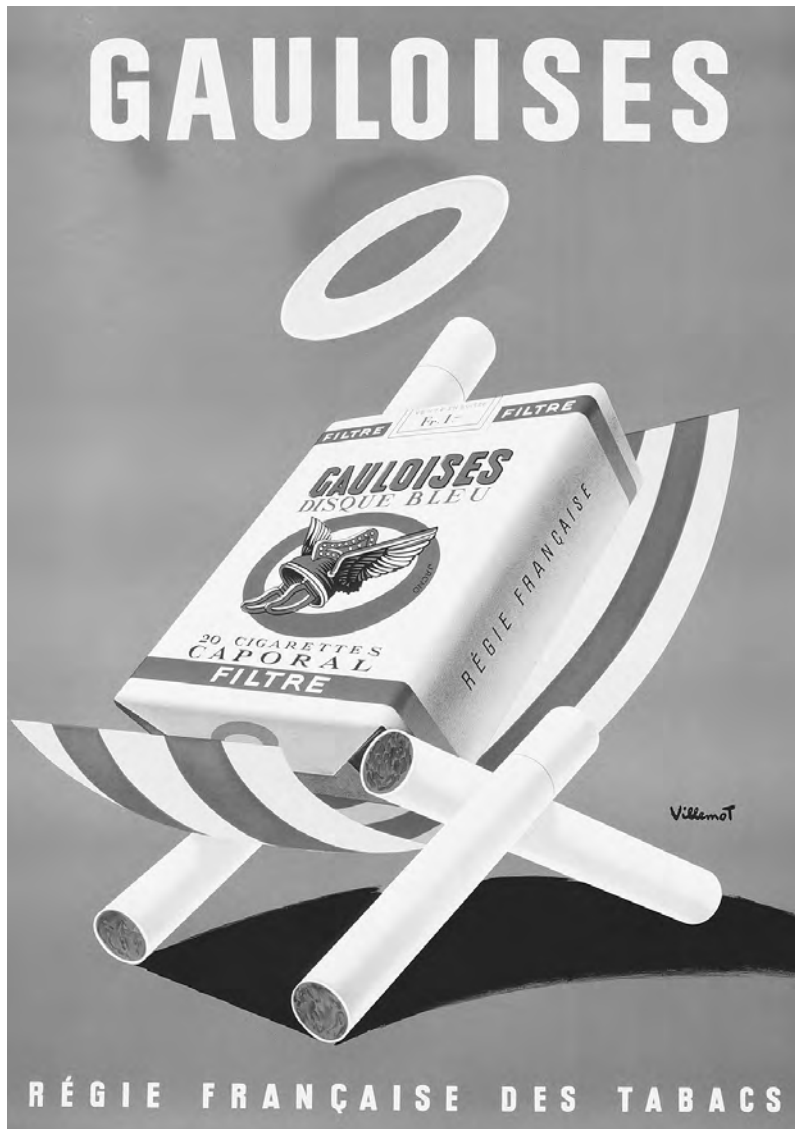
Gauloises has remained the less expensive brand, while Gitanes has continued to represent French taste. In 1926 the Gitanes brand was given packaging representative of the period's **Art Deco** style. One of the slogans that appeared on the subway walls of Paris in the 1930s was, "No smoking . . . Not even a Gitanes." The movies helped spread the virile image of the smoking man through such stars as Maurice Chevalier and Jean Gabin, who both smoked Gitanes. The first publicity movie for Gitanes was made in 1929 (sound was added in 1932). It was during this period that the most famous Parisian writers and artists, including the American stage actress Josephine Baker, came together to discuss their love of tobacco at the famous literary café Rotonde. The Gitanes blend underwent various changes over the years and at one point



nationalism the belief that the narrow, selfish interests of one's country should supersede international standards of behavior.



Art Deco the most fashionable style of design in the 1920s and 1930s. Art Deco is usually characterized by geometric lines and shapes. Smoking tobacco tins and cigarette packages of this period were often rendered in the Art Deco style.



The Disque Bleu variety of Gauloises was launched in 1956. The winged helmet first drawn by Maurice Giot in 1925 is still evident in this 1950s poster by Bernard Villemot. © SWIM INK/CORBIS

included Oriental tobaccos. Consumption of Gitanes climbed from 75 million units in 1926 to 850 million units in 1938.

After World War II, Gauloises and Gitanes, which were made from French black tobacco, found new competition in brands made from the American blond tobacco. In response, SEITA launched in 1956 the Gauloises Disque Bleu brand and gave it unprecedented promotional support. This version, also made from black tobacco, distinguishes itself by its filter tip. The package's design of a famous flamenco dancer dancing through wisps of smoke was drawn by the artist Max Ponty. The artist Hervé Morvan won the Martini publicity prize in 1961 for his Gitanes poster of a male flamenco dancer with a bolero in the shape of cigarettes.

Gitanes sales quadrupled between 1952 and 1957. In 1977, 18.9 billion units were sold, representing 22 percent of all cigarettes smoked in France that year. In 1985, 33 million Gauloises were sold in France, representing 38 percent of the French market. At the end of the twentieth century, however, these two brands suffered from a decline in sales; in

A packet of Gitanes cigarettes in 1996 still depicts the flamenco dancer made famous by artist Max Ponty's original packaging design in 1956. However, Ponty's wisps of smoke are absent from this more contemporary packet of "Blondes." © VERNIER JEAN BERNARD/CORBIS SYGMA



1993 they represented 40 percent of the market but ten years later they hardly accounted for 20 percent due to their unhealthy reputation—black tobacco is considered more carcinogenic—and to competition from the American blond cigarettes (especially Marlboro). Despite being more expensive, the American brands have won over the tastes and hearts of French consumers. As the twenty-first century begins, ALTADIS, the company that comprises SEITA and the Spanish TABACALERA, is still producing Gitanes and Gauloises in its French factories.

See Also Antismoking Movement in France; Camel; Cigarettes; French Empire; Lucky Strike; Marlboro; Virginia Slims.

■ DIDIER NOURRISSON

BIBLIOGRAPHY

- Adès et Jean-Hugues Piettre, Marie-Claire. *Graphismes et créations SEITA: années 30, 40, 50/catalogue*. Paris: Musée-Galerie de la Seita, 1986.
- Encyclopédie du tabac et des fumeurs*. Paris: Le Temps, 1975.
- La Revue des Tabacs*. Paris: André-Paul Bastien, 1925–.

Glamorization See Film; Visual Arts.



Globalization

Globalization has been used to explain the increasing degree of international economic integration that emerged as a feature of many industries during the late twentieth century. In the tobacco industry, however, the origins of globalization can be found unusually early. Indeed, by the closing years of the nineteenth century, tobacco goods were already being manufactured and marketed by firms whose operations spanned a variety of countries. One tobacco product in particular was responsible for this early example of successful international economic integration: the machine-made cigarette. By the year 2000, over 80 percent of all tobacco grown in the world was destined to be consumed in cigarettes, the majority of which were produced by just three leading multinational corporations: Philip Morris, British American Tobacco, and Japan Tobacco.

A Product with Global Potential

Mass-produced hand-rolled cigarettes first began to emerge as a significant form of tobacco consumption in the United States after the American Civil War (1861–1865). Using the **flue-cured** Bright tobacco leaf grown in Virginia, tobacco firms experimented with different blends of leaf that could be smoked in the form of a cigarette. Targeting the more affluent and sophisticated urban consumers, these relatively expensive hand-produced items became an important aspect of the development of branded products that symbolized the beginning of the era of mass-produced consumer goods. What might be considered as the first modern American cigarette was launched by the New York firm of F. S. Kinney in 1872 when it marketed the brand Sweet Caporal using a blend of flue-cured Virginian and Turkish leaf. Following Kinney's lead, other firms, such as the Virginia-based enterprise of Allen & Ginter, developed brands that replaced the costly imported Turkish leaf with flavored Burley tobacco grown in Kentucky to produce an all-American blend. To promote its brands, Allen & Ginter packaged its products with picture cards as an innovative marketing technique.

By 1880 sales of cigarettes in the United States had reached 500 million per year, and both Kinney and Allen & Ginter had begun to seek out export markets for their products. In Britain, where a small trade in the hand-rolled items had been developed by firms such as W. D. & H. O. Wills of Bristol, imported American cigarettes became a fashionable item of consumption, although the Customs authorities frowned on the adulterated products that contained flavored tobacco and, as a result, British consumers developed a taste for pure Virginia leaf cigarettes rather than the American blended version. In many other countries of Europe, the production of tobacco goods was controlled by a state monopoly, and this situation meant that in France, Spain, Italy, and Portugal, for example, consumers were offered little choice of manufacturers' brands.



flue-cured tobacco also called Bright Leaf, a variety of leaf tobacco dried (or cured) in air-tight barns using artificial heat. Heat is distributed through a network of pipes, or flues, near the barn floor.



Billboards advertise coffee and Lucky Strike cigarettes in front of a Buddhist pagoda in Pyin-U-Lwin, Myanmar, 1996. © RICHARD BICKEL/CORBIS

Although hand-rolled cigarettes grew in popularity, the continued expansion of output required the employment and supervision of an increasingly large female workforce and allowed few gains in productivity because the cost of labor accounted for around 90 percent of the total. The globalization of the cigarette industry thus only began in earnest following the mechanization of the production process. Of the various attempts that were made to produce a machine to manufacture cigarettes, the most reliable was developed by an American engineer named James A. Bonsack. His invention was capable of producing 200 cigarettes per minute, equivalent to the combined output of around forty to fifty hand-rollers. In England, Bonsack granted an exclusive license for his machine to the Wills firm, whose Woodbine cigarette brand became a marketing sensation following its launch in 1888. In the United States, meanwhile, Bonsack's invention was exploited most successfully by the North Carolina-based firm of W. Duke & Sons. Led by the astute and ruthless business tycoon James B. Duke, the company used the cost advantages it derived from mechanization to expand its cigarette sales rapidly across the United States. Using a mixture of price-cutting, advertising, and corporate **acquisition**, Duke's firm was strong enough by 1890 to browbeat its four main domestic cigarette manufacturing rivals into a joint venture named the American Tobacco

acquisition the purchase—sometimes called a merger—of a smaller company by a larger one. During the late twentieth century, major tobacco companies diversified their holdings through acquisition of nontobacco products.

Company, which then accounted for over 90 percent of all cigarettes manufactured in the United States.

From Exports to Foreign Investment

Immediately following its formation, Duke's American Tobacco Company used its monopoly power in cigarettes to continue the strategy of market expansion. In domestic terms, this involved further infiltrating and gaining control wherever possible in the markets for other tobacco products. In the cigarette business, Duke's earlier campaign of domestic expansion was now transferred into foreign markets. Initially, this international growth was founded on developing an export trade in cigarettes manufactured in America. Duke sent experienced tobacco men such as Richard H. Wright and James A. Thomas on tours of duty into Europe, Asia, and the Pacific Rim to gather orders for the company's products. During the 1890s, leading cigarette brands of American Tobacco such as Cameo, Old Gold, and Pin Head found new consumers in Britain, Germany, the West Indies, India, South Africa, Australia, and, particularly, Japan and China. Such was the extensiveness of the company's bill poster advertising that, in many parts of China, the characters "Pin" and "Head" were taken to be the generic name for cigarettes.

British firms, such as Wills, John Player & Sons, and Lambert & Butler, followed Duke's example and began to set up branches outside the United Kingdom to promote their products. Wills in particular scored considerable success with brands such as Pirate, Scissors, and Diamond Queen. By the beginning of the twentieth century, one-third of American Tobacco's cigarette output was being produced for export, and around 20 percent of Wills's tobacco products were being shipped abroad. To consolidate this trade, in the face of local competition and rising tobacco **tariffs**, Duke's firm began to make strategic investments in foreign markets. In 1894 American Tobacco formed three **subsidiary** companies in prefederation Australia, in each case operating in conjunction with other manufacturers. The following year the American Tobacco Company of Canada was founded by Duke's firm in order to acquire control of the two leading Montreal-based tobacco businesses. The pattern was now set for a process of international corporate expansion in the tobacco business.

An International Cigarette Cartel

Duke's foreign investments were by no means always welcomed by firms or governments in the host country. A campaign of political resistance developed in Japan, for example, following the acquisition by American Tobacco in 1899 of the controlling interest in the Kyoto-based Murai Brothers firm, culminating in the nationalization of the entire tobacco manufacturing industry in 1904. Opposition was frequently also encountered from within the trade. Thus when, in September 1901, Duke's firm purchased control of the Liverpool-based Ogden Tobacco Company, a concerted campaign of commercial warfare was waged by the leading British tobacco companies, spearheaded by Wills, who banded together to form the Imperial Tobacco Company. This federated concern encompassed more than a dozen firms and ultimately negotiated



tariff a tax on imported goods imposed by the importing country to protect native industry from foreign competition, protect jobs and profits, and raise revenue. Tariffs typically raise consumer prices of effected products.

subsidiary in commerce, a branch or affiliate of a larger unit that provides components or support services.



embryonic in the early stages; undeveloped; nascent.

American Tobacco's withdrawal from the British market in 1902, following a period of desperate competition that spilled into international markets and became known as the Tobacco War.

The terms that were negotiated between Imperial and American Tobacco in 1902 ushered in a new phase of international expansion in the **embryonic** global tobacco industry. An agreement signed in September 1902 gave Imperial and American Tobacco exclusive rights to one another's brands in Britain and the United States respectively. Outside these two markets, this vast portfolio of brands was allocated to a newly formed joint venture called the British-American Tobacco Company (now British American Tobacco), in which Duke's firm was allocated a two-thirds interest. British American was therefore created as a multinational company. As well as owning brand rights in international markets, the new firm inherited all the export trade and foreign assets that its two parent companies had built up in the preceding decade.

A Pioneering Multinational Company

Between its formation in 1902 and the end of World War II, British American was virtually unchallenged as the leading international firm in the global tobacco industry. During this time the company continued to expand the export trade from its factories in Britain and the United States. More significantly for the future shape of the industry, however, the company made significant investments in cigarette factories and distribution systems in other parts of the world. The company's main area of success was in China, where it built a huge production capacity and a distribution system that utilized local tobacco merchants whilst retaining control and accountability to the company's regional head offices. Unmarried young men, mainly American, aged under twenty-five were recruited and posted to China on tours of duty that normally lasted four years. Expatriate employees of this kind formed the vanguard through which western business methods were transferred into other economic and social systems.

Methods of market entry varied from country to country. In India, no domestic cigarette producers existed and hence British American set up its own factories and distribution system into which it gradually assimilated local employees. In Latin America entry more often took the form of corporate acquisition. In 1914 in Brazil, for example, British American bought control of Souza Cruz, a company that had been set up ten years earlier by a Portuguese immigrant and which already operated its own factories in Rio de Janeiro, Bahia, and Santa Cruz. Over time therefore, as it developed local production capacity, the balance of activity undertaken by British American in foreign markets shifted from an export business to local production and distribution. As the company gained control over foreign firms as its subsidiaries, it also acquired and developed many new cigarette brands for these markets that reflected local tastes and cultures. Ruby Queen was a derivative brand of Wills's Diamond Queen that traded outstandingly well in China where red is considered **auspicious**. Elephant brand succeeded in India, and the brand Bicycle was aimed at upwardly mobile consumers in West Africa.



auspicious showing promise for success; favorable.

For a period during the 1920s a few other tobacco companies did begin to expand their operations into foreign markets in order to challenge British American's domination. Following the dissolution of the

American Tobacco Company in 1911, some of the successor companies did make foreign investments, and a group of financiers also used the opportunity to set up the Tobacco Products Export Corporation, which briefly offered a threat to British American in China and elsewhere. Competition from the British firm Ardath was ended when British American jointly acquired this firm with Imperial, and thereby gained control of the successful international brand State Express 555. With the onset of the Great Depression after 1929 much of this international rivalry came to a halt, although the Japanese Toa Tobacco monopoly began a concerted and ultimately successful attempt to capture much of the cigarette market in Manchuria and northern China. The surge in **nationalist** sentiments that characterized the 1930s led British American to adopt a lower international profile in many markets, where earlier **boycotts** of their products (notably in China, Germany, and India) had already encouraged the company to downplay its international identity. In 1934 in China, for example, the company adopted the Chinese pseudonym Yee Tsoong to replace British American and tried to encourage more investment from local sources.

The Spread of Flue-Cured Leaf Tobacco

British American's strategy of developing local production in the majority of its markets was further supported by encouraging local cultivation of Virginian tobacco leaf. To do this the company formed the Export Leaf Tobacco Company, which handled leaf procurement and provided expertise to support local cultivation. Seedlings were developed for the varying climatic and soil conditions, and the company established extension services and leaf-handling facilities at which local cultivators could sell their crop of flue-cured Bright tobacco leaf. Important regions of tobacco growing designed to support cigarette manufacturing were established in China, India, and Brazil. In India, for example, a British American subsidiary—the Indian Leaf Tobacco Development Company—was set up to promote tobacco growing and given further encouragement by the adoption by the British government of favorable tariffs on Empire products under the Imperial Preference scheme. Thus, between the wars a substantial increase occurred in the amount of land devoted to growing tobacco leaf for cigarettes, particularly in the non-industrialized regions.

In the period since World War II the trade in tobacco leaf has become an important aspect of the global tobacco industry. The formation in 1918 of the Universal Leaf Tobacco Company in the United States created a leaf-handling organization that exploited the cultivation of tobacco leaf in China to set up a tobacco-trading subsidiary there in 1925. Since this time, Universal has grown into a major transnational tobacco processing and trading company whose operations make up an aspect of the global commodities trade linking the producers of raw materials with the manufacturers of final products.

A Global Tobacco Oligopoly

The outbreak of World War II had a dramatic impact on the competitive conditions of the global tobacco industry. After 1945 British American found their position under threat in many of the strongest markets.



nationalism the belief that the narrow, selfish interests of one's country should supersede international standards of behavior.

boycott an economic sanction imposed by an interest group to influence policy. In the 1900s, tobacco growers in Tennessee and Kentucky refused to sell leaf to the American Tobacco Company until prices were raised.



oligopoly control of a commodity or service by a small number of companies. A marketing environment in which a few vendors have control of a product. Oligopolies tend to suppress competition and fix prices.

diversification in agriculture, to avoid overdependence upon one crop by producing several different crops.



conglomerate a large business enterprise usually composed of several smaller companies or branches.



consolidation when numerous smaller units are combined into a larger one. In agriculture, consolidating small farms into one large farm usually makes operations more efficient and profitable.

The communist revolution in China in 1949 was a particularly devastating blow, ending hopes of a revival in their sales there, and significant reversals were also experienced to their position in Egypt, Indonesia, and India. American firms, conscious of the adverse publicity arising from the health consequences of smoking, began to make a more concerted effort to challenge for a share of international markets. Liggett & Myers, R.J. Reynolds, and Philip Morris all began to engage in overseas expansion during the 1950s, particularly into the markets of Latin America, using a combination of direct investment and licensing. The German Reemtsma and the South African-based Rothman's International also made inroads during this period as the competitive structure of the international cigarette industry adopted a strongly **oligopolistic** dimension.

After the mid-1960s all the world's leading privately owned tobacco manufacturers were growing concerned about the accumulating evidence linking tobacco smoking to lung cancer and other debilitating conditions. The industry-wide response was to adopt a strategy of growth through **diversification**, and by the end of the 1970s the leading group of international tobacco firms had each developed a nontobacco arm: British American evolved into BAT Industries, R.J. Reynolds became RJR Nabisco, Philip Morris merged with the food manufacturer Kraft, American Tobacco transmuted into American Brands. Diversification had in most cases involved international investments and thus, as a strategy, had created a group of global industrial **conglomerates**.

The Modern Global Industry

Despite this loss of focus, certain international features of the tobacco industry continued to emerge. Cigarettes and light tobacco became increasingly important across international markets, filter-tipped cigarettes grew in popularity and led to increased emphasis on image over taste in the marketing mix, American blend cigarettes attained increased popularity over the pure Virginia article, and international brands moved back into the ascendancy. Riding on the back of these trends, Philip Morris successfully developed its Marlboro brand as the world's leading cigarette and wrested away from BAT the leading position in the international industry.

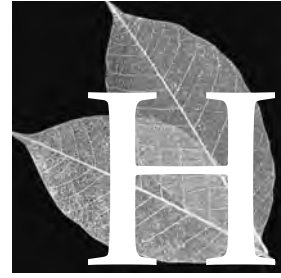
Although the tobacco industry had in many senses undergone a process of globalization before World War II—when British American operated plants in over fifty countries—it was only in the 1990s that the industry could be said truly to have adopted a global form. Trade liberalization demanded the dismantling of the system of state monopoly producers, of which Japan Tobacco emerged as a genuine multinational firm when it purchased the R.J. Reynolds brands, while the collapse of communism meant that the huge markets of Eastern Europe and China opened to foreign manufacturers' products. This growth was coupled with **consolidation**. Pressured by corporate raiders, the leading tobacco companies unwound their earlier diversification strategy and used the capital to fund growth via acquisition. Philip Morris and British American Tobacco both successfully expanded into Eastern Europe, and the latter firm acquired Rothman's International in 1998.

See Also American Tobacco Company; British American Tobacco; Industrialization and Technology; Philip Morris.

■ HOWARD COX

BIBLIOGRAPHY

- Alford, B. W. E. *W. D. & H. O. Wills and the Development of the U.K. Tobacco Industry, 1786–1965*. London: Methuen, 1973.
- Basu, Champaka. *Challenge and Change: The ITC Story, 1910–1985*. Calcutta: Orient Longman, 1988.
- Cochran, Sherman. *Big Business in China: Sino-Foreign Rivalry in the Cigarette Industry, 1890–1930*. Cambridge, Mass.: Harvard University Press, 1980.
- Corina, Maurice. *Trust in Tobacco: The Anglo-American Struggle for Power*. London: Michael Joseph, 1975.
- Cox, Howard. *The Global Cigarette: Origins and Evolution of British American Tobacco, 1880–1945*. Oxford: Oxford University Press, 2000.
- Cox, Reavis. *Competition in the American Tobacco Industry, 1911–1932*. New York: Columbia University Press, 1933.
- Duke, Maurice, and Daniel P. Jordan. *Tobacco Merchant: The Story of Universal Leaf Tobacco Company*. Lexington: University Press of Kentucky, 1995.
- Durden, Robert Franklin. *The Dukes of Durham, 1865–1929*. Durham, N.C.: Duke University Press, 1975.
- Kluger, Richard. *Ashes to Ashes: America's Hundred-Year Cigarette War, the Public Health, and the Unabashed Triumph of Philip Morris*. New York: Alfred A. Knopf, 1996.
- Tennant, Richard B. *The American Cigarette Industry: A Study in Economic Analysis and Public Policy*. New Haven, Conn.: Yale University Press, 1950.
- Tilley, Nannie May. *The Bright-Tobacco Industry, 1860–1929*. Chapel Hill, N.C.: University of North Carolina Press, 1948. Reprint, New York: Arno Press, 1972.
- . *The R.J. Reynolds Tobacco Company*. Chapel Hill, N.C.: University of North Carolina Press, 1985.



Hallucinogens

Hallucinogens may be defined as substances that cause hallucinations. This functional definition covers a variety of compounds, including indole **alkaloids** (organic compounds with basic properties, including at least one nitrogen atom in a heterocyclic ring structure), such as harmine, hamaline, or tryptamine. Tobacco is closely related to hallucinogenic plants, in terms of its **physiological** effect and the context of its use. However, there are similarities in nicotine's physiological effect to hallucinogens, especially in extremely large doses.

Research indicates that nicotine can cause hallucinations by altering neurotransmitter levels. Descriptions of early Native Americans (1500–1650) indicate tobacco smoking caused trances and hallucinations. These reports agree with later descriptions of South American shamans, specialists who intercede with the spirit world through (potentially chemically induced) ecstatic trance. Tobacco smoke, with symbolic connotations of air, breath, and sky, is considered an ideal medium for **shamanistic** practices.

North and South America are home to numerous hallucinogenic plants. In North America there are more than a dozen *Psilocybin* fungi, as well as cacti or legumes. South America and the Caribbean include *Banisteriopsis caapi* and *Anadenanthera peregrina*. Hallucinogens are generally used in rituals. There are cross-cultural examples of hallucinogen use in shamanistic rituals. American hallucinogens include *Solonacea*, such as *Atropa* and *Datura*. *Nicotiana* tobacco belongs to this family. *Solonacea* contain hallucinogens, including atropine, or scopolamine, and are found in prehistoric burials with tobacco pipes. The effects of high nicotine doses, especially the sense of flight, probably resulted in some ritual activities and symbols found in prehistoric Native American contexts.

Tobacco was used along with hallucinogens in many cultures. Shamans use tobacco with *Banisteriopsis* in Peru, Columbia, and Bolivia. Oaxacan shamans used tobacco with *Psilocybin* mushrooms. Modern ethnologists have observed tobacco smoked during peyote (*Lophophora williamsii*) harvesting and cite use among Southwestern Indians. Californian Indians used *Datura* with tobacco. The usage is not a strictly



alkaloid an organic compound made out of carbon, hydrogen, nitrogen, and sometimes oxygen. Alkaloids have potent effects on the human body. The primary alkaloid in tobacco is nicotine.

physiology the study of the functions and processes of the body.



shamanism an ancient religion based on commune with animal spirits and characterized by magic, healing, and out-of-body experiences. Shamanism was widely practiced by American Indians.

American phenomenon, as evidenced by the use of tobacco and hallucinogenic mushrooms in New Guinea.

While ritual hallucinogen use is worldwide, there is often a preference for more controllable substances. Tobacco became a safe alternative to plants like *Datura*, allowing more widespread use of hallucinogens, taking spirituality away from shamans who had previously benefited from specialized knowledge that allows the control of dangerous but spiritually powerful substances. Increased tobacco use is likely another reason behind the pan-continental distribution of tobacco in native North America.

See Also Additives; Native Americans; Shamanism.

■ SEAN M. RAFFERTY

BIBLIOGRAPHY

- Dobkin de Rios, Marlene. *Hallucinogens: Cross-Cultural Perspectives*. Albuquerque: University of New Mexico Press, 1984. Reprint, Prospect Heights, Ill.: Waveland Press, 1996.
- Furst, Peter T, ed. *Flesh of the Gods: The Ritual Use of Hallucinogens*. New York: Praeger, 1972.
- Harner, Michael, ed. *Hallucinogens and Shamanism*. New York: Oxford University Press, 1973.
- Wilbert, Johannes. *Tobacco and Shamanism in South America*. New Haven, Conn.: Yale University Press, 1987.

Humoralism See Therapeutic Uses.



Industrialization and Technology

While tobacco has been consumed for thousands of years in numerous forms, from the mid-nineteenth century tobacco production changed radically with the industrialization of production and the advent of new industrial technologies. Industrial production of tobacco brought transformations in the social relations of production, a greater capitalization in tools and factories, and new challenges for tobacco manufacturers, leading to advertising on an unprecedented scale. While the impact of these changes was not uniform in all sectors of the tobacco industry, those entrepreneurs who controlled new technologies made them the foundations of global business empires, the offspring of which are still powerful in the twenty-first century.

Preindustrial Production

Before the mid-nineteenth century there was little mechanization of the tobacco production process. In much of the world, part of the production process continued to be done by farmers and retailers. Even in the 2000s, in places like Africa, most tobacco is home grown and never enters a factory. Before the mid-nineteenth century, when production facilities were separate from tobacco farms, they were small with little mechanization. Most production in the pre-1850 period was done in Europe and products were exported elsewhere in the world. Shredded smoking tobacco, or “shag,” popular in England, required brief fermentation, **stripping** of the stem and midribs, and little more than knives to chop the tobacco.

Production of other forms of tobacco was slightly more elaborate. Tobacco was spun into twists on a spinning wheel. The twists were then folded into large rolls and small pieces were cut off for consumers to smoke, chew, or **snuff**. Soft twisted rolls were often made with less expensive tobacco and used for smoking and chewing. Higher quality leaf was used to manufacture hard pressed “carottes” for nasal snuff. Tobacco rolls were fermented in saucers for as long as one week and then



stripping in the Burley and fire-cured tobacco cultures, cured leaves must be separated from the dead stalk. This is called “stripping.”

snuff a form of powdered tobacco, usually flavored, either sniffed into the nose or “dipped,” packed between cheek and gum. Snuff was popular in the eighteenth century but had faded to obscurity by the twentieth century.



Machines facilitated the processing of tobacco, as illustrated in this 1750 print. An enlarged tobacco plant is shown in the background. © CORBIS

for one or two days put into carrot-shaped molds and pressed in iron presses that were operated by as many as fifteen men. From the 1720s these carottes were wrapped with string and consumers grated the carottes themselves. Pre-grated snuff, taken nasally in much of the world but orally in Scandinavian countries, was also produced in Europe and eventually in the United States using graters, rasps, and hand-turned wind and water mills. In much of Europe only the soft part of the leaf was used, thus requiring some labor to remove stems and midribs. In Scotland and Ireland, the entire leaf was ground.

In the United States during the early 1820s and 1830s wooden tobacco presses were used to shape twists into more convenient plugs. Lower quality strips of tobacco were shaped into “lumps” and then wrapped in a higher quality leaf. Beginning in the 1840s the tobacco lump was also soaked in flavoring sauces such as honey or licorice. Thousands of small factories, usually located close to tobacco farmers in Virginia and North Carolina, supplied consumer demand. Not only did European tobacco products differ from those in the United States, factories were also significantly larger than those in America. Tobacco production was much more centralized, particularly in countries like France and Spain where government monopolies controlled tobacco production. In France, the most important tobacco manufacturing country

in the world during the eighteenth century, there were only ten factories, but they averaged 1,000 workers each, making them the largest tobacco processing plants in the world at the time.

As a consequence of the size of these factories, the taste of manufactured tobacco in Europe was far more standardized than in the United States. Yet even in major production centers like Paris, Seville, Amsterdam, and Strasbourg, large factories were little more than groups of artisans and laborers under one roof using the same production processes as found in small shops. The greatest investments made to the tobacco industry in the preindustrial period were the factory building and the fermenting vats. Other than greater standardization of taste, there were few advantages in producing tobacco on larger and larger scales.

Early Industrial Production

From the mid-nineteenth century, new industrial technologies were added to these production processes. In Europe, snuff mills began to be powered by steam engines, though snuff was becoming less popular. From 1866, production of shag tobacco also began to be powered by steam engines, though in England retailers continued to play a significant part in mixing cut tobaccos to the tastes of consumers. In the United States, where **plug** tobacco was particularly popular for chewing, a **hydraulic** press was patented in 1858, replacing horse and manpower formerly used to press tobacco. After the initial expense of purchasing these new presses, manufacturers considerably reduced the cost of producing plugs. This was a result of three factors. First, tobacco plugs could be produced more quickly, cutting labor costs. Second, lessening the amount of heavy labor considerably, tobacco manufacturers replaced male tobacco workers with lower-paid women and children, further reducing labor costs. Third, though these new machines were expensive, their costs could be spread out over massive production runs. The more the machine ran and the more it produced, the greater economy of scale could be achieved. In other words, it was cheaper to manufacture more.

These new presses were adopted quickly in North American tobacco factories, giving their owners a distinct market advantage. In Canada, for example, the pioneer of the steam-powered tobacco press, William Macdonald, dominated the tobacco industry for the last half of the nineteenth century, though he was increasingly attacked for his reductions in prices and his use of child labor. This new speed through steam power was not without its problems. Packaging technologies did not keep up with production and not until 1885, when these difficulties were solved, could manufacturers take full advantage of the speed of these machines.

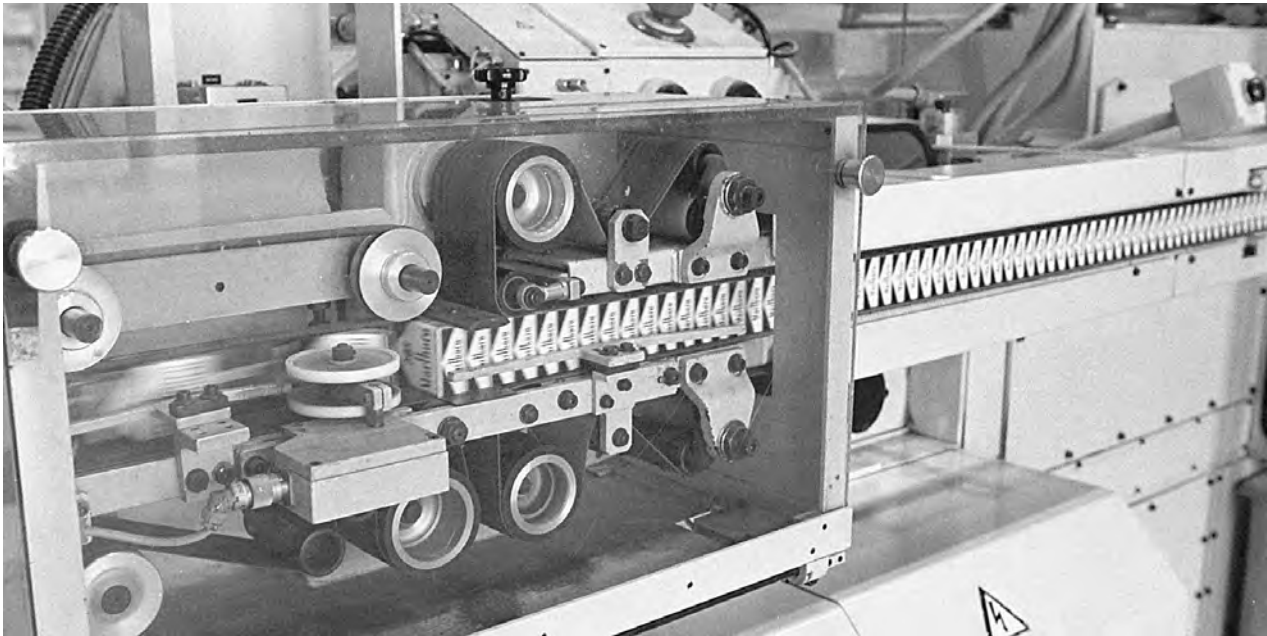
The Second Industrial Revolution

While the advent of steam significantly increased the speed of production of numerous tobacco products, changes during the last quarter of the nineteenth century played a more dramatic role. Skilled workers were replaced with technologically advanced production processes, often electrically powered, that increased the speed of production, integrated several manufacturing activities and reduced unit



plug a small, compressed cake of flavored tobacco usually cut into pieces for chewing.

hydraulic to operate through the force of liquid, typically water or oil. For centuries, mill machinery was powered by hydraulic (water-operated) wheels.



Marlboro cigarette machine. Mechanization of cigarette rolling and packaging in the late nineteenth century reduced unit costs from 80 cents to 8 cents per thousand cigarettes. AP/WIDE WORLD PHOTOS

costs, creating consumer- rather than producer-oriented products. These new machines were often powered by electricity and integrated numerous processes into a continuous feed. The best example of this type of new mechanization is in cigarette production. Before the 1880s, cigarettes were rolled by skilled rollers, by this point frequently female, or alternatively by smokers themselves. Both methods had their problems. To use rollers meant that labor costs were high and cigarettes were expensive. As a result, they were seen as luxury goods or novelties. When cigarettes were rolled by the smoker they were frequently overly fragile and risked falling apart. In both cases they were viewed as somewhat effeminate with so much work and money being spent on such a short smoke.

The key change in cigarette production came in 1881 when Virginian James A. Bonsack patented the Bonsack Cigarette Machine. By the late 1880s when the most skilled cigarette rollers could make 3,000 cigarettes per day, one Bonsack Cigarette Machine could produce 120,000 cigarettes in the same amount of time. Additional machines were added to package cigarettes in a new, more solid box, and altogether unit costs were reduced from 80 cents to 8 cents per thousand cigarettes, with Bonsack achieving impressive economies of scale. At the same time, Bonsack bought the copyrights to competing machines, giving him great power within the cigarette industry. Tobacco companies that licensed Bonsack's machine ended by dominating their national markets and expanding abroad. Yet in the 1880s the future success of the Bonsack was not clear. Adopting the machine was a significant risk because many believed that when a smoker chose a smoking product, part of his or her decision was based on the skill it took to roll or mix the tobacco. Indeed, several tobacco companies showed no interest in Bonsack's machine. Finally, in 1883 it was licensed to the French tobacco monopoly, in England to W.D. & H.O. Wills and later in 1885 to the American firm W. Duke, Sons, & Co., headed by James B. Duke.

Advertising and Globalization

The adoption of this industrial technology created problems of over-supply. One means used by Duke and Wills to rectify this quandary was to create new markets through mass advertising. Methods included newspaper advertisements, window displays, wall murals, handbills, and collectible **cigarette cards** with such images as scantily clad women and sports stars. Advertising was expensive and Duke in particular spent extravagantly; in 1889, for example, 20 percent of his sales were spent on advertising. Though Wills spent less on advertising than Duke, both companies came to dominate the cigarette markets in their respective countries.

While Duke had conquered the cigarette market in the United States, cigarettes were still a long way from being the most popular way to consume tobacco. Duke used his profits in the cigarette industry to gain control of much of the tobacco industry. In the last half of the 1890s Duke's American Tobacco Company (ATC) was involved in what historians have called the "Plug War": the ATC sold plug tobacco at a loss to gain a significant market and then arranged to purchase the remaining competition.

Duke in particular sought to go beyond his national borders and construct a global tobacco empire. In some countries he was able to do this by exporting from the United States, thus helping him solve problems of excess production. In other countries tariff barriers made this unprofitable so he built factories or made alliances with local firms. In the 1890s, Duke established divisions in Australia, Canada, Japan, South Africa, and Germany using his control over Bonsack's technology and the same kinds of managerial hierarchies and business methods as he had pioneered with great success in the United States.

In 1901, Duke looked to conquer the British market as well, creating Imperial tobacco through an alliance with Ogden's, an important competitor of Wills. In retaliation Wills entered the American market and a massive round of price cutting and advertising ensued on both sides of the Atlantic until a truce was declared in 1902. According to the agreement, both companies were left to their national markets and international markets were left to a jointly owned, newly created British American Tobacco Company (BAT). For ten years BAT was largely controlled by its American partners but in 1911 the British took an upper hand when the U.S. Supreme Court dissolved the ATC into competing companies after it was found to be in violation of U.S. antimonopoly laws. Companies formed as a result of the ATC dissolution remain the dominant players within the international cigarette industry into the twenty-first century.

Cigar Making

While new industrial technologies significantly transformed production processes in smoking, chewing, and snuff tobacco, as well as in cigarette production, technological changes were not inevitable nor did they affect all domains of the tobacco industry. Cigar manufacturing stands out as only being changed in a limited way by industrial technologies. Until the end of the eighteenth century, cigar making largely took place in Spain and in Spanish possessions in the Caribbean. After that time, cigar makers spread through Europe. English, Dutch, and



cigarette cards paper trading cards sometimes featuring sports personalities or movie stars packaged with cigarettes and offered as an incentive for purchase.

especially German immigrants brought the cigar-making trade to North America, competing with imported cigars and tobacco farmers who rolled their own. Small artisanal shops sprung up in the 1830s and 1840s and cigar sales expanded significantly. While larger cigar factories were established from the mid-nineteenth century, these factories were little more than artisans brought together under one roof with their trade remaining largely unchanged.


The skill involved in making a good cigar was supposed to be acquired during a three-year apprenticeship. Apprenticeship agreements in the eighteenth and early nineteenth centuries laid out a set of responsibilities between master and servant. In exchange for the young apprentice's labor, he (in the cigar trade, rollers were almost exclusively male) received little or no pay, but was fed, sheltered, clothed, and taught a craft. A fully trained cigar maker used few tools to roll a cigar from start to finish. He began by choosing, blending, and shaping the filler tobacco into a "bunch," which was then rolled into a binder leaf. He then rolled the wrapper leaf around the bound filler.

By the 1880s, in the move from artisanal shop to industrial factory, this apprenticeship system had already broken down and many cigar makers who had completed their apprenticeships were not able to complete a full cigar. In the 1870s the cigar mold was introduced. Teams of workers, including women and children, performed segments of the rolling process and soon replaced cigar makers. With limited success, these transformations in the craft were vigorously opposed by cigar-maker unions in cigar-making countries. Well into the twentieth century in North America, the Cigar Makers International Union continued to control its own hours of work (to an extent), own its own tools, and have its members paid by the number of cigars they rolled. From the 1870s to World War I this union played a leading role in organized labor in North America.

The major technological change in the cigar-making industry came in the 1920s when a machine was perfected to produce cigars. From 1901, the American Machine and Foundry Company, a **subsidiary** of James B. Duke's ATC, began research on a machine. In 1919, in the midst of a wave of strikes the AMFC introduced its cigar-making machine, which produced 6,000 to 8,000 cigars per day. The consequences of introducing the machine were similar to the introduction of the new technologies in other areas of the tobacco industry: The workforce became dominated by low-paid women, and in some places children, and the price of cigars dropped. These machine workers also differed from cigar makers because they were paid by the hour, not by the per-thousand cigars, and they no longer controlled their hours of work. The introduction of new technologies in the cigar industry differed from other sectors of the tobacco industry because hand-rolled cigars continued to be valued partially for the skilled labor used to roll them. Indeed, while cheap machine-made cigars outsell handmade cigars, to this day those that are hand rolled, especially in Cuba, are viewed as being of higher quality and thus command far higher prices than machine-made cigars.

See Also Labor; State Tobacco Monopolies.

■ JARRETT RUDY



subsidiary in commerce, a branch or affiliate of a larger unit that provides components or support services.

BIBLIOGRAPHY

- Cooper, Patricia A. *Once a Cigar Maker: Men, Women, and Work Culture in American Cigar Factories, 1900–1919*. Urbana and Chicago: University of Chicago Press, 1992.
- Cox, Howard. *The Global Cigarette: Origins and Evolution of British American Tobacco, 1880–1945*. New York: Oxford University Press, 2000.
- Goodman, Jordan. *Tobacco in History: The Cultures of Dependence*. New York: Routledge, 1993.
- Hilton, Matthew. *Smoking in British Popular Culture 1800–2000*. Manchester, U.K.: University of Manchester Press, 2001.
- Porter, P. G. "Origins of the American Tobacco Company." *Business History Review* (Spring 1969): 59–76.
- Rogozinski, Jan. *Smokeless Tobacco in the Western World, 1550–1950*. New York: Praeger, 1990.
- Rudy, Robert Jarrett. "Manly Smokes: Tobacco Consumption and Identity in Industrial Montreal, 1888–1914." Ph.D. diss., McGill University, 2001.
- Tennant, R. B. *The American Cigarette Industry*. New Haven, Conn.: Yale University Press, 1950.
- Tilley, N. M. *The Bright Tobacco Industry, 1860–1929*. Chapel Hill: University of North Carolina Press, 1948.



Insurance

Conceptually, insurance is based on the idea of a pool of shared risk. At regular intervals, all members of an insurance pool pay money known as premiums so that, when one of the members suffers from a known risk, such as illness, injury, or death, money will be available from the insurance company to designated beneficiaries for the expenses that will be incurred. In order for an insurance company to remain financially sound, it must take in at least as much money in premiums as it pays out in benefits.

In state-run social insurance programs, the payment of identical rates is encouraged based on the argument that the risk must be shared throughout society as a whole. In the private, for-profit insurance market, by contrast, the purpose is to take in more money in premiums than one pays out in benefits. Consequently, those individuals at higher risk are required to pay higher premiums because the company will probably have to make payments to its beneficiaries sooner than for its low-risk counterparts. (This is the rationale, for example, of charging "risk-taking" teenagers a higher rate for auto insurance than more mature drivers). Although statisticians and actuaries speculated on the connection between cigarette smoking and life expectancy throughout the twentieth century, the insurance industry only began to offer nonsmokers lower premiums around 1980.

Early Research

Writing for a largely medical audience in *Annals of Surgery* in 1931, Frederick L. Hoffman, a consulting statistician with the Prudential Insurance Company of Newark, New Jersey, president of the American



Frederick L. Hoffman (1865–1946)

Frederick L. Hoffman, who arrived in America as a German immigrant without any specialized education, emerged as an insightful and prophetic authority on American health and welfare throughout the early 1900s. As an insurance actuary working for the Prudential Insurance Company in New Jersey, he was a pioneer in collecting and analyzing statistical data on health and in bringing attention to cancer as a rising public health menace. In 1915, he wrote *The Mortality from Cancer throughout the World*, the first of his papers that reported cancer linked with a variety of causes, one of

which was tobacco. An astute observer of history and humanity, Hoffman based his initial theories on the subject by noting that few women of that period used tobacco and that the majority of mouth, throat, and lung cancer patients were men. He later published *Cancer and Smoking Habits*, which also promoted the notion that excessive smoking leads to cancer. Ironically, Hoffman himself was a heavy cigarette smoker. He died in 1946, having suffered from Parkinson's disease for nearly two decades.

■ DONALD LOWE

Statistical Association, and a founder of what would eventually become the American Lung Association and the American Cancer Society, speculated on the relationship between cancer and smoking habits (see sidebar). Specifically, he wondered whether there was a relationship between the resulting cancer and factors like the kind of tobacco smoked, the daily quantity smoked, the method of smoking (for example, pipes or cigarettes), the date that an individual started smoking, and the regularity or irregularity with which the individual exercised the habit of smoking.

Although Hoffman admitted that it would be difficult to prove conclusively that cigarette smoking contributed to cancer of the lungs, he did note that “those who practice inhaling certainly drive the smoke into the innermost recesses of the lungs. The observed increase in cancer of the lungs during recent years is highly suggestive of its correlation to the immense spread of cigarette-smoking habits.” In 1938, a Johns Hopkins University statistician, Raymond Pearl, published a study in which he compared the mortality curves (graphs showing the number of individuals who died at different ages) of smokers and nonsmokers. Pearl demonstrated that individuals who smoked had a shorter life span than nonsmokers. Despite these studies, insurance companies apparently did not, at this time, begin to charge their enrollees different premiums based on their smoking habits.

Late-Twentieth-Century Findings

The decisive event, which caused insurance companies to reconsider their practice, was the landmark 1964 report of the United States Surgeon General suggesting that there might be a link between cigarette smoking and lung cancer. Based on information contained in the report, State Mutual Life began selling policies to nonsmokers at a lower premium than to smokers. However, it was not until fourteen years later, in 1978, that the company reported that the mortality rates between smokers and nonsmokers were sufficiently large to warrant the differing fee structure. Within two years of the company's announcement, most major life insurance companies (which had been reluctant to



Smoking man with hourglass in chest.
Message: Smokers, your time is running
out. © IMAGES.COM/CORBIS

charge different rates prior to that time) introduced new, less expensive, policies for nonsmokers.

By 2000, the United States Department of Health and Human Services had developed clinical practice guidelines, which recommended that insurers include tobacco cessation treatment as part of their standard package of benefits to their subscribers. The recommended treatments included both counseling and **pharmacotherapy**. One of the reasons health professionals have advocated these practices for tobacco cessation treatment, in particular, is that such approaches have been seen as the “gold standard” of preventive interventions; that is, more cost-effective than the treatment for other chronic conditions related to smoking such as hypertension. For this reason, the inclusion of tobacco cessation treatment as part of standard insurance packages could be seen as one of the most vivid examples of the underlying philosophy behind the emergence of managed care—namely, the introduction of cost-saving preventive measures rather than costly medical interventions after a patient has already become ill.

See Also Doctors; Disease and Mortality; Lung Cancer.

■ J. ROSSER MATTHEWS

BIBLIOGRAPHY

Brandt, Allan M. “The Cigarette, Risk, and American Culture.” *Daedalus: Journal of the American Academy of Arts and Sciences* 119 (Fall 1990): 155–176.



pharmacotherapy a form of smoking cessation therapy that temporarily substitutes other forms of nicotine for tobacco smoke. Withdrawal symptoms are reduced and patients can more easily overcome their addiction to tobacco. Nicotine can be applied through a transdermal patch, chewing gum, oral inhaler, or nasal spray.

- Fiore, Michael C. et al. *Treating Tobacco Use and Dependence: Clinical Practice Guideline*. Rockville, Md.: U.S. Department of Health and Human Services Public Health Service, 2000.
- Hochschild, Richard. "Biological Age as Measure of Risk." *Journal of American Society of CLU & ChFC* 42 (September 1988): 60–67.
- Hoffman, Frederick L. "Cancer and Smoking Habits." *Annals of Surgery* 93 (January 1931): 50–67.
- Stone, Deborah A. "The Struggle for the Soul of Health Insurance." In *The Politics of Health Care Reform*. Edited by James A. Morone and Gary S. Belkin. Durham, N.C.: Duke University Press, 1994.



Intellectuals

In a small room crowded with books a man hunches over a typewriter, the black and white camera perfectly capturing the curl of smoke from a nearby ashtray. In another, larger room, a man sits in an overstuffed club chair, pen in hand and pipe in mouth. In a private library, a man in a tweed jacket sits in a leather armchair, perusing a book and holding a cigar.

Dressed in black, the typist might be Jean Paul Sartre; in a jacket of less determinate color, he might be George Orwell. The pipe smoker is perhaps Albert Einstein; if fictional, Sherlock Holmes. And the gentleman with the cigar could be any number of vaunted thinkers, from H. L. Mencken to Thomas Edison, Mark Twain to Sigmund Freud. These men are both particular and generic: they are writers, scholars, thinkers, and above all, intellectuals.

The link between smoking and intellectualism undoubtedly owes something to the link between smoking and **individualism**. Even had tobacco not proved a reigning cash crop for centuries, it almost begged for antiauthoritarian status (and popularity) when use of the plant Elizabethans commonly called "divine" was contemporaneously excoriated in King James I's *Counterblaste to Tobacco* and deemed punishable by excommunication by Pope Urban VIII. As tobacco became increasingly accepted, individualism rested less in the choice to partake and more in the particularity implied by one's tobacco preferences. It is almost impossible to imagine Sherlock Holmes without his pipe or Jean Paul Sartre without Gitanes (a French brand of cigarette)—subtle but telling proofs of Mark Twain's assertion in "Concerning Tobacco" that "Each man's own preference is the only standard for him, the only one which he can accept, the only one which can command him."

While factory workers of the nineteenth and twentieth centuries were presumed to smoke to pass the time, intellectuals commonly cited tobacco as productive of creativity or erudition. Sir Arthur Conan Doyle's fictional character, Sherlock Holmes, for example, referred to a particularly difficult case as a "three pipe problem." And though Sigmund Freud is perhaps best remembered for his unsubstantiated insistence that "a cigar is just a cigar," in Freud's case, it was also an oft-noted source of inspiration he deemed essential to his work. The inspiration sought in the bright leaves produced an intellectual smoking



individualism an independence of spirit; the belief that self-interest is (or should be) the goal of all human actions.



Author Jean Paul Sartre epitomized the tobacco-smoking intellectual, whose inspiration and erudition was culturally linked to tobacco consumption. The link between smoking and individualism also contributed to this phenomenon of popular perception. AP/WIDE WORLD PHOTOS

culture spanning broad ideological, philosophical, and disciplinary gaps, and stretching from the Mississippi River to the Left Bank.

Since most academies in the Western Hemisphere have effectively banned smoking in many common areas, and since intellectuals are not uniquely incapable of understanding risks associated with tobacco use, the culture of smoking among intellectuals has shifted dramatically in the final decades of the twentieth century. Nevertheless, tobacco has remained remarkably consistent in its presumptive humanizing of the intensely cerebral. While the so-called decadence of smoking once safely humanized the intellectual by asserting his or her baser sensuality, this function is now more readily identifiable in a tableau visible on campuses and at institutes across the globe: the huddled professor having a cigarette with a student who shares her distinctly corporeal and increasingly unpopular vice, both in open (if somewhat guilty) defiance of the Romantic poet Charles Lamb's prescient homage, "For thy sake, tobacco, I would do anything but die."

See Also Class; Literature; Psychology and Smoking Behavior.

■ CARA BAYLUS

BIBLIOGRAPHY

- Gately, Iain. *Tobacco: The Story of How Tobacco Seduced the World*. New York: Grove Press, 2001.
- Goodman, Jordan. *Tobacco in History: The Cultures of Dependence*. London and New York: Routledge, 1993.
- Klein, Richard. *Cigarettes Are Sublime*. Durham, N.C.: Duke University Press, 1993.
- Stern, Lesley. *The Smoking Book*. Chicago: Chicago University Press, 1999.
- Walton, James. *The Faber Book of Smoking*. London: Faber and Faber, 2000.



Iranian Tobacco Protest Movement

The Iranian Tobacco Protest of 1890–1892, directed at the monopoly on tobacco declared by the state in 1890, occurred against the background of an insolvent Qajar government, a population suffering from hard economic times and angry at rulers who were largely unresponsive to their plight, and a religious leadership that was deeply distrustful of the growing role Westerners had come to play in the country's economy. The movement, which brought together disparate groups with divergent motives and interests, has been called the first successful alliance between Iran's religious leaders, its modernizing reformers, and its discontented populace—an alliance that was to come to fruition in the Iranian Constitutional Revolution of 1905–1911.

The cultivation and sale of tobacco in Iran was a private affair until the late nineteenth century. The popularity of smoking made tobacco a lucrative business and thus a logical target for state efforts to increase revenue. In the second half of the nineteenth century the Qajar monarch Nasir al-Din Shah began to sell off national resources as **concessions** to foreign firms and nationals. In the 1870s and 1880s the country's telegraph and mail systems, its fisheries, and many of its mines were thus sold to Western, mostly British, interests. In March 1890 the shah granted a monopoly for the sale of Iran's tobacco and control over its production for a period of fifty years to Major Gerald F. Talbot, a British subject, with the understanding that, in return, Iran's Imperial Treasury would receive an annual sum of £15,000 in addition to a quarter of the net profit. Russia, Britain's main competitor in Iran and a force of great influence in the country, protested immediately, arguing that this concession violated the Treaty of Turkomanчай, which the Russians had imposed on Iran in 1828 after defeating its army and which gave Russian merchants the right to engage in trade in Iran. Several government officials, especially the enemies of Amin al-Sultan, the shah's chief minister and main advocate of the concession, also worked hard to oppose the concession in order to discredit him.

Russian opposition persisted throughout the episode, and some of the anti-concession agitation was clearly instigated by Russian officials in Iran, but neither this nor the intrigues of Qajar officials was enough to thwart the concession. Much more decisive was the popular reaction against it. The driving force behind this reaction was the opposition by Iranian merchants and shopkeepers who anticipated higher prices and feared being **marginalized** if the tobacco trade would pass into the hands of foreigners. Their resentment was given an ideological voice by the country's clerics, the ulama. Many, though by no means all, ulama supported the resistance, in part out of fear that the growing presence and influence of non-Muslim foreigners, people they considered not just unbelievers but ritually impure, would increase immorality in the form of prostitution and drinking and estrange people from Islam. Some also supported the opposition because tobacco grew on property they owned privately or on land that had been endowed as religious property, so that they stood to lose income from foreign control over its sale and export. Articulated as a struggle in defense of Islam against foreign intrusion,



concession a grant of land, usually by a government, to produce and market certain commodities or perform certain services for profit. Agricultural concessions were sometimes offered by European governments to encourage immigration.



marginalization the act of shunning or ignoring certain ideas or behavior that results in its being pushed outside the mainstream of the peer group.

the movement quickly became a popular one, involving an estimated 2.5 million smokers out of a total population of perhaps 8 million.

The movement first flared up in Shiraz, the center of Iran's main tobacco-growing region. Faced with the initial protests, the central government reacted by exiling the leading cleric in Shiraz, Ali Akbar Fal-Asiri. This action, however, merely caused a public outcry and further popular opposition, besides allowing the cleric to make contact with prominent Iranian ulama residing in the Shi'`i shrine cities of Iraq.

The city of Tabriz, in the northwest, became the next major center of opposition. Russian influence was particularly strong in Tabriz, and the province of Azerbaijan, in which Tabriz is located, was at the time the most politically conscious and sophisticated in the country. Isfahan and Mashhad, too, soon erupted in popular clergy-led agitation.

The protest movement culminated when the ulama declared tobacco itself unclean and smoking religiously impermissible. Isfahan took the lead in this escalation in late 1891, but the move received a stamp of authority when the chief cleric (*mujtahid*) of Isfahan, Hajji Mirza Muhammad Shirazi, who resided in Iraq, issued a religiously binding decree (**fatwa**) that banned smoking. Outside Iran, Jamal al-din al-Afghani, a radical reformer and professional agitator of Iranian background, fanned the flames by calling the concession a grave threat to Islam. Ordinary Iranians, frustrated at the mismanagement and misery prevalent in the country, massively heeded the call. People throughout the country, but especially in the capital, abandoned their **water pipes**. Even the women in the shah's own harem gave up smoking. Not just coffeehouses but the entire bazaar closed in protest, and several ulama issued calls for jihad.

Realizing that his own authority was at stake and that the stability of the country was in danger, Nasir al-Din Shah first tried to persuade the opponents that the boycott was to the detriment of the country's stability and well-being. When that failed and the opposition remained adamant in its demand that foreigners' involvement in Iran's tobacco trade end, the shah in January 1892 rescinded the concession. Smoking resumed shortly thereafter, even though many ulama long continued to agitate against tobacco. Forced to compensate the Tobacco Company for its losses, the Qajar government had to take out a £500,000 loan.

The Tobacco Revolt remains one of the landmark events in Iran's modern history. It is often seen as the first episode in which common people showed an awareness of a collective identity and its success in mobilizing disparate groups around a common cause was to be repeated a number of times in the twentieth century, most recently in the Islamic Revolution of 1978–1979. The precise role of the ulama in the movement remains contested. Some argue that, far from simply acting as the protectors of the people, those ulama who opposed the concession did so in large part from economic self-interest. Historians working in the Islamic Republic, on the other hand, have tended to elevate them to the status of popular heroes fighting tirelessly and selflessly for the sake of the people and the nation.

See Also Islam; Middle East.



Nasir al-Din Shah, Qajar monarch from 1848–1896, whose grant of a monopoly on the sale and production of Iran's tobacco in March 1890 to Britain set off protests from Russia, Britain's main competitor. Subsequent protests from government opponents of the shah; Iranian merchants and shopkeepers; religious leaders; and landowners led to the nationwide protest and eventually the declaration that tobacco was unclean and smoking was religiously impermissible. In January 1892 the shah rescinded the concession; smoking resumed soon after despite continued objections from some religious leaders.

© HISTORICAL PICTURE ARCHIVE/CORBIS



fatwa a ruling by an Islamic cleric upon a religious issue. Many Islamic clerics have declared cigarette smoking a sin and forbidden Muslims to sell cigarettes.

water pipe also called a hookah, a tobacco pipe in which smoke is filtered through a bowl of water. The smoker inhales through a mouthpiece connected to the pipe by a flexible tube. Water pipes are traditional in Asia.

BIBLIOGRAPHY

- Keddie, Nikki R. *Religion and Rebellion in Iran: The Tobacco Protest of 1891–1892*. London: Cass, 1966.
- . *Sayyid Jamāl al-Dīn “al-Afghāni”: A Political Biography*. Berkeley: University of California Press, 1972.
- Lambton, Ann K.S. “The Tobacco Régie: A Prelude to Revolution.” In *Qājār Persia: Eleven Studies*. Austin: University of Texas Press, 1988. Pp. 223–276.



Islam



Qalyan bearer, a tobacco servant who provided his master with his pipe and tobacco paraphernalia, from the Qajar period (1796 to 1925)

Though news of tobacco may have reached the Eastern Hemisphere shortly after Spanish explorer Christopher Columbus’s first voyage in 1492, it took until the early seventeenth century for smoking—mostly in the form of the water pipe—to become popular among the people of West and South Asia.

Medical Interest

In the Middle East, as in many places around the world, tobacco in the early stage of its introduction aroused medical interest, provoked moral rebuke among clerics, and caused economic anxiety on the part of bureaucrats. Like their counterparts in the West, Muslim physicians discussed the effect of smoking on physical health. Controversy surrounded the alleged effects of smoking on the body. Following the humoral pathology of traditional Galenic medicine, which remained normative in the Islamic world well into the nineteenth century, tobacco was classified as a hot and dry substance, and as such it was believed to be salutary for people with a humid disposition. Some even saw it as a universal medicine against a variety of diseases, while others believed that it weakened the brain. Similar to European beliefs, tobacco smoke was thought to repel pestilence. Overall, however, in Islamic lands tobacco never gained the medicinal reputation it enjoyed in early modern Europe.

Theological Scrutiny

Muslim scholars, on the other hand, were highly preoccupied with the potentially detrimental effects that smoking had on piety and propriety. The moral and religious debate that erupted in the Middle East is similar to the discussion tobacco sparked in the West, but aspects of it are different. Unable to find references to tobacco in the Koran, the Muslim book of sacred writings, some theologians declared it impermissible. Others used analogical reasoning to determine whether smoking was permitted or should be condemned and banned as contrary to religion. Because tobacco did not resemble any of the forbidden substances mentioned in the Koran and the sayings of the prophet Muhammad, proscribing it was not a simple matter. Nor was it easy to “prove” that tobacco in itself was bad, or harmful to one’s health. One way of arguing for restriction, therefore, was to equate tobacco with the foul things that the Koran declares forbidden, to associate it with the “avoidance of things evil,” or to argue that

the Prophet, who appreciated sweet odors, would certainly have loathed tobacco's offensive smell.

In Shi'ism, the minority variant of Islam that in 1501 became the state religion of Iran, tobacco inspired similar debates. A number of Iranian theologians wrote treatises that discuss the religious status of tobacco smoking, weighing the potential health benefits ascribed to it by some doctors against possible religious objections. Arguments for and against tobacco were often made in the context of the controversy between the representatives of orthodoxy, who rejected tobacco, and members of Sufi orders, who embraced smoking, often mixing tobacco with hashish for the hallucinatory effect. In Iran, most of those who spoke out against the habit seem to have adhered to Akhbarism, a theological school of thought that relied heavily on the Koran, and the sayings of the Prophet and the Shia Imams (prayer leaders).

Bans on Smoking

In the seventeenth century, Muslim authorities issued decrees that outlawed smoking. Following clerical disapproval, they often presented prohibitive measures as a return to the true faith. However, their motives typically went beyond mere piety and involved fears of social unrest. The Mughal shah Jahangir (reigned 1605–1627) banned smoking in 1617, convinced that its consumption created “disturbance in most temperaments” (Sangar). Similar motives are recorded in the Ottoman Empire, where tobacco was first proscribed in the reign of Sultan Ahmad (1604–1617), who issued numerous bans on tobacco and the places where it was smoked. Of his successors, Sultan Murad IV (1623–1640) was most vehement in his opposition to smoking. He used tobacco's status as innovation as an argument against it, but appeared mostly concerned with the presumed undermining of order and discipline by those who frequented tobacco shops, and with political opposition by the Janissaries, who owned many of these establishments. In 1627 a ban was issued on tobacco cultivation in Ottoman territory. Six years later the sultan, possibly persuaded by Istanbul's Friday mosque preacher KaDizadeh Mehmet Efendi, used a large fire that destroyed thousands of houses in Istanbul as a pretext to outlaw smoking and to close all coffee shops. Many who were found smoking were executed.

In Safavid Iran during the 1500s and 1600s, governmental attempts at curbing tobacco occurred under Shah Abbas I (1587–1629) and Shah Safi I (1629–1642). The former seems to have been motivated by a personal dislike for tobacco as well as concerns about the waste it represented. He outlawed the use of tobacco because his soldiers spent too much of their pay on smoking, punishing offenders by having their noses and lips cropped. The same ruler is also known to have ridiculed his smoking courtiers by offering them ground horse manure, claiming it was a special tobacco from the town of Hamadan. His successor, Shah Safi, rescinded the ban shortly after taking power, presumably in an attempt to gain legitimacy among his people, who by this time had massively taken to smoking. Yet the same ruler banned tobacco several times himself, for reasons that remain unknown.

Everywhere, tobacco restriction was temporary and unable to stop the advance of the herb. Even clerical authorities came to realize that fighting tobacco was an exercise in futility. As one Iranian cleric observed



Tobacco shop, from the Qajar period (1796 to 1925)

in the late seventeenth century, “The water pipe is so well known in east and west that its removal is no longer possible. In former times a ruler proscribed it everywhere and ordered the execution of addicts, and people were indeed killed on its account, but all to no avail.” (Jafariyan). Even an otherwise uncompromising Akhbari theologian such as Muhammad Baqir Majlis (d. 1699) sanctioned smoking. Like many of those who spoke out similarly, he was an avid smoker himself.

With the triumph of tobacco as the drug of choice for the masses, the continuing debates about its religious status became largely academic and moot after the seventeenth century. Secular states, having discovered the easy tax revenue tobacco generated, followed the example of western governments by ceasing to oppose the use of tobacco and in many cases began to stimulate smoking.

The rise of puritanical movements occasionally reasserted the ban on what fundamentalist preachers continued to consider an ungodly innovation. An example is the rise of the puritanical strand of Islam known as the Wahhabi movement in the Arabian Peninsula at the turn of the eighteenth century, which was accompanied by a ban on all intoxicating substances, including tobacco. In the modern Wahhabi-inspired state of Saudi Arabia, tobacco imports and smoking were banned from 1926 until 1960. The Taliban regime in Afghanistan in the late 1990s discouraged smoking. But these are anomalies, as was the clergy-led controversy over tobacco in late-nineteenth-century Iran known as the Tobacco Revolt. This movement did not target tobacco itself as much as the tobacco concession that the shah had given to a foreign firm, prompting the country’s religious leaders to decry smoking as impermissible out of fear that non-Muslims would defile tobacco. The religious ban on smoking was lifted as soon as the shah rescinded the concession and, though some religious leaders continued to agitate against tobacco, smoking quickly resumed.

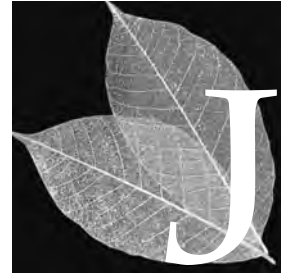
In the 2000s tobacco is hugely popular throughout the Islamic world, and the ban on smoking remains in place only during Ramadan, the Muslim month of fasting. In Saudi Arabia and Afghanistan, the antismoking measures that are taken or contemplated stem from medical rather than religious considerations.

See Also Christianity; Iranian Tobacco Protest Movement; Judaism; Mayas; Native Americans; Prohibitions; Regulation of Tobacco Products in the United States; Shamanism; Social and Cultural Uses.

■ RUDI MATTHEE

BIBLIOGRAPHY

- Floor, Willem. “The Art of Smoking in Iran and Other Uses of Tobacco.” *Iranian Studies* 35 (2002): 47–85.
- Jafariyan, Rasul. *Din va siyosat dar dawrah-i Safavi*. Qum: Intisharat-i Ansariyan, 1991.
- Klein-Franke, Felix. “No Smoking in Paradise: The Habit of Tobacco Smoking Judged by Muslim Law.” *Le Muséon* 106 (1993): 155–183.
- Matthee, Rudi. *The Pursuit of Pleasure: Drugs and Stimulants in Iranian History, 1500–1900*. Princeton, N.J.: 2005.
- Sangar, S. P. “Intoxicants in Mughal India.” *Indian Journal of Science* 16 (1981): 210.



Japan

The diffusion of tobacco from European countries to Japan began sometime during the late sixteenth and early seventeenth centuries. Scholars are unsure of the exact date and route of its arrival. However, in 1601 in Fushimi, Kyoto, Jerónimo de Jesús, a Spanish Franciscan missionary, had an audience with the soon-to-be first shogun (military governor) of the Edo period (1603–1867), Tokugawa Ieyasu. On this occasion, the missionary presented Ieyasu with an ointment made from tobacco and the seeds of a tobacco plant. Further references to tobacco appear in Japanese archives beginning in 1609. Accounts of tobacco use and cultivation are also documented in the paintings from the Keicho period (1596–1615).

During the first 100 years after introduction to Japan, tobacco was strictly regulated and generally banned by the Edo shogunate (feudal government). At first, the new custom of tobacco smoking was practiced by gangs of young men, known as *kabukimono*, notorious for their wild dress and outrageous behavior. Tobacco became a symbol of this infamous group, which resulted in the shogunate's subsequent efforts to restrict smoking. Regardless, smoking and leaf tobacco cultivation expanded, causing the shogunate to ban production and sales of tobacco completely. The Edo shogunate promulgated about forty bans on the sale and use of tobacco during the seventeenth century, though the prohibitions failed to prevent the expansion of smoking. By the late seventeenth century the government sought to regulate sales and cultivation instead, though occasionally reverting to a policy of prohibition. In the eighteenth century, the government began to actively encourage tobacco cultivation.

Consumption

At the start of the Edo period, tobacco began its popularization, but during the Genroku years (1688–1704) of the Edo period, tobacco became part of the mainstream despite its continued official prohibition. Smoking finely chopped leaf tobacco in the Japanese *kiseru* pipe became a common foundation for Japanese tobacco culture. Pipes similar

Japanese *kiseru* pipes, decorated with metal carving and inlay work, from the late Edo Period. Smoking finely chopped leaf tobacco in *kiseru* pipes became common in Japanese tobacco culture during the Edo and then the Genroku Period. COURTESY OF TOBACCO AND SALT MUSEUM



to the *kiseru* are used to smoke tobacco throughout Asia; however, the practice of smoking fine-grained tobacco in extremely small-bowled *kiseru* pipes was solely practiced by the Japanese. Even in the twenty-first century, the only fine-grained tobacco produced for use in a *kiseru* pipe is in Japan. One piece of the finely shredded tobacco, known as *koiki*, measures approximately 0.1 millimeter wide and 76 millimeters long. The late Edo period craftspeople set the standard for fine-grained tobacco production by hand. Later upgrades in technology allowed the production of fine-grained tobacco to be mechanized. The Japanese preference for a milder-tasting tobacco contributed to the development of the fine-grained type. The Japanese skill in knife and sword craftsmanship also propelled the production of a precisely chopped tobacco.

At first, tobacco consumption in Japan was mainly an indoor activity. Rooms for entertaining guests were equipped with the tobacco *bon*, a smoking tray usually containing a *kiseru* pipe, tobacco jar, ash-tray, and *hire* (tinderbox). Outdoor smoking later became customary when the tobacco pouch was introduced. The tobacco pouch was easily portable and could be used to carry tobacco for smoking on the public streets. The products used for carrying and storing tobacco were all originally developed from other receptacles such as the incense tray, flint pouch, and *inro* (pillbox). Each of these items was modified to suit its specific purpose of carrying tobacco or storing ashes. The use of particular high-priced materials as pipe decorations gave birth to the



After Japan's loss in World War II, American fashions were ascendant and included the spread of cigarette use, including Iko, which replaced the traditional *kiseru* tobacco pipes. COURTESY OF TOBACCO AND SALT MUSEUM

production of various smoking paraphernalia. Fast-paced production technology of these pipes and accessories was encouraged in order to address the emerging popularity of tobacco.

As smoking grew in popularity, tobacco use soon became commonplace among the performers of Kabuki theater. In the *yukaku* courtesan quarters, which served as a brothel, a prescribed manner for tobacco use also emerged. Smoking tobacco was steadily becoming a fashionable undercurrent of the Edo period common culture. The Japanese used the word *iki* to denote a fashionable character, an adjective they applied to the manners of a stylish smoker.

From 1639 to 1867, Japan was a country closed to foreigners. Against the backdrop of Japan's cultural isolation, smoking became part of the common culture of adults, regardless of social class and gender. (Although smoking had become a legal custom, Japan did not pass a statutory law forbidding minors under the age of twenty from smoking until 1897.) During the Meiji period (1868–1912), cigarettes, cigars, and pipes made their way from Europe and America to a Japan that formerly had a restricted definition of tobacco mediums. In particular, consumption of cigarettes became popular in big cities.

At the beginning of the twentieth century, 80 percent of tobacco consumed nationally was the finely shredded tobacco for *kiseru* pipes, called *kizami*. *Kizami* consumption was stable until the early Showa period (1926–1989). However, cigarette consumption, particularly in urban areas, rose drastically during the Taisho period (1912–1926). Although by 1921 the majority of tobacco sales were cigarettes, *kizami* was still enjoyed throughout Japan. With Japan's World War II defeat in 1945 and the subsequent period of reconstruction, traditional Japanese culture went into decline while an Americanized lifestyle spread throughout the country. Following the American pattern, the demand for cigarettes grew and the *kizami* tobacco and *kiseru* pipes gradually disappeared.

In 1957, the first Japanese-made filter cigarette, Hope, entered the market. Because the main tobacco choice of Japanese smokers was filter



cigarettes, demand rose quickly: By 1979, production of domestically produced filter cigarettes had reached 300 billion. Following this peak in tobacco production the percentage of Japanese smokers started to decrease, causing a fall in production as well.

The decline in smoking is linked to rapid urbanization, which led to a perceived deterioration in smoking manners, and, more importantly, a growing awareness of tobacco's negative health effects. With these two issues in mind, the Japanese government began to regulate smoking; for instance, the Health Promotion Law of 2003 prohibits smoking in public spaces. The proliferation of stronger antitobacco laws leaves the future of Japanese tobacco culture in question. At the turn of the twenty-first century, the smoking rate of Japanese adults was 49.1 percent of males and 14 percent of females. These figures bring the national average of smokers to 30.9 percent.

Production, Manufacturing, and Regulation

In the major cities of Edo (Tokyo) and Osaka, tobacco specialty shops began to appear in the late seventeenth century. These shops were typically family-owned enterprises that centered their businesses on selling tobacco leaves (some that were shredded in the shop, and others that were shredded and blended in the growing district), as well as products such as old-fashioned lighters. By the 1800s the expansion of nationwide tobacco cultivation had already begun; 250 major regions were producing tobacco. Famous tobacco leaves such as *kokubu* of Satsuma, Japan, and *hattori* of Settsu, Japan, were under production. As tobacco became an important agricultural crop, cultivation technologies and plant refinements improved.

Around the fifth year of the Meiji period (1872), domestic tobacco production, trade, and promotion intensified. During the period from 1888 to 1898, companies such as the Iwaya Co., based in Tokyo, and Murai Bros. and Co., based in Kyoto, gained power. Above all, the Murai Bros. and Co., which introduced American production technology, became the forerunner of all tobacco trade companies in Japan.

The Meiji government also brought a new approach to tobacco taxes. It aspired to replace the former land tax with a new tax on tobacco sales. During the prior Edo period, feudal lords, flouting the shogunate's efforts to prohibit tobacco, began to tax tobacco crops. After the Meiji government abolished feudalism, the incorporation of tobacco into the national tax system provided funds for building the infrastructure necessary for a free market economy. The government also utilized tax revenue from tobacco sales to finance the modernization of industries.

In 1876, the Japanese government implemented a new tobacco control law called *tabako zeisoku*. This law enforced the taxation of commercial tobacco sales and the use of revenue stamps to make sure the tax was being paid. In the ensuing decades, the government revised the law and eventually introduced a measure known as the Tobacco Monopoly Law in 1904. The Tobacco Monopoly Law placed most stages of tobacco production under the government's control. Although this law angered private tobacco dealers, the government's financial straits, partly caused by the outbreak of the Russo-Japanese War in 1904, and resentment of the enormous profits going to the British American Tobacco Company, ensured the monopoly's acceptance.

The government-run tobacco monopoly closed its doors in 1985, after eighty years. Once again, the tobacco industry became privatized, with Japan Tobacco Inc. becoming the only tobacco manufacturers in the country. The Japanese tobacco business gradually changed to fit the contemporary international market system, although, as elsewhere, the government continues to profit from taxes on tobacco. Researchers estimate tax revenue from tobacco consumption to be approximately 2 trillion Japanese yen (about \$18.2 billion) in 2001.

See Also China; Origin and Diffusion; Philippines.

■ MASUYUKI HANDA

BIBLIOGRAPHY

- Handa, Masayuki. *Tabako Omoshiro Igai Shi*. Tokyo: Bungei Shunju Co., 2002.
- Japan Monopoly Corporation. *Tabako Senbaishi*. Vol. 1–6. Tokyo: Japan Monopoly Corporation, 1964–1989.
- Monopoly Bureau of the Ministry of the Finance. *Tabako Senbaishi*. Vol. 1–3. Tokyo: Monopoly Bureau of the Ministry of the Finance, 1915.
- Ueno, Katami. *A History of Tobacco*. Tokyo: Taishukan Shoten, 1998.
- Ugata, Tamekichi. *Sekai Kituenshi*. Tokyo: Senbai Kosaikai, 1984.



Judaism

In the Bible, the Book of Numbers proclaims that Nazirites, who vowed to deny themselves wine and liquor for a specified time in special service to God, had to bring a sin offering at the end of their abstinence. Thus the Talmudic rabbis established that it is a sin to deny oneself pleasures that God has provided and not prohibited. As early as the second century C.E., then, the rabbis saw such vows not as an act of piety, but rather as an act of ingratitude for God's gifts and maybe even haughtiness in trying to be holier than others. Consequently the discovery of tobacco and its pleasures in the seventeenth century was, for Jews, another manifestation of God's goodness. While many Christian clergymen of that time condemned smoking as offering incense to Satan, the rabbis did not see it in those theological terms but rather simply as a new mode God had given people to enjoy life.

Thus by the seventeenth century smoking was widespread among Jews, and **snuff** taking was common by the eighteenth century. Scholars believe that women smoked as much as men did in the eighteenth and nineteenth centuries. Smoking was permitted in the study hall (and in the twenty-first century many **yeshiva** students smoke while studying), but it was forbidden in the synagogue, just as eating was.

Ritualistic Concerns

For most of history, the only religious issues that Jews had with tobacco were ritual in nature. Since tobacco is a plant, there were no concerns about violating the Jewish dietary laws governing the eating of fish and



snuff a form of powdered tobacco, usually flavored, either sniffed into the nose or "dipped," packed between cheek and gum. Snuff was popular in the eighteenth century but had faded to obscurity by the twentieth century.

yeshiva a Jewish religious school.

animals as outlined in Leviticus, chapter 11, and Deuteronomy, chapter 14. The problems rather centered on whether tobacco violated the laws of the holy days. Because lighting or extinguishing a fire is prohibited on the Sabbath (from eighteen minutes before sunset on Friday until three stars appear on Saturday evening) and the Day of Atonement, smoking was clearly forbidden on these holy days. On the other biblical holy days (Passover, for example), though, using fire from an already-burning source to light another is permitted, but extinguishing a fire is not. The question, then, was whether one might light a cigarette or cigar that way on the holy day, even though that would thereby inevitably cause it to go out when one had finished smoking it. Most rabbis ruled that one may indeed smoke.

Another question was whether one may smoke on the fast of the Ninth of Av, the day of mourning the destruction of the First and Second Temples and other national Jewish tragedies, and on the other minor fasts of the Jewish year. One issue was whether it was appropriate to indulge in the enjoyment of smoking on a fast day, when one was to avoid sexual relations and bathing, among other activities, to afflict oneself as part of the expression of mourning on the fast. The other issue was the legal status of smoke: Is it a “means of sustaining life,” like food, and therefore to be prohibited on the fast, or no “substance” and therefore permissible? Here again the permissive opinion won the day, but many religious Jews nevertheless refrain from smoking on fast days, for even if it satisfies the letter of the law, it violates its spirit. In addition, historically the concern arose about sullyng the reputation of Jews; thus the seventeenth-century Turkish rabbi Hayyim Benveniste declared that the name of God is desecrated when the Muslims observe Jews smoking on their fast days when Islam prohibits smoking on its fasts.

Finally, rabbis asked whether one must pronounce a blessing of God before smoking, as one must do before enjoying food. The view that smoke is not a substance led to the conclusion that no blessing was necessary or appropriate.

From Tobacco Industry to Public Health

Jews were heavily involved in the manufacture and sale of tobacco in both Europe and America. So, for example, of 110 tobacco factories in the Pale of Settlement (in western Russia) in 1897, 83 were owned by Jews, and over 80 percent of the workers were Jewish. In the United States, except for the garment industry, the largest concentration of poor, immigrant Jewish workers in the last quarter of the nineteenth century and the early twentieth century was working for cigar and cigarette factories. This group participated actively in the nascent labor union movement in the United States, organized by Samuel Gompers in the 1870s and 1880s. In the next generation, Jews often served as tobacco distributors, and while cigarette making was taken over by large companies, as late as 1935 Jews owned three of the four major cigar manufacturing businesses.

These demographics changed with the discovery of the harmful effects of smoking on health. In Judaism, God owns everything, including the human body, and the religion requires that people take care of themselves during their lifetime, which includes the duty to avoid harming themselves.



A Jewish woman lighting Sabbath candles and saying a prayer to mark the onset of the Sabbath on Friday before sunset. Jerusalem, Israel, 1988. Contemporary Jewish authorities disagree as to whether smoking itself is prohibited by Jewish law, but even those who permit it would prohibit smoking on the Sabbath because lighting, spreading, and extinguishing fire is prohibited on this holy day. © RICHARD T. NOWITZ/CORBIS

Because smoking has been shown beyond any doubt to harm human health in many ways, rabbinic rulings in the Conservative and Reform movements as early as the 1970s prohibited smoking, at least in public. Some Orthodox rabbis permit, and some prohibit, smoking as a matter of law, but even the former urge that Jews refrain from smoking as an unwise activity. The dangers of secondhand smoke have led the Rabbinical Assembly, the association of Conservative rabbis, to ban smoking in its public meetings and to call on governmental officials to ban smoking in all public places.

Moreover, Jewish legal sources would permit society to limit its assistance to those who repeatedly endanger themselves. In recent decades rabbinic authorities have specifically included in this those who engage in practices known to constitute major health risks such as smoking, for individuals must take responsibility for the consequences of their behavior, especially after being duly warned through public education or their own sickness. For example, smokers cannot rightfully expect the community to pay for repeated lung transplants; indeed, in light of the shortage of organs for transplant, the cost of the procedure, and the poor prognosis for smokers to benefit significantly from such transplants, Jewish law, like current medical practice, would deny smokers even one transplant. Thus the fundamental Jewish concern for preserving life and health, coupled with current medical findings about the dangers of smoking, has led to a complete reversal in the earlier Jewish endorsement of the use and manufacture of smoking materials.

See Also Christianity; Islam; Prohibitions; Regulation of Tobacco Products in the United States; Social and Cultural Uses.

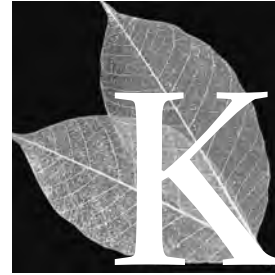
■ ELLIOT N. DORFF

BIBLIOGRAPHY

Dorff, Elliot N. *Matters of Life and Death: A Jewish Approach to Modern Medical Ethics*. Philadelphia: Jewish Publication Society, 1998.

Dorff, Elliot N., and Arthur Rosett. *A Living Tree: The Roots and Growth of Jewish Law*. Albany: State University of New York Press, 1988.

Herring, Basil F. *Jewish Ethics and Halakhah for Our Time: Sources and Commentary*. New York: Ktav Pub. House and Yeshiva University Press, 1984.



Kentucky

More than any other crop, tobacco has been a central part of Kentucky culture since the late 1700s. Because of the rich soil in the central and western regions of the state, tobacco is well suited for Kentucky and was probably first harvested by the Shawnees. European settlers in Kentucky began growing tobacco as early as the mid-1700s, and the first tobacco warehouse in the area was established in 1788 when Virginia authorized warehouse inspectors to examine the tobacco's quality. Throughout the early 1800s, tobacco production increased steadily, and by the eve of the Civil War, Kentucky surpassed Virginia in tobacco production. Until the early 1900s, Kentucky led the nation in tobacco production.

The western part of the state, known as the Black Patch, became one of the world's foremost producers of dark tobacco, used primarily in **snuff**, chewing tobacco, and cigars. This variety was often cured in a barn with an open fire and therefore was called fire- or **flue-cured tobacco**. After the Civil War a lighter blend was introduced in Bracken County in the Bluegrass Region and was cured in the open air. This milder Burley tobacco became the prime ingredient in cigarettes, which became a popular product by the 1890s.

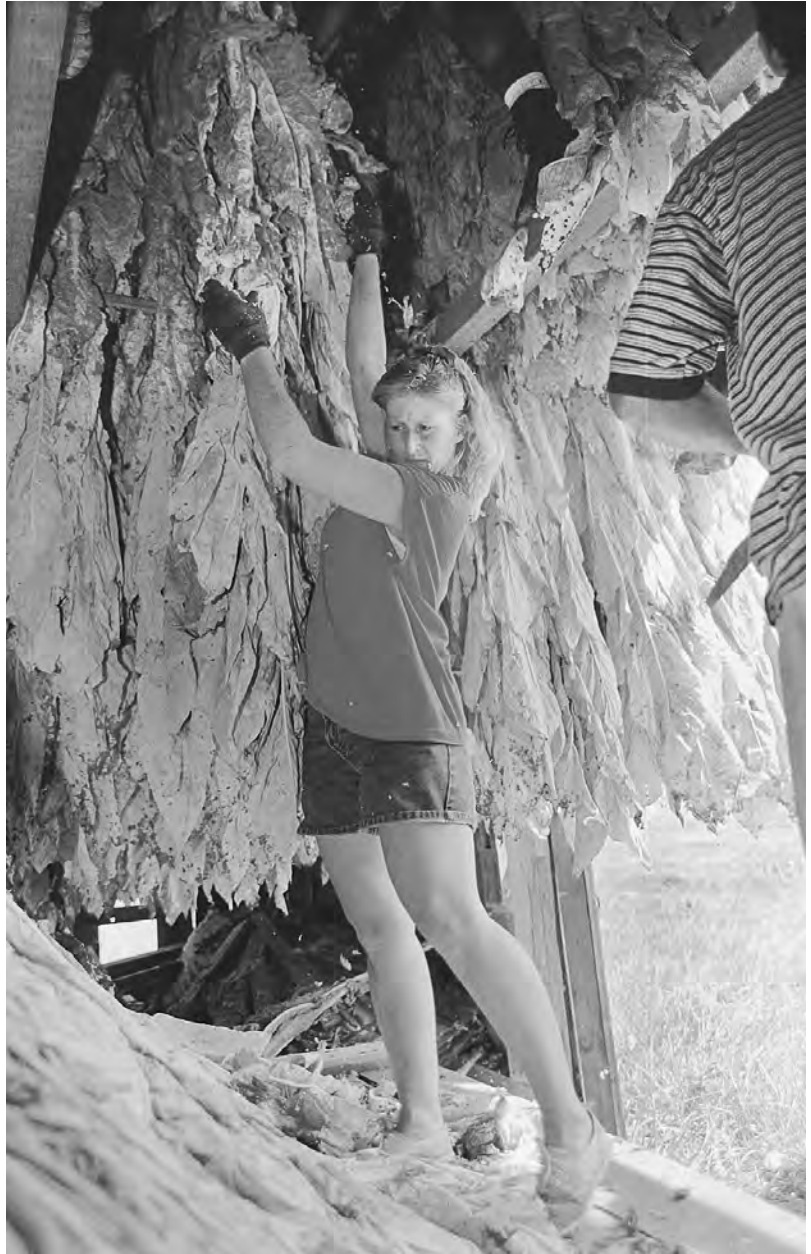
With the spectacular growth of the American Tobacco Company (ATC), whose dominance of the industry was unrivaled by the early 1900s, tobacco growers found that the prices they received from the company's buyers were often below even the cost of production. From 1874 to 1894, Kentucky tobacco prices fell 52 percent, and farmers waged an insurgency that became known as the Black Patch War, which lasted from 1904 to 1909. In the central region, growers in 1908 staged the only successful large-scale agricultural strike in American history. The growers refused to plant a crop of Burley tobacco, thereby diminishing its supply, forcing the ATC to relent and give in to all of the growers' demands. But by 1909 the producers of Burley tobacco still had only one major buyer for their crop, and their economic straits worsened.

With the end of the hostilities against the ATC, the tobacco industry in Kentucky evolved further. Marketing underwent various changes until the 1920s, when the loose-leaf system gained prominence.



snuff a form of powdered tobacco, usually flavored, either sniffed into the nose or "dipped," packed between cheek and gum. Snuff was popular in the eighteenth century but had faded to obscurity by the twentieth century.

flue-cured tobacco also called Bright Leaf, a variety of leaf tobacco dried (or cured) in air-tight barns using artificial heat, distributed through a network of pipes, or flues, near the barn floor.



The continuing role of tobacco in Kentucky's economic, social, and political history, despite cultural and economic challenges, is represented by the photograph of this worker in Simpsonville, taken in 1998. PHOTOGRAPH BY TONY GUTIERREZ. AP/WIDE WORLD PHOTOS

Under this system, growers brought their leaf to warehouses, where buyers competed for the crop. World War I was crucial in making cigarettes a common part of American culture, and during the war prices soared. Yet when markets opened in 1920, the price fell in central Kentucky from 35 cents per pound to just 3 cents. In Lexington, angry growers drew their guns, threatening another war against the tobacco industry. Throughout the 1920s, while Kentucky remained a major producer of tobacco, its farmers continued to receive drastically lower prices. With the inclusion of tobacco as a core commodity in the Agricultural Adjustment Act in 1933, tobacco prices were guaranteed by the federal government.

Since the early 1900s, there has been a steady shrinkage of small, family-owned tobacco farms in Kentucky. What had once been a

labor-intensive crop was made easier by the invention of mechanical devices such as pickers and other machines. The cost of producing tobacco has increased and, consequently, while the number of farmers has decreased, the size of the average tobacco farm in Kentucky has increased. Despite all of these changes, tobacco remains labor intensive and promises little in the way of income. Future price support remains doubtful, causing additional worry to growers.

The role of tobacco consumption in Kentucky is also somewhat remarkable. Tobacco use has long been a core component of Kentucky culture, especially in rural areas, and Kentucky has always been one of the leading states in per capita cigarette consumption. In 1995 Kentucky had the highest per capita smoking rates in the nation at 27.8 percent. By 2000, the Centers for Disease Control and Prevention placed that figure at 30.5 percent and concluded that 7,791 Kentuckians died that year from smoking-related illnesses. Also, an estimated 15 percent of the state's **Medicaid** funds were used to treat tobacco-related diseases. By 2003 Kentucky continued to lead the nation in per capita smoking, and debates raged about the public health consequences for the state's citizens.

While smoking bans were contemplated, the state maintained the second-lowest cigarette tax in the nation at 3 cents per pack, a level that was still holding in 2004. A century earlier, tobacco brought millions to the state in income, but by 2000, with ever-diminishing prices, fewer farmers, and declining national smoking rates, the crop was becoming an economic drain on an already impoverished state.

See Also American Tobacco Company; Black Patch War; Consumption (Demographics); United States Agriculture.

■ TRACY CAMPBELL

BIBLIOGRAPHY

- Axton, William F. *Tobacco and Kentucky*. Lexington: University Press of Kentucky, 1975.
- Centers for Disease Control and Prevention, Office of Smoking and Health. "Tobacco Information and Prevention Source." Atlanta, Ga.: Centers for Disease Control, 2004.



Kretek

A prescription for cigarettes may seem highly unlikely in today's world where cigarettes are well known to be harmful to one's health, but just about one hundred years ago in a small town called Kudus, Central Java, smoking cigarettes was the most popular way to cure the common cough. These were no ordinary cigarettes, though. They were the clove-spiced *kretek*, which today are a **ubiquitous** feature in the lives of over 200 million Indonesians.

Around 1880, a Kudus resident named Jamahri was suffering from a mild case of asthma. To relieve his suffering, he rubbed oil of cloves

The Agricultural Adjustment Act of 1933

This New Deal law was one of many passed during President Franklin Delano Roosevelt's administration to assist the American farmer. It was intended to compel farmers to reduce their production of agricultural products, thus driving up prices. While involvement in the program was voluntary, the economic reality of the Great Depression practically necessitated participation. In addition to paying farmers for allowing their acreage to lay fallow and raising fewer animals, the government promised participants a minimum price for the goods they did produce and protected them from creditors by providing generous loans.



Medicaid a public health program in the United States through which certain medical expenses of low-income persons are paid from state and federal funds.



ubiquitous being everywhere; commonplace; widespread.



Workers handrolling kretek cigarettes at Gudang Garam in Kediri, East Java, Indonesia. Gudang Garam was the largest kretek manufacturer in the world at the time this photograph was taken (1990). The average kretek roller can produce up to 8,000 sticks per day, and the rolling is exclusively done by women. © CHARLES O'REAR/CORBIS

(**eugenol**) on his chest. Eugenol has been used for centuries as an astringent and today is common in dentistry. While this eased his pain somewhat, he decided he needed to bring the healing powers of the cloves in closer contact with his troubled lungs. What would happen if he mixed cloves with tobacco and smoked it?

According to the legend, this is what he did and his cough ended immediately. He began to distribute his product through the local *apotik* (pharmacies), and soon his *rokok cengkeh*, or clove cigarettes, were as common a remedy for coughing as is today's cough syrup. A short time later this new product was renamed *kretek* (kreh-TEK) because of the pop and crackle the cloves make when burned (*keretek-keretek*). While Jamahri failed to grasp the commercial potential of his invention, another Kudus resident did. This man, the original father of the kretek industry, was called Nitisemito.

Nitisemito was holding various odd jobs around Kudus when he noticed that more and more people were taking up the habit of smoking tobacco mixed with cloves. At that time, all kretek were rolled by hand, and its ingredients were bought separately. Nitisemito decided to mix the ingredients himself, package them, and sell them as a branded product. He experimented with several names but in the end he chose Bal Tiga ("three balls"), and in 1906 he founded his company as Bal Tiga Nitisemito.

The 1920s and 1930s saw a rapid rise of kretek production, but kretek were unable to displace white cigarettes as the most popular cigarette in the region. Kretek were regarded as cigarettes for the middle classes, while white cigarettes conferred style and prestige. World War II

eugenol an aromatic chemical derived from cloves. It is the active ingredient found in clove cigarettes.

and Indonesia's occupation by the Japanese halted most production due to the scarcity of tobacco and cloves. Shortly after the end of the war and subsequent independence, Indonesia revived kretek production.

It was not until the late 1960s and early 1970s that kretek's status changed from just a spicy cigarette to that of a national icon. Two factors contributed to the rapid rise of kretek production and consumption. The first was the oil boom in the early 1970s, which resulted in a cash windfall in the government's coffers and an upsurge in domestic industries, with kretek leading the way. The second and perhaps more important factor was a government decision to allow select companies to purchase machines to automate the manufacturing process. Up until that time, all kretek were rolled by hand and therefore looked rustic when placed alongside the machine-made white cigarettes. That all changed when Bentoel in East Java produced the first machine-made kretek, Biru International, in 1974.

By the end of the twentieth century, kretek commanded roughly 85 to 90 percent of the entire cigarette market in Indonesia. The industry is one of the largest sources of the Indonesian government's excise revenue and it is one of the only domestic industries to survive the country's financial crises nearly unscathed. It is one of Indonesia's most well-known cultural **signifiers**, with its distinctive scent greeting each visitor who comes to Indonesia.



signifier a word, sound, or image that symbolizes an underlying concept.

See Also South East Asia; Therapeutic Uses.

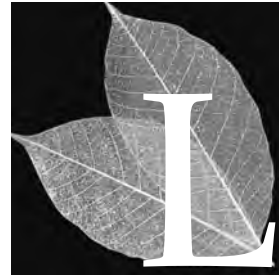
■ MARK HANUSZ

BIBLIOGRAPHY

Castles, Lance. *Religion, Politics, and Economic Behavior in Java: The Kudus Cigarette Industry*. New Haven, Conn.: Yale University Press, 1967.

Hanusz, Mark. *Kretek: The Culture and Heritage of Indonesia's Clove Cigarettes*. Jakarta, Indonesia: Equinox Publishing, 2000 and 2003.

Wit, Augusta de. *Java: Facts and Fancies*. London: Chapman & Hall, 1905.



Labor

Since tobacco first emerged as a commercial crop, its production and manufacture have depended on onerous and often exploitative labor arrangements. In newly established colonies in Latin America and the British Caribbean, slaves began cultivating tobacco for the world market during the 1500s and 1600s. In the Chesapeake, planters relied on indentured servants until they eventually substituted them with slave labor. By the seventeenth century, slavery was the predominant form of labor throughout the Americas. The abolition of slavery, which occurred at different times in different places, necessitated a shift to other labor forms. From the late nineteenth century to the 2000s, tobacco cultivation has relied on relations of production that have included wage work, child labor, and migrant labor.

The manufacturing of tobacco products has also involved various forms of labor. The emergence of an industrial working class in Europe rested, in part, on the growth of cigar production during the seventeenth century. In the Americas, the production of cigars, **snuff**, and cigarettes has occupied many different types of workers over time, including slaves, indentured servants, convicts, home workers, and factory workers. Since the 1950s, wage work has dominated factory production.

Farm Labor

INDENTURED SERVITUDE. For the first two generations of tobacco cultivation in the Chesapeake, indentured servants raised the crop on the farms of small planters. These servants, mostly young, poor, and unmarried men, signed contracts, or indentures, in England agreeing to immigrate to Virginia and Maryland and work a specified number of years in exchange for payment of their transatlantic passage. During their term of service, indentured servants were considered the chattel property of the planters who had purchased their indentures. Typical contracts obligated the master to provide clothing, food, and shelter.



snuff a form of powdered tobacco, usually flavored, either sniffed into the nose or “dipped,” packed between cheek and gum. Snuff was popular in the eighteenth century but had faded to obscurity by the twentieth century.

Farm Security Administration supervisors inspecting the tobacco crop, Puerto Rico, 1942. LIBRARY OF CONGRESS



In return, the indentured servants raised tobacco. They expected in time to become landowners themselves. Historians estimate that one-half to three-fourths of all immigrants to the Chesapeake between 1630 and 1680 came as indentured servants. While the total population of Virginia and Maryland was just under 1,000 in 1620, it increased to 60,000 by 1680.

During the late seventeenth and early eighteenth centuries, tobacco planters in the Chesapeake began to replace indentured servants with slaves because the supply of servants began to dwindle. Several factors contributed to the decline of indentured servitude. Better living conditions in England and agricultural depression in the Chesapeake stemmed the flow of migrants. Some freed servants themselves were becoming landowners and searching for laborers to work their fields. In addition, imported African laborers were living longer, enhancing their value as slaves for life.

SLAVERY. In Brazil and the Caribbean, planters had been employing slave labor since the seventeenth century, when tobacco emerged as a major staple in the colonial export trade. With the introduction of slaves into the Chesapeake and other North American colonies, slave labor became the major foundation of growth and prosperity throughout the New World. Scholars cannot produce precise figures for the number of slaves who grew tobacco, but estimates from Brazil and Cuba report that slaves accounted for at least one-third of the population in the tobacco districts of colonial and nineteenth century Bahia, the state in Brazil where tobacco cultivation flourished. Slaves numbered 89,000 in the region between 1816 and 1817, and still numbered between 72,000 and 81,000 in 1873. As late as 1862, more than 17,000 slaves still worked on tobacco farms in Cuba.

The slave societies of the southern United States and Bahia in Brazil were unique among American plantation societies in their ability to maintain their supply of slaves through natural increase. By the 1730s,

there were sufficient numbers of women born in the North American colonies to allow the slave population to grow by natural increase. Planters on the tobacco **plantations** of Brazil also did not have to rely on importing newly enslaved Africans to sustain their supply of slaves.

Slaveholdings on tobacco plantations varied enormously by size. Throughout the New World, both small and large tobacco planters held slaves, varying from between 50 to 200 on the largest farms to 2 or 3 slaves on others. In Brazil, there were plantations with large slaveholdings, but it also seems that a greater percentage held no more than a dozen slaves. The United States also had a mix of large planters and small farmers, but the larger growers cultivated the bulk of the crop. Among the largest slaveholders was Samuel Hairston of Pittsylvania County, Virginia. In 1855, he owned 1,500 slaves, and his plantations were worth \$600,000.

Regardless of the number of slaves on a plantation, the work of growing tobacco was arduous. During the winter, slaves cut wood to be used in curing barns. Before spring, they sprinkled tiny tobacco seeds on the soil and planted them firmly into small seedbeds. They kept them watered throughout most of the growing season to ensure their growth. Eight to ten weeks would pass before the seedlings would be mature enough to be transplanted. Slaves gently uprooted the plants by hand and transferred them to the field row by row. After the seedlings had been transplanted, regular hoeing kept the field clear of weeds, and constant vigilance and picking kept worms, caterpillars, and other pests from damaging the plant. As tobacco plants continued to develop, they formed flower clusters on top. Slaves removed these growths in a process called “topping” or “capping.” The purpose of this task was to increase leaf growth, but it also led to the appearance of secondary leaf shoots, or suckers. These, too, had to be removed by hand in a process called “suckering.” At harvest time, slaves cut the entire stalk of each tobacco plant and cured them in barns. They performed all of these jobs under the strict supervision of overseers.

Although slavery was the main form of labor on tobacco plantations, other types of labor organization existed to a limited extent. In the United States and Latin America, some **smallholders** (landowning family farmers) produced the crop, relying heavily on the work of the entire family. In nineteenth-century Cuba, indentured laborers, apprentices, and smallholders worked in tobacco cultivation and manufacturing in addition to slaves.

Nevertheless, slavery remained the main source of labor for the cultivation of tobacco until its abolition, which occurred across the Americas at different times. In 1833, an act of Parliament emancipated slaves throughout the British Empire. Most British colonies replaced slavery with a period of enforced “apprenticeship.” Colonial assemblies eventually dismantled the apprenticeship system in 1838. Slavery ended in the United States with passage of the Thirteenth Amendment in 1865. In Cuba, slavery ceased in 1886, after a prolonged, gradual process of emancipation that varied by region. With the abolition of slavery in Brazil in 1888, slavery completely ended in the Americas.

SHARECROPPING, TENANT FARMING, AND WAGE WORK. The abolition of slavery sent tobacco planters scrambling for new ways to organize labor on their farms. In the United States, an increased demand



plantation historically, a large agricultural estate dedicated to producing a cash crop worked by laborers living on the property. Before 1865, plantations in the American South were usually worked by slaves.



smallholders farmers and other rural folk who own modest-sized farms and provide their own labor.



Workers at a long bench roll and spin tobacco leaves. Two other workers sit nearby binding together a cluster of leaves taken from large baskets, c. 1722.
© CORBIS

tenant farmer landless farmer who rented acreage from landowner. The tenant family usually moved to a house on the rented land where they lived and worked. The rent was payable in cash or sometimes a specified amount of produce. The tenant often owned draft animals and implements and had established credit. Tenants were typically more independent than sharecroppers and occupied a higher place in the hierarchy of rural America.

for the new variety of Bright leaf tobacco coincided with this need to devise new systems of labor. Sharecropping and tenant farming emerged on tobacco farms during the 1870s and 1880s. Sharecroppers were essentially wage workers who received a share of the crop as payment. **Tenant farmers**, on the other hand, paid rent to landowners with a portion of the crop proceeds. Both systems typically trapped workers in a cycle of debt. Landowners charged exorbitant interest rates for the necessities that sharecroppers purchased on credit throughout the year.

Planters in Brazil and Cuba also switched to sharecropping when slavery ended. An increase in the demand for Cuban tobacco leaf in the United States market accounted for the rapid development of sharecropping. As sharecropping became more prevalent in Cuba, many formerly independent growers lost their land and were forced to raise tobacco on other owners' land. Between 1862 and 1877, the number of tobacco farms dropped by 40 percent as Cuban manufacturers consolidated landownership and hired farmers as sharecroppers. In Oaxaca, Mexico, tobacco growers relied on debt peonage, an abusive practice in which courts hired out individuals to work off their debts.

During the early twentieth century, increased demand for cigarette tobacco contributed to the spread of tobacco cultivation to new areas and, consequently, the creation of more tobacco workers. In colonial Zimbabwe, where production of Bright leaf tobacco took off after 1904,

tobacco workers received wages for their work on European-owned farms. Tobacco growers instilled discipline in the workers through physical abuse. It also was common for women and children to work during busy seasons in exchange for additional rations of food for the family.

SMALLHOLDING. Despite the encroachment of sharecropping and tenant farming, some independent cultivators managed to make a living in tobacco growing areas of the Americas during the twentieth century. Burley producers in North Carolina, Kentucky, and Tennessee were predominantly landowning family farmers, and smallholders farmed to a lesser extent in **flue-cured** production areas of North Carolina. In many places throughout Latin America, Africa, and Asia, tobacco has and continues to offer subsistence farmers a better livelihood. Many family farmers mixed farming with work in tobacco factories to make ends meet.

MIGRANT LABOR. Eventually, the advent of mechanical and chemical innovations after the 1950s decreased the need for a permanent labor force on the tobacco farms of the American South. Landowners increasingly turned to migrant workers from Mexico to fill their seasonal labor needs. Migrant workers typically arrive on tobacco farms in the spring and work until the fall. Working in tobacco fields often places migrant workers in danger because they are in close proximity to tobacco plants that have been treated with toxic pesticides. In many other tobacco regions, however, chemicals and machinery have been slower to encroach on existing labor arrangements. In the 2000s tobacco growers in Zimbabwe and other countries continue to rely on labor-intensive methods of production. Still evident, too, are poor living and working conditions. Low wages, substandard medical care, and poor housing for workers are still common in tobacco-growing regions throughout the world, including the migrant work quarters on the farms of the American South.

MANUFACTURING LABOR. As in tobacco cultivation, the forms of labor used to manufacture tobacco products have varied over space and time. Before the nineteenth century, most of the tobacco grown in the Americas was exported to either Europe or Africa. The production of cigars, pipe tobacco, and chewing tobacco in eighteenth-century Europe rested on wage labor. In Seville, the center of cigar manufacturing, women known as *cigarreras* rolled cigars by hand in factories. *Cigarreras* came to represent the autonomy of women workers because of factory uprisings that they led in Seville and Madrid during the 1880s and 1890s. Cigar factories in France, Germany, and England also used wage workers.

Beginning in the late eighteenth century, workers in the New World became involved in tobacco manufacturing. Cuba and the United States exemplify the development of tobacco factory labor in the Americas. In Cuba, small workshops relied on wage workers to produce cigars, while manufacturing in Cuba's large cigar and cigarette factories rested on the labor of prisoners, soldiers, and home workers. Most small cigarette workshops had small staffs, employing no more than 45 workers in 1848, and only 65 factories were registered. Only 6 of these small



flue-cured tobacco also called Bright Leaf, a variety of leaf tobacco dried (or cured) in air-tight barns using artificial heat, distributed through a network of pipes, or flues, near the barn floor.



factories employed 50 or more workers. The vast majority of work was done in the large factories, which employed slaves, indentured Chinese workers, and orphans as apprentices, often under horrendous conditions. They worked in poorly ventilated rooms, received pay only partly in cash, and had to carry identification cards that recorded their debts, a method that factory owners used to restrict workers' ability to move from one factory to another. Outwork for large factories involved the labor of women and children working in their homes.

With the mechanization of cigarette production during the late nineteenth century, the number of workers in Cuba's tobacco factories grew rapidly. By the 1860s, several factories in Havana employed hundreds of workers, and the number reached into the thousands by the late 1880s, with the cigar factories employing more than 50,000 workers throughout the island. Although many workers lost their jobs during the depression of the late nineteenth century, tobacco workers constituted one of the largest groups of industrial wage laborers in Cuba by the early twentieth century. Most of them were white men. However, outwork by women persisted in cigarette manufacturing because not all tasks could be accomplished with machinery. Outwork and small sweatshop production also continued in cigar manufacturing in Cuba because technological developments did not emerge until the latter part of the twentieth century.

Several Cuban cigar factories moved to Tampa, Florida, during the 1880s to escape the political and economic unrest that accompanied Cuba's attempts to end Spanish colonial rule. Cuban cigar makers in the United States had a vibrant tradition of labor unionism through World War I. They protested dust-filled working conditions and low pay. In addition to Cuban workers, Italian workers began migrating to the region to work in cigar factories. Small cigar workshops and large factories also existed throughout the eastern and Midwestern United States. In the face of competition from the United States throughout the twentieth century, an ever-dwindling number of Cuban factories continued sweatshop and home production.

Despite the migration of cigar production, tobacco workers remained one of the largest parts of the Cuban working class until the 1950s. When cigar factories became further mechanized during the 1950s, factory owners continued to use a predominantly male workforce to run the new machines. Cigarette manufacturers gradually employed more women workers. By the 1950s, women worked as cigarette packers and placed the bands, cellophane and metal tubes on cigars. They also performed the job of "stemming," the task of removing the hard center core from the tobacco leaf. Upwards of 90 percent of stemmers were women, and almost 40 percent of those women were black.

Like Cuban workers during the late eighteenth century, laborers in the United States assumed more responsibility for manufacturing tobacco products as an increasingly large amount of tobacco grown in the Chesapeake went to local manufacturers. Between 1790 and 1860, commercial factories emerged in the tobacco-growing districts of the American South. Enslaved men made up the majority of the workforce in these southern factories before 1865. They manufactured snuff, cigars, and chewing tobacco. Most of the tasks they performed involved

hand labor, and heavy lifting under hot, dusty conditions. In comparison, women made up more than half of workers employed by the Spanish *estanco*, or colonial monopoly, at its cigar and cigarette factory in Mexico City during the 1790s.

Following the U.S. Civil War (1861–1865), white workers began seeking employment in tobacco factories as the industry grew and production shifted to cigarette manufacturing. Serious conflicts occurred between these newcomers and black workers. One such incident contributed to a major riot in Danville, Virginia, in 1883. Despite the introduction of white workers, black workers continued to predominate in the less mechanized factory jobs, and filled the dirtiest, lowest-paying positions in the new cigarette and smoking tobacco sectors.

The division of labor in the newly mechanized tobacco factories reflected the racism and sexism of the Jim Crow South. White men held more secure and lucrative jobs supervising workers and operating most of the newer machines. Stuck in menial jobs, black men occupied less secure and lower-paying jobs that required exhausting physical exertion, such as lifting **hogsheads** and carrying tobacco. Both white and black women performed highly repetitive tasks and received less pay than men for the same work. However, white women completed cleaner tasks than black women, who, like their counterparts in Cuba, predominated in the less desirable job of stemming. By 1943 most stemmers worked on a machine that cut the leaf away from the stem.

During World War II, black women union leaders and activists mounted a strike against the R.J. Reynolds tobacco company to force company officials to the negotiating table. They were protesting the subjugation of black workers at menial jobs in the industry, low wages for all tobacco workers, and intolerable working conditions. Their efforts met with success until the cold war created a dangerous climate for labor radicalism.

Since the end of World War II, tobacco manufacturing has continued to undergo mechanization, contributing to the displacement of tobacco workers. In the 2000s, smaller corps of workers operate machines that produce upward of 10,000 cigarettes per minute. United States tobacco companies have transferred many of their manufacturing operations to other countries.

The forms of labor used to produce tobacco products have undergone tremendous change. Cultivation shifted from a reliance on slavery and other forms of paid labor to myriad forms of unfair wage labor. Likewise, the manufacture of cigars, cigarettes, and other products has depended on both wage labor and various forms of coerced labor. However, the degree of change has varied across space and time, especially in terms of farm labor. Mechanization transformed tobacco cultivation and manufacture in the United States in particular, decreasing the number of workers needed for production. But in many tobacco-growing societies, including China, Brazil and Zimbabwe, tobacco production remains a peculiarly labor-intensive affair.

See Also Industrialization and Technology; Processing; United States Agriculture.



hogshead a large wooden barrel formerly used to store and transport cured leaf tobacco. A hogshead typically held approximately 800 to 1000 pounds of tobacco.

■ ADRIENNE PETTY

BIBLIOGRAPHY

- Barickman, B. J. *A Bahian Counterpoint: Sugar, Tobacco, Cassava, and Slavery in the Recôncavo, 1780–1860*. Stanford, Calif.: Stanford University Press, 1998.
- Cooper, Patricia A. *Once a Cigar Maker: Men, Women, and Work Culture in American Cigar Factories, 1900–1919*. Urbana and Chicago: University of Illinois Press, 1987.
- Deans-Smith, Susan. *Bureaucrats, Planters, and Workers: The Making of the Tobacco Monopoly in Bourbon Mexico*. Austin: University of Texas Press, 1992.
- Korstad, Robert Rodgers. *Civil Rights Unionism: Tobacco Workers and the Struggle for Democracy in the Mid-Twentieth-Century South*. Chapel Hill: University of North Carolina Press, 2003.
- Kulikoff, Allan. *Tobacco and Slaves: The Development of Southern Cultures in the Chesapeake, 1680–1800*. Chapel Hill: University of North Carolina Press, 1986.
- Rubert, Steven C. *A Most Promising Weed: A History of Tobacco Farming and Labor in Colonial Zimbabwe, 1890–1945*. Athens: Ohio University Center for International Studies, 1998.
- Stubbs, Jean. *Tobacco on the Periphery: A Case Study in Cuban Labour History, 1860–1958*. Cambridge and New York: Cambridge University Press, 1985.



tar a residue of tobacco smoke, composed of many chemical substances that are collectively known by this term.



“Light” and Filtered Cigarettes

The introduction and marketing of filtered and low-**tar** cigarettes transformed the use of cigarettes over the last half of the twentieth century, with a 60 percent fall in the average tar values for U.S. cigarettes and a transition from less than 5 percent of cigarettes being filtered in 1950 to the 2004 level of over 97 percent. Statements made by public health agencies supported this transition. These agencies recommended that smokers who could not stop smoking were well advised to switch to these purportedly lower yield products. These recommendations were based on the expectation that lower yield cigarettes might reduce the disease risks caused by smoking, an expectation that slowly wilted in the face of a continuing rise in lung cancer death rates. In the 2000s, there is a scientific consensus that all of the changes in cigarettes since the 1950s have not resulted in a meaningful benefit to public health and that smokers should not expect a reduction in disease risks from cigarettes with lower machine measured tar and nicotine yields.

The identification of cigarette smoking as a major cause of lung cancer in the early 1950s was rapidly followed by a demonstration that cigarette tar painted on the skin of mice produced cancerous tumors. These two scientific discoveries received widespread coverage in the popular press and led to a fall in the consumption of cigarettes in the United States. They also led scientists to suggest that cigarettes designed to deliver less tar to smokers might be of benefit to those cigarette smokers who were unable to quit smoking entirely.

The tobacco industry’s response to the increasing level of smokers’ concern about the risks of smoking was both to deny that the scientific evidence was conclusive and to offer filtered and lower tar cigarettes to the public as a reassurance that any concern about smoking could be

minimized by smoking filtered cigarettes. The success of this public relations campaign is demonstrated by the dramatic rise in the number of cigarettes smoked following the campaign's initiation, and by the rise in the percentage of filtered cigarettes from 2.6 percent in 1950 to over 50 percent in 1960. Clearly, the American smoking public was willing to change its smoking behavior in response to the concern about the risks of smoking cigarettes. Unfortunately, the reassurance offered by the tobacco industry and echoed by the public health community turned out to be an illusion, and the result was one of the greatest public health deceptions of the twentieth century.

Early Public Health Recommendations

Tar is the particulate phase of cigarette smoke once the nicotine and water are removed. The demonstration that most of the carcinogenic effect of cigarette smoke was contained in the tar led leading public health scientists to suggest that the dose of tobacco smoke received by smokers, and the resultant risk, could be reduced if cigarette design was changed to reduce the amount of tar delivered by individual cigarettes. The focus of public health authorities on tar led to a competition to offer cigarettes that claimed to be low, or the lowest, in tar delivery. This "tar derby" led to many conflicting and confusing claims about which cigarette was lowest based on different methods for measuring tar delivery. In 1960, the Federal Trade Commission (FTC) negotiated a ban on using tar values in advertising with the tobacco industry because the Commission felt these claims were not substantiated by scientific evidence and therefore inherently deceptive.

The Public Health Service convened a committee of experts that suggested in 1966 that "the preponderance of scientific evidence strongly suggests that the lower the 'tar' and nicotine content of cigarette smoke, the less harmful would be the effect" (U.S. Congress, p. 7). That position led the FTC to reverse its ban and allow presentation of tar and nicotine yields provided that they were generated using a machine testing method specified by the FTC. Beginning in 1967, the FTC began public reporting of tar and nicotine values for all brands of U.S. cigarettes, and in 1970 the FTC reached an agreement with major cigarette manufacturers that required these tar and nicotine values to be placed in all print media cigarette advertisements.

Epidemiological studies at the time appeared to support a reduction in lung cancer risks, but not other tobacco-related disease risks, among smokers who chose to use filtered cigarettes or cigarettes with lower machine measured tar and nicotine values. The U.S. Public Health Service, the American Cancer Society, and many other health agencies then recommended that smokers who were not able to quit should switch to lower yield cigarettes.

Tobacco Industry Manipulation of Cigarette Design

Initial efforts to lower tar and nicotine yields using filters rapidly encountered two limitations: Filters that could remove most of the tar from the smoke also made it unacceptably difficult to draw smoke through the filter and smokers would not continue smoking cigarettes that did not deliver sufficient nicotine to satisfy their addiction. A variety of engineering



epidemiological pertaining to epidemiology, that is, to seeking the causes of disease.

changes were used in an effort to lower the tar yield, including expanding the tobacco so that it took up more space, increasing the burn rate of the paper so that more of the cigarette was consumed between puffs, and moving the end of the filter overwrap, the paper that surrounds the filter material, toward the tip of the cigarette so that a “smoking machine,” as is used for cigarette testing by the FTC, would cease smoking the cigarette with more of the tobacco remaining unburned. However, the need to deliver sufficient nicotine to the smoker remained a barrier. Since tar is formed with a relatively fixed ratio to nicotine, if sufficient nicotine was delivered to the smoker then a comparable level of tar (and risk) would also be delivered. The tendency of the smoker to compensate for any reduced nicotine delivery by increasing the intensity of smoking, or the number of cigarettes smoked, prevented these design changes from altering the amount of tar actually delivered to smokers, even though machine measurements using the FTC’s method showed reduced levels of tar and nicotine.

Recognizing that compensation would defeat any approach based on reducing the mass of smoke delivered, and understanding that a real alteration in the toxicity of tar would require both a large research expenditure and an acknowledgement that cigarettes were hazardous, the tobacco companies focused on developing cigarettes that could be presented to smokers with the appearance of risk reduction. In the late 1960s and early 1970s, lasers were developed that could cut holes in the filter wrap. When a machine smoked a cigarette with these holes, air was drawn in through the holes reducing the amount of smoke in the machine puff and lowering the machine measured tar value. When a human smoker smoked the same cigarette, however, he or she could simply take a larger puff and obtain a full dose of tar and nicotine. By varying the size of the holes, cigarettes with any level of lower tar on machine measurement could be produced without changing the amount of tobacco contained in the cigarette. Since “low-tar” cigarettes contained the same amount of tobacco, a full dose of nicotine was available to the smoker if he or she chose to smoke more intensely.

Considerable design effort was devoted to enhancing the “elasticity” of yield of cigarettes so that cigarettes purchased with the promise of low-tar delivery could be made to yield whatever dose of nicotine the smoker desired simply by changing the way the cigarette was smoked. This elasticity of delivery was enhanced by placing the holes in the filters in locations where they could be blocked by the fingers or lips of the smoker, but would remain unblocked when smoked by machine.

The result of these design manipulations were cigarettes that could be offered to the public as having less risk based on the official FTC measurements while in fact delivering a full dose of tar, nicotine, and risk to the unsuspecting smoker.

Why Was the Epidemiology Misleading?

Lower lung cancer risks are found in studies of populations of individuals who smoke cigarettes with lower yields of tar and nicotine compared with smokers of higher tar cigarettes. While researchers initially thought these differences were due to the cigarette smoked, they now understand that they are the result of three differences among individuals who smoke cigarettes with different yields. First, individuals who choose lower yield cigarettes are in general more concerned about health

and have better health-related behaviors such as diet and alcohol use, which lead to lower disease risks.

Second, people who smoke lower yield cigarettes are different from those who smoke higher yield cigarettes, as they are likely to be less intense smokers and less addicted and therefore receive lower levels of smoke exposure. For example, if a two-pack-per-day high-tar and nicotine cigarette smoker smokes each cigarette very intensely, he or she will derive a very large delivery of nicotine. In order to derive the same dose of nicotine from a lower yield cigarette, the smoker might have to smoke a much larger number of cigarettes per day, dramatically increasing the cost of smoking. That individual is likely to fail in his or her attempt to switch brands. However, a less intense smoker is more likely to succeed. Over time this means that intense smokers will stay in the high-tar group while less intense smokers will move into the low-tar group. These differences in exposure and risk are due to differences between the individuals that existed before they switched brands, not due to the differences in the type of cigarette they chose to smoke.

Lastly, when smokers shift from smoking high-yield cigarettes to smoking lower yield cigarettes, a substantial number of smokers increase the number of cigarettes that they smoke per day. Most of the epidemiological studies examining differences in lung cancer risk between high- and low-yield cigarette smokers have controlled for intensity of smoking by using cigarettes smoked per day as a measure of the exposure to smoke, and this overcontrolling may have generated the appearance of a reduction in risk where none was actually present.

Scientific Understanding of the Risks of Lower-Yield Cigarettes

Machine-measured tar and nicotine yields using the FTC method do not estimate exposure of smokers to tar or nicotine from a given cigarette, and comparisons of machine measured yields between brands are likely to mislead smokers about the exposure they will receive when they switch brands. Filters and manufacturing changes that lower machine-measured tar and nicotine yield do not reduce the disease risks produced by smoking. Medical recommendations for smokers interested in reducing their risks are to quit smoking completely, and medical and public health professionals do not recommend switching to lower-yield brands as a means of reducing risk.

See Also Cigarettes; Menthol Cigarettes; Product Design; Toxins.

■ DAVID M. BURNS

BIBLIOGRAPHY

- Benowitz, N. L. et al. "Smokers of Low-Yield Cigarettes Do Not Consume Less Nicotine." *New England Journal of Medicine* 309, no. 3 (1983): 139–142.
- Canadian Expert Panel. *Putting an End to Deception: Proceedings of the International Expert Panel on Cigarette Descriptors*. A report to the Canadian Minister of Health from the Ministerial Advisory Council on Tobacco Control, 2001.
- Jarvis, M. J. et al. "Nicotine Yield from Machine-Smoked Cigarettes and Nicotine Intakes in Smokers: Evidence from a Representative Population Study." *Journal of the National Cancer Institute* 93 (2001): 134–138.

- Kozlowski, L. T., and R. J. O'Connor. "Cigarette Filter Ventilation Is a Defective Design Because of Misleading Taste, Bigger Puffs and Blocked Vents." *Tobacco Control* 11 (2002): Supp. 1: 140–150.
- National Cancer Institute. *Risks Associated with Smoking Cigarettes with Low Machine Yields of Tar and Nicotine*. Smoking and Tobacco Control Monograph No. 13. Bethesda, Md.: U.S. Department of Health and Human Services, 2001.
- Pollay, R. W., and T. Dewhirst. "The Dark Side of Marketing Seemingly 'Light' Cigarettes: Successful Images and Failed Fact." *Tobacco Control* 11 (2002): Supp. 1: 118–131.
- Scientific Advisory Committee on Tobacco Product Regulation. *Recommendation On Health Claims Derived From ISO/FTC Method to Measure Cigarette Smoke*. Geneva, Switzerland: World Health Organization, 2002.
- Stratton K., et al. *Clearing the Smoke: Assessing the Science Base for Tobacco Harm Reduction*. Washington, D.C.: National Academy Press, 2001.
- U.S. Congress. *Hearings before the Consumer Subcommittee of the Committee on Commerce. Senate, 90th Congress, August 23, 24, 1967*, p. 7. Washington, D.C.: Congressional Record, 1967.




Literature

Some scholars have said that religion is the topic about which, throughout time, the most books and manuscripts have been written. However, books about tobacco, a division of literary history, follow a close second. As Jerome E. Brooks noted in his multivolume *Tobacco* (1937–1952), "The most universal of the social habits adopted by man, and the plant upon which it depends (together with its appendages and associations) have had innumerable commentators." In the twenty-first century, smoking is taken for granted—in art, in life, and in literature.

Early Literature

The earliest literature about tobacco as a cultural or social custom is European, primarily because no significant treatises about the use, pleasures, and pains of tobacco were written until the discovery of the New World. Chronologically, the first writers were the explorers of the fifteenth and sixteenth centuries who observed the ritualistic use of tobacco among the indigenous people. For instance, Ramon Pane, a Catalan friar who accompanied the Spanish explorer Christopher Columbus, described in *La Historia de l'Indie Occidentale* (1534) the Indians of Hispaniola participating in the rite of *cohoba*, which was later determined to be pulverized tobacco, or **snuff**. Fernandez de Oviedo y Valdés wrote of the natives smoking crude cigars in *La Historia General de las Indias* (1535). Jacques Cartier, a Breton mariner, observed Iroquoians around Montreal smoking what he considered to be elbow pipes and noted it in *Brief Recit* (1545).

As tobacco became known in the Western world, herbalists and physicians crafted the next wave of literature, giving testimonials to tobacco as a cure-all for various illnesses and ailments as they sought new uses for it. As tobacco received more attention, there appeared a spate of technical textbooks from botanists who collected the plant in order to



snuff a form of powdered tobacco, usually flavored, either sniffed into the nose or "dipped," packed between cheek and gum. Snuff was popular in the eighteenth century but had faded to obscurity by the twentieth century.

describe and characterize it. Rembert Dodoens' *Cruydeboeck* (1554) was probably the first publication that included a description and an accompanying woodcut of *Nicotiana rustica*, a nightshade family plant.

As the seventeenth century drew near, tobacco entered a new and different literary spotlight. Edmund Spenser was the first poet to laud tobacco in his epic *The Faerie Queene* (1590), and in 1595 the first English-language book wholly devoted to the positive effects of tobacco appeared: Anthony Chute's *Tabaco*, which contained a now-famous illustration of an Englishman smoking a clay pipe.

Today's antitobacco campaign is not a twenty-first-century phenomenon. The first diatribe of record condemning the use of tobacco began was Philaretus' *Work for Chimny-Sweepers: Or a Warning for Tobacco-conists. Describing the pernicious use of Tobacco. . .* (1601–1602). Two countrymen immediately came to the plant's rescue in 1602: Roger Marbecke, who wrote *A Defence of Tobacco. With a Friendly Answer to the late printed Booke called Worke for Chimny-Sweepers*, and Sir John Beaumont's *The Metamorphosis of Tobacco*, the first book of flourishing verse praising tobacco and its "heavenly origin." The most damning antitobacco influence was King James I's *A Counterblaste to Tobacco* (1604), which contained the oft-quoted peroration, "a custome lothsome to the eye, hatefull to the Nose, harmefull to the braine." (Some may be more familiar with Dr. Samuel Johnson's 1773 famous oracular proclamation about the end of tobacco: "Smoaking has gone out.")

Eighteenth Century to Present

During the next four centuries, tobacco found its way into every field of literary expression. A large quantity and endless variety of contributions came from a broad spectrum of writers—an assortment of apologists, dramatists, economists, historians, novelists, philologists, philosophers, poets, and scientists. Their collective efforts addressed many aspects of tobacco:

- studies on the cultivation of the plant;
- textbooks on the manufacture of pipes, cigars, cigarettes, tobacco, and snuff;
- anthologies and miscellanies of prose, poetry and paeans to smokers;
- historical treatises on the social and cultural uses of tobacco;
- portfolios illustrating smokers' clubs and caricatures of smokers on canvas and paper by noted artists; and
- catalogues raisonnés of antiquarian and collectible smoking artifacts.

Furthermore, an uninterrupted stream of antitobacco material continues unabated in the twenty-first century. As a body of work, this represents a wealth of literary knowledge.

Few tracts of historical significance to tobacco's history were published in the eighteenth and early nineteenth centuries. It was not until England's Victorian era that tobacco literature took center stage in novels, chapbooks, and chronicles about the plant. Writers such as Robert Burns, Lord Byron, Charles Kingsley, Charles Lamb, John Milton,

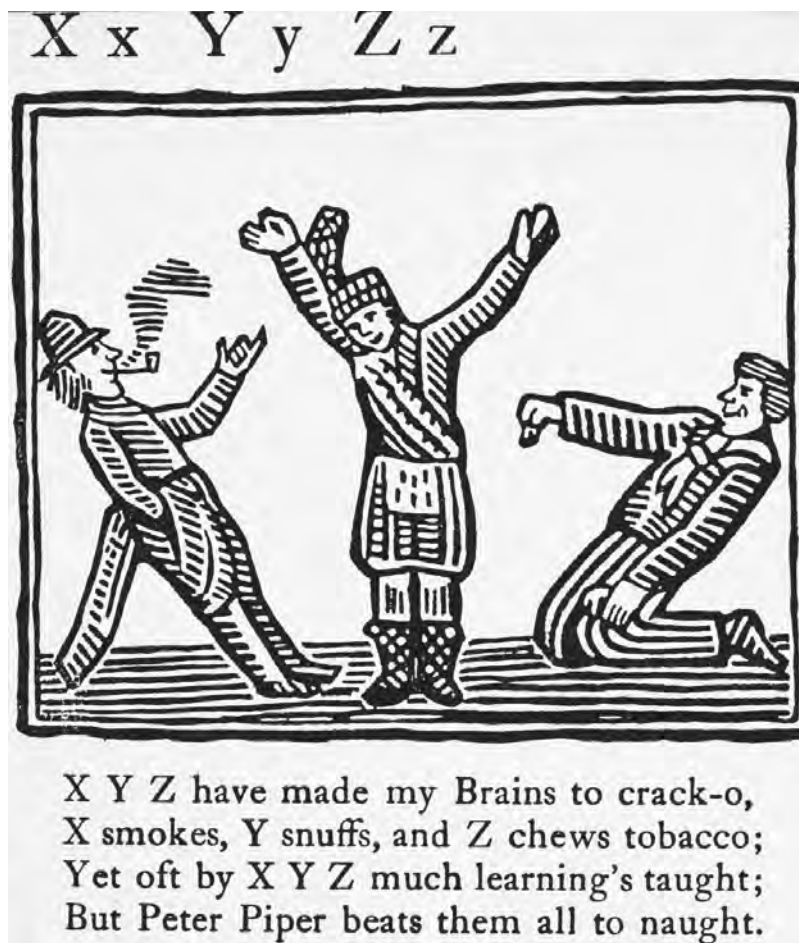


Alice talks to a hookah-smoking caterpillar sitting on a mushroom in an illustration from Lewis Carroll's *Alice in Wonderland*.
© BETTMANN/CORBIS

Alfred Lord Tennyson, and William Thackeray paid homage to tobacco in print. Following in the footsteps of tobacco-inspired antecedents, James Matthew Barrie, more well known for his stage play *Peter Pan* (1904), penned *My Lady Nicotine: A Study in Smoke* (1890), which scholars consider the most popular work of tobacco fiction and, perhaps, the singular work worthy of being called literature. It is a collection of original and humorous essays about the pipe and cigar, written in hymnal praise.

One of the most distinctive examples of Victorian journalism was an ephemeral journal of the highest literary quality, *Cope's Tobacco Plant, A Monthly Periodical, Interesting to the Manufacturer, the Dealer, and the Smoker*, that ran from March 1880 to January 1881. According to Richard D. Altick's essay "Cope's Tobacco Plant: An Episode in Victorian Journalism," printed in *Papers of the Bibliographical Society of America* (1951), "The periodical became, indeed, a monthly encyclopedia of nicotine learning. . . . Its love for literature was somewhat more inclusive than discriminating, but there can be no question that it was genuine."

During the latter half of the nineteenth century, France and Germany, two countries that raised tobacco and whose populations included



A page from *Peter Piper's Practical Principles of Plain & Perfect Pronunciation*, 1911. This book, intended as an advertisement for the many typefaces available from the Mergenthaler Linotype Company, features rhymes based on the nineteenth-century tongue twister that begins, "Peter Piper picked a peck of pickled peppers." Each page was designed by a different notable twentieth-century book or type designer and/or illustrator.
 © CORBIS

a very large contingent of inveterate smokers, produced many notable works on tobacco. Among the many tracts devoted to pipes, cigars, and snuff written in France during this period, perhaps the most complete and colorfully illustrated book on the culture and custom of smoking was Spire Blondel's *Le Tabac* (1891). The Germans wrote a number of scientific monographs on tobacco, on how to carve meerschaum pipes, and on how to turn amber and wood, and tracts that both romanced and railed on smoking. The most respected tome on the topic remains Friedrich Tiedemann's *Geschichte des Tabaks und anderer ähnlicher Genussmittel* (The History of Tobacco and Other Similar Luxuries) (1854).

Since Elizabethan days pipes and tobacco and, to a lesser extent, cigars and snuff, have been important symbols in literature. In the twentieth century, George Arents, the premier tobacco bibliophile, understood this better than anyone. In his speech, "Tobacco Leaves: An Address Made at the Grolier Club" delivered on November 27, 1941, in New York City, he said, "A vast literature—probably the largest single division in the history of tobacco—is devoted to pipes." This was true then, but at about the end of the last millennium and continuing into this one, an invigorated resurgence in cigar smoking has occurred, and so it is the *puro*, not the pipe, that is all the rage; myriad new books and magazines on cigars in many languages are present everywhere, and the cigar has been resuscitated as the "hot" topic most explored in tobacco literature.

The Future of Tobacco Literature

The following excerpt from an anonymous article published in 1880 best explains and summarizes the lengthy history and histrionics of tobacco literature:

The bibliography of Tobacco has yet to be completed. . . . Whenever it is done the result will be one of the curiosities and wonders of literature. It will show the praise and blame that has been heaped upon the Indian weed in every clime. We shall see it in every form of literary expression, from rabid denunciation to dithyrambic adulation. We shall see the same herb proclaimed as the panacea of every disease and as the cause of all the ills that flesh is heir to.

Since 1880 a few tobacco bibliographies have been published. The controversy between those who derive pleasure from versus those who deride the use of tobacco has been incessant since this plant was introduced into the Western world, and continues into the twenty-first century. If the future is a mirror of the past and present, trees will continue to be felled, and new pro- and antitobacco books addressing assorted views of this herb and the cultural invention of smoking will continue to be written, published, and read until, perhaps, the “divine weed” is no longer.

See Also Film; Music, Classical; Music, Popular; Visual Arts.

■ BEN RAPAPORT

BIBLIOGRAPHY

- Arents, George. *Early Literature of Tobacco*. Washington, D.C.: Privately printed for distribution at the Library of Congress, 1938.
- Brooks, Jerome E. *Tobacco, Its History Illustrated by the Books, Manuscripts and Engravings in the Library of George Arents, Jr., Together with an Introductory Essay, a Glossary and Bibliographic Notes by Jerome E. Brooks*, 5 vols. New York: The Rosenbach Company, 1937–1952. Reprint, Mansfield Centre, Conn.: Martino Fine Books, 1999.
- Dickson, Sarah A. *Panacea or Precious Bane: Tobacco in Sixteenth Century Literature*. New York: The New York Public Library, 1954.
- , comp. *Tobacco. A Catalogue of the Books, Manuscripts and Engravings Acquired Since 1942 in the Arents Tobacco Collection at the New York Public Library from 1507 to the Present*. Volume 1 (1507)–Volume 7 (1651–1672). New York: The New York Public Library, 1962.
- Hilton, Matthew. *Smoking in British Popular Culture 1800–2000: Perfect Pleasures*. Manchester and New York: Manchester University Press, 2000.
- Kiernan, Victor G. *Tobacco: A History*. London: Hutchinson Radius, 1991.
- O’Neill, Perry Hugh, comp. *Tobacco. A Catalogue of the Books, Manuscripts and Engravings Acquired Since 1942 in the Arents Tobacco Collection at the New York Public Library from 1507 to the Present*. Volume 8 (1673–1687)–Volume 10 (1703–1724). New York: The New York Public Library, 1969.
- Rapaport, Benjamin, ed. *The Global Guide to Tobacco Literature*. Reston, Va.: Author, 1989.
- Umberger, Eugene, comp. *Tobacco and Its Use: A Bibliography of the Periodical Literature*, 2nd ed. Rochester, N.Y.: Author, 1996.
- Walton, James, ed. *The Faber Book of Smoking*. London: Faber and Faber, 2000.



Litigation

Since its inception, tobacco litigation has pitted injured individuals, or plaintiffs, with limited resources against the aggressive litigation defense strategies and vast financial resources of the tobacco industry. Starting in the 1950s, cigarette manufacturers have concealed their own knowledge of the addictive nature and deadly effects of their products, while aggressively rebutting scientists who sought to alert the public to these dangers. Manufacturers manipulated the amount of nicotine in cigarettes, denied the link between smoking and cancer, and targeted youth in their advertising campaigns. Despite this misconduct and more than three hundred lawsuits filed against its members, the tobacco industry never lost a lawsuit during the first forty years of litigation. It was not until the 1990s, when tobacco industry documents revealed grossly deceptive practices of the cigarette manufacturers, that the tobacco industry would pay for its manipulation of facts and its deception of the public.

There are three formative stages of tobacco litigation. The first wave of tobacco litigation witnessed approximately 150 unsuccessful lawsuits brought against the tobacco industry. During the second wave, plaintiffs armed themselves with new legal tactics and financial resources aimed at defeating the tobacco industry's aggressive litigation strategies. However, these suits also failed to produce any monetary results for plaintiffs. It was not until the third wave, which began in the mid-1990s, that cigarette manufacturers suffered their first financial losses as a result of their courtroom battles.

First Wave

The first wave of tobacco litigation began in 1954, when a Missouri smoker filed a personal injury claim against R.J. Reynolds. As scientific studies began to link smoking and health risks, plaintiffs started to sue the tobacco industry to recover medical costs as well as for pain and suffering associated with their smoking-related illnesses. In response to this rise in litigation, the tobacco industry devised aggressive and expensive legal tactics to prevent smokers from prevailing through the legal process. These tactics were effective and allowed the cigarette manufacturers to escape the first wave without losing even one lawsuit.

Before the 1950s smoking was very much a part of everyday life in the United States and was glorified by society. At the time, one out of two Americans was a regular smoker. Cigarettes were endorsed by athletes and entertainers, and were advertised on billboards, in magazines, and over the radio. By 1953, epidemiologic and animal studies strongly suggested a relationship between smoking and cancer. These studies inspired the first lawsuits against the tobacco companies. From the outset of the litigation, the tobacco industry hotly contested the link between smoking and cancer or other health problems, even though recently uncovered documents reveal that by the late 1950s some industry scientists had concluded that smoking caused lung cancer.

During the next eleven years, smokers and their family members brought nearly 150 lawsuits against the tobacco companies, yet only ten

ever reached trial. The tobacco industry had decided that it would defend every claim no matter what the cost and make it too expensive for individuals to continue lawsuits. The companies delayed, denied, and filed unjustified preliminary legal motions to drive up the expense of the litigation, financially overcoming plaintiffs prior to the trial phase. Many of these early suits were brought by lawyers working alone who did not have the financial resources to pursue the suits over the numerous and expensive years called for by tobacco litigation. Most plaintiffs ran out of money, their cases finished before they ever reached the courtroom.

In the event that a plaintiff made it to the trial stage of litigation, the tobacco industry would deny any causal link between smoking and lung cancer. The industry claimed that it lacked any sufficient knowledge or notice about the health risks associated with smoking that would amount to a duty to warn its customers. Even where juries concluded that smoking cigarettes caused the plaintiffs' injuries, they did not hold the tobacco companies liable because they believed the industry's argument that it did not know about the link between smoking and health risks. In later years, tobacco industry documents would reveal that cigarette manufacturers lied about this and in fact had scientific knowledge of the potential harm smoking could cause its customers.

Second Wave

The second wave of tobacco litigation began in the early 1980s and was fueled by plaintiffs' lawyers experienced with the successful lawsuits against the asbestos industry, as well as the public's increased understanding of the connection between smoking and health problems. By this time, several surgeon general reports had been released. These reports scientifically linked smoking with cancer and other related illnesses and dramatically increased public understanding about the hazards of smoking. During this time, federal legislation was also enacted which required warning labels on cigarette packages and banning broadcast advertising of tobacco products.

Armed with a better understanding of the effects of smoking on health, plaintiffs' lawyers began a second tobacco litigation effort. They realized that, in order to prevail against the tobacco companies, they would first need to overcome the financial resources the tobacco industry lawyers had used in the first wave. To address this issue, some plaintiffs' lawyers combined resources with other lawyers so that they could adequately respond to the expensive and overwhelming pretrial defense tactics of the tobacco lawyers. This allowed the lawyers to successfully manage the daunting litigation costs associated with suing tobacco companies.

Despite these collaborative efforts, tobacco companies still had an impenetrable defense strategy. The tobacco companies continued to make the litigation process outrageously expensive for plaintiffs' lawyers. As R.J. Reynolds tobacco attorney J. Michael Jordan stated, "We won these cases not by spending all of [the tobacco company's] money, but by making the other [side] spend all of his" (Memorandum 1988). The tobacco industry did a complete turnaround in its defense strategies. It claimed that health risks associated with smoking—which they denied existed in the first wave—were so well known that they were common knowledge and that smokers were fully aware of the dangers associated



with smoking. The industry went so far as to state that the dangers of smoking were so well known that smokers could not have reasonably relied on the cigarette manufacturers' assertions that smoking was not hazardous. As a result, jurors held plaintiffs who smoked responsible for their smoking-related health problems. These strategies were so effective that, at the end of the second wave, the tobacco industry could still claim that after thirty-five years of litigation it had not paid a cent in legal awards.

Plaintiffs' attorneys recognized that the only way to convince the juries that the cigarette manufacturers were to blame for the smokers' health problems was to uncover incriminating internal documents from the tobacco companies, demonstrating that the industry had long known about the hazards of smoking and had suppressed scientific information. Unfortunately for the plaintiffs, the tobacco companies' defense strategy had so far been successful in preventing plaintiffs' lawyers from accessing those vital tobacco industry documents.

However, there was one case during the second wave that obtained internal industry documents and laid the groundwork for successful litigation. *Cipollone v. Liggett Group, Inc.* was a personal injury case filed in 1983 on behalf of a New Jersey smoker and lung cancer victim. The legal approach to the case was to try and gain access to as many tobacco industry documents as possible and prove that the tobacco companies had conspired to make money at the expense of the public's health.

While this attempt met with limited success, some very damaging documents were released. These documents revealed fraud and deceit

Winston Bryant, Arkansas attorney general, speaking at a news conference in 1998 in Little Rock, Arkansas, and gesturing toward a mock check from the tobacco industry, signed by Joe Camel and made out to the state of Arkansas for \$1.6 million.
AP/WIDE WORLD PHOTOS

Rose Cipollone

Rose Cipollone estimated that she smoked a pack and a half of cigarettes a day beginning when she was 16-years old. By 1981, after smoking for nearly forty-two years, the New Jersey native was diagnosed with lung cancer, and in 1983 she filed a product liability suit against three cigarette companies: Phillip Morris, Lorillard, and the Liggett Group. She died in 1984 at age 58, but the lawsuit labored on. Her argument was straightforward: Cigarette makers did not warn her adequately of the dangers of smoking cigarettes until it was too late and she was addicted. When the trial finally ended, tobacco litigation history was made when a jury ruled that the Liggett Group must pay \$400,000 in damages to Cipollone's family—the first-ever tobacco liability case won by a plaintiff. However, an appeals court set aside the money in 1988 and asked for a retrial. In the meantime, Rose Cipollone's husband died and the remaining family never went back to trial.

■ DONALD LOWE

and denial of important health information that the industry knew to be true, and proved to be so damaging that the jury awarded \$400,000 for the plaintiff, the first verdict for plaintiffs in more than thirty years of litigation. An appeals court set aside the jury verdict on a technicality, leaving the case open to be retried. The lawyers and family members were exhausted, the plaintiff had been dead for seven years, and the family decided not to pursue the case. While this case showed the potential power of industry documents to sway courtroom results, by the end of the second wave cigarette manufacturers still had not paid any money to individuals who had been injured by tobacco smoke.

The Third Wave

The third wave of tobacco litigation began in the mid-1990s and would change the litigation tide in favor of plaintiffs for the first time since 1954. Three major events opened the door for successful tobacco litigation during this wave. First, an employee of a law firm that represented tobacco companies released documents to the public that exposed the tobacco companies' misconduct. Second, class-action litigation and litigation on behalf of state governments allowed plaintiffs to combine their resources and expertise on a scale not before realized. Finally, attorneys developed new legal theories that avoided and overcame many of the tobacco industry's traditional victim-blaming defenses.

SETTING THE STAGE. One of the most important factors in the initiation of the third wave of tobacco litigation was the disclosure of tobacco industry documents that proved that the tobacco industry knew of the addictive nature of nicotine and its harmful effects on consumers' health. As the trustees of the American Medical Association put it in an editorial in the *Journal of the American Medical Association*:

[T]hese documents . . . provide massive, detailed, and damning evidence of the tactics of the tobacco industry. They show us how this industry has managed to spread confusion by suppressing, manipulating, and distorting the scientific record. They also make clear how the tobacco industry has been able to avoid paying a penny in damages and how it has managed to remain hugely profitable from the sale of a substance long known by scientists and physicians, to be lethal (Todd 1995).

On 12 May 1994, a gentleman calling himself "Mr. Butts" mailed a box of tobacco industry documents to public health researcher Professor Stanton Glantz at the University of California. "Mr. Butts" was a paralegal at a law firm that represented the Brown & Williamson Tobacco Company. The documents contained information indicating that the tobacco industry had known for thirty years that smoking was dangerous to human health and that it led to many illnesses. The documents demonstrated how the tobacco industry had funded scientific research aimed to create controversy and uncertainty about the health effects of smoking and to divert public attention to other causes of cancer and heart disease, such as diet and heredity. Additionally, these documents showed how the tobacco industry had targeted children through advertising.

STATE ACTIONS FOR REIMBURSEMENT OF MEDICAID FUNDS.

One of the most important legal strategies that developed during the third wave was the focus on injuries incurred by state governments in the United States. The state governments sought to sue tobacco companies for all **Medicaid** expenses that state governments had to pay in order to care for sick smokers. From 1993 to 1998, almost every state filed an action against the tobacco companies. The theory underlying the states' legal actions, based on information revealed by the tobacco documents, was that the tobacco industry had conspired to conceal the addictive nature of nicotine and the dangerous health effects, and, as a result, many smokers had developed and would develop health problems related to smoking. The states argued that the tobacco industry should have to pay for the medical costs of smokers. For the first time since 1954, the tobacco companies were facing an opponent that not only had vast financial resources but also had very damaging evidence. On 20 March 1997, one small tobacco company, Liggett and Myers, broke a fifty-year-long conspiracy of silence. The company and the states settled, or agreed to end the lawsuit, with the states' attorneys general and, in the process, made some very damaging admissions regarding the industry's long-standing conspiracy of silence and denial.

In 1997 and 1998, the states and the tobacco industry agreed to five settlement agreements covering all fifty states. There were individual settlements with the states of Mississippi, Florida, Texas, and Minnesota, and a "Master Settlement Agreement" with the remaining forty-six states. The Master Settlement Agreement provided for payment of \$206 billion over the initial twenty-five years of the agreement. The four states settling separately received another \$40 billion in damages. The Master Settlement Agreement did not just provide monetary relief to the states but also placed restrictions on the tobacco companies that included ending cigarette billboard advertising, banning the use of merchandise with cigarette brand names, and limiting sponsorships. The industry also formally agreed to stop targeting youth in its advertising and agreed to stop engaging in anticompetitive practices. Despite these promises, the industry has, according to two federal courts and the National Association of Attorneys General, violated the Master Settlement Agreement on numerous occasions.

CLASS ACTIONS. During the third wave, class actions became a method to bring smokers' claims against tobacco companies. Class actions are the consolidation of individual cases, where the injured parties all have similar injuries, factual circumstances, and legal issues. Plaintiffs used class action lawsuits because the cost of litigation could be spread across thousands of claims, making the cases against the tobacco companies affordable for the first time. There was also an unprecedented potential for large damages justifying the investment of vast resources in suing the tobacco companies.

A group of sixty law firms, called the Castano group, filed a class action that helped launch the third wave of litigation. It was estimated that the nationwide class action could represent between 40 million and 100 million smokers. The Castano group focused on the issue of addiction, seeking to represent all smokers who were addicted to nicotine. The legal claim was based on allegations that the tobacco companies had concealed and suppressed material research that showed nicotine is



Medicaid a public health program in the United States through which certain medical expenses of low-income persons are paid from state and federal funds.

Jury at Miami Dade County Courthouse during a class action lawsuit against the tobacco industry. In the mid-1990s class action lawsuits made cases against the tobacco companies affordable for the first time and cigarette manufacturers suffered their first financial losses as a result of their courtroom battles. AP/WIDE WORLD PHOTOS



highly addictive. In 1996, despite the Castano group's ambitious efforts, the court determined that the class was too large to manage efficiently, a fate that befell most class actions brought on behalf of smokers.

In 1991 a successful class action was filed by a husband and wife legal team on behalf of nonsmoking airline flight attendants injured by their exposure to secondhand smoke. This case, called *Broin v. Philip Morris Companies*, was heard by Florida courts as a nationwide class action. In this case the class members were not smokers, which prevented the tobacco industry from blaming the plaintiffs for their health problems. Four months into trial the tobacco industry settled for \$349 million dollars and the case never finished trial.

Another class action was *R.J. Reynolds Co. v. Engle*, which was filed in 1994 and sought damages on behalf of all citizens of Florida injured by their addiction to cigarettes. The jury in *Engle* found that cigarettes were addictive and caused some twenty diseases or medical problems, that tobacco companies had committed fraud and conspired to mislead the public, and that punitive damages should be awarded. On 7 April 2000 the *Engle* case made history when it became the first class action to assess actual damages against the tobacco industry. The jury decided that punitive damages for the entire class should be \$145 billion. On 21 May 2003, a Florida appeals court overturned this \$145 billion verdict. The court ruled that the claims of each class member were too unique to be tried collectively.

OTHER TYPES OF LITIGATION. The third wave of tobacco litigation has seen an expansion of claims by nonsmoking plaintiffs who are trying to recover damages from the tobacco industry based on its deceptive and manipulative practices. Asbestos manufacturers have also filed suits seeking contribution from tobacco companies for the role of cigarettes in causing or aggravating the cancers of asbestos victims. Fire victims have sued tobacco companies for the failure of manufacturers to make cigarettes self-extinguishing. The United States Department of Justice is also

suing the tobacco industry and is seeking injunctive relief and damages for “an unlawful conspiracy to deceive the American public” (Tischler 2003). Governments of other nations have filed litigation in the United States to recover for the role of cigarette manufacturers in global tobacco smuggling schemes. And individual and governmental cases are also being filed in dozens of countries around the world.

Conclusion

From its inception in 1954 to the 2000s, tobacco litigation has been a battle. While the industry has paid record settlements to state governments, it has yet to deliver any substantial compensation to individual smokers. In light of the evidence of the industry’s deception and manipulation together with the staggering statistic that cigarettes kill at least 450,000 American smokers and up to 65,000 nonsmokers each year, and about 5 million smokers worldwide, it appears as if the scales of justice have yet to tilt in favor of the many victims of this tobacco use.

See Also British Empire; Caribbean; Dutch Empire; French Empire; Spanish Empire.

■ RICHARD DAYNARD
 ■ ROBERT KLINE
 ■ KRISTEN DALEY

BIBLIOGRAPHY

- American Lung Association. On Florida Court Ruling to Overturn Engle Tobacco Class Action Suit. 2003. Available: <http://www.lungusa.org/press/tobacco/tobacco_052103jlk.html>.
- Broin v Philip Morris Companies, Inc.*, 641 So 2d 888 (Fla App 1994), review denied, 654 So 2d 919 (Fla 1995).
- Castano v American Tobacco Company* 160 FRD 544 (ED La 1995), reversed, 84 F 3d 734 (5th Cir 1996).
- Cipollone v Liggett Group, Inc.*, 683 F Supp 1487 (DNJ 1988); *Cipollone v Liggett Group, Inc.*, 505 US 504 (1992).
- Crawford, Franklin E. *Fit for Its Ordinary Purpose? Tobacco, Fast Food, and the Implied Warranty of Merchantability*, 63 Ohio St L J 1165, 1,887–1,888 (2002).
- Cunningham, Laurie. Appeals Court Refuses to Rehear “Engle” Tobacco Suit. Law.com. Online. Available: <<http://www.law.com/jsp/article.jsp?id=1063212077718>>.
- Daynard, Richard A. *Regulating Tobacco: The Need For a Public Health Judicial Decision-Making Canon*, 30 JLMEDETH 281 (2002).
- Daynard, Richard A., and Graham E. Kelder, Jr, *The Many Virtues of Tobacco Litigation*, 34 Trial 33, 35 (Nov 1998).
- Daynard, Richard A., and Mark Gottlieb. *Keys to Litigation Against Tobacco Companies: The Authors Advise Plaintiff Lawyers on How to Win on Behalf of Clients Wrongly Harmed by the Tobacco Companies*, 35 Trial 18 (Nov 1999).
- Glantz, Stanton A. et al. *The Cigarette Papers*. Berkeley: University of California Press, 1996. Online. Available: <<http://galen.library.ucsf.edu/tobacco>>.
- Memorandum by R.J. Reynolds’ attorney J. Michael Jordan, 29 April 1988, quoted in *Haines v Liggett Group, Inc.*, 814 F Supp 414, 421 (DNJ 1993).

- Public Health Service, U.S. Department of Health, Education, and Welfare. *Smoking and Health: Report of the Advisory Committee to the Surgeon General of the Public Health Service*. Pub. No. 1103. Washington: Government Printing Office, 1964.
- Rabin, Robert L. "Some Thoughts on Smoking Regulation." *Stanford Law Review* 43 (1991): 475, 478.
- R.J. Reynolds Tobacco Co. v Engle*, 672 So 2d 39 (Fla App 1996), review denied, 682 So 2d 1100 (Fla 1996).
- Tischler, Eric. "Tobacco Class Action Goes up in Smoke; Individual and Government Cases Proceed." *Trial* 39 (August 2003): 12.
- Tobacco Law Project. *Toward Health and Justice: Litigation and Public Inquiries as Tools for Tobacco Control*. Online. 2003. Available: http://www.who.int/tobacco/en/final_jordan_report.pdf.
- Todd, J. S. et al. "The Brown and Williamson Documents: Where Do We Go From Here?" *The Journal of the American Medical Association* 274, no. 3 (1995): 256.
- Walburn, Roberta B. "The Prospects for Globalizing Tobacco Litigation." Paper presented at WHO International Conference on Global Tobacco, New Delhi, India, 7–9 January 2000. Online. Available: <http://tobacco.who.int/repository/tld94/ROBERTA2000.doc>.



Lobbying

Lobbying is defined as the effort to affect legislation by influencing the opinions of legislators, legislative staff, and government administrators directly involved in drafting legislative proposals. These efforts may be achieved through direct overtures to legislators themselves, or more indirectly through other parties that may hold sway over them. Lobbying can be seen as part of the healthy functioning of a democratic political system within which many groups compete to further their interests. It is thus part of the accepted political process within all democracies for interest groups to, for example, seek an audience with key decision makers, submit position papers to them on specific issues, or even provide financial support for maintaining them in office. Interest groups may include business associations, labor unions, charitable foundations, or professional groups.

To ensure that the lobbying process is transparent, accountable, and ethical, in some countries there are guidelines regulating lobbying activities. In the United States, for example, the U.S. Lobbying Disclosure Act (1995) and Internal Revenue Service regulations require that lobbying activities be documented and reported.

The U.S. Tobacco Industry and Lobbying

Lobbying is a major strategy of the tobacco industry in its efforts to protect and further its interests. Tobacco companies and industry associations (led in the United States from 1958 by the Tobacco Institute until it was disbanded in the late 1990s) employ staff, professional lobbyists, public relations companies, and legal firms to lobby legislators, public officials, and other prominent individuals directly on tobacco-related

issues. These actions are often carefully timed to coincide with the legislative process, such as the proposal of a new bill or revision of a law. Lobbyists approach legislators and government officials directly to present their positions in oral or written form, even offering specific wording for proposed legislation.

However, the tobacco industry also engages in more indirect forms of lobbying via a wide range of other parties. The recruitment of prominent individuals, such as former politicians, to advance the industry's interests is a well-known strategy. The mass media is actively wooed to run favorable coverage. Other industries, including hotels and restaurants, advertising, and professional sports, are also lobbied to gain support for specific issues, such as opposing public smoking bans or advertising restrictions. More covertly, the tobacco industry may rely on "front groups" to put across their views. This is achieved through organizations representing the rights of smokers or tobacco farmers (for example, International Tobacco Growers Association) where a financial link to the tobacco industry may or may not be disclosed. More controversially, the industry creates and funds a wide range of organizations which, in turn, present their views as being independent.

In the United States, industry expenditure on direct lobbying is substantial. Record expenditure by the industry was reached in the late 1990s as the outcome of legal action by the attorneys general of forty-six states against tobacco companies to recover health care costs of tobacco-related diseases reached a climax. Under the proposed Master Settlement Agreement (MSA) between the attorneys general and the tobacco companies, the tobacco companies agreed to change the way tobacco products are marketed and pay the states an estimated \$206 billion over twenty-five years. Antismoking organizations, however, felt the MSA fell significantly short of the real costs to be recovered and gave the industry too much latitude in advertising and promotional activities. As debate over terms of the settlement commenced in 1997, intense lobbying ensued by the industry, costing approximately \$35 million, a 23 percent increase from 1996, to persuade the U.S. Congress to approve the MSA. The agreement was signed by the attorneys general in 1998.

On the back of negotiations over the MSA, legislators sought to put forth comprehensive national tobacco control legislation. As reported by Public Citizen in its report, "Blowing Smoke," these bills prompted another major increase in lobbying expenditure by the tobacco industry to over \$43 million during the first half of 1998 or \$81,000 for each member of Congress. This paid for a 70 percent increase in the number of lobbyists on Capitol Hill. The most notable success for the industry was the defeat of Senator John McCain's bill in the U.S. Senate in June 1998, which tobacco control groups attributed to "unprecedented amounts [of lobbying expenditure] to keep crucial public health legislation from being passed" (Public Citizen 1998).

In 2002 more than \$20 million was spent to lobby Congress as it prepared for the first time since 1998 to take up the issue of tobacco regulation by the Food and Drug Administration. Another \$10.6 million was spent during the first half of 2003. Overall, the tobacco industry was the top spender on lobbying in 1998 led by British American Tobacco (BAT) and Philip Morris (PM). PM is the eighth largest all-time donor to American politics since 1989 and among the most partisan, with three-quarters of its donations to the Republican Party.





Ron Olinger, a tobacco company lobbyist, testified Monday 3 March 2003 in Pierre, South Dakota, against a bill that would raise tobacco taxes. The Senate State Affairs Committee approved the bill, sending it to the full state Senate. AP/WIDE WORLD PHOTOS

The government does not require that figures for spending on indirect lobbying be reported, and therefore they are difficult to estimate. Nonetheless, it is important to recognize that political contributions, advertising, funding of front groups, and similar expenditures are intended to lobby legislators indirectly. It is reported that at least \$40 million was spent on television and other advertising in the first half of 1998, with an additional \$5.6 million on political party contributions to influence the outcome of federal elections during this period. In 2002 the industry spent \$9.4 million on political contributions.

Studies of tobacco industry lobbying have found that lobbying activities have paid off well for the industry. Fred Monardi and Stanton Glantz (1996), for example, found that lobbying activities in the state of Washington coincided with the tabling of a number of local smoke-free and youth access ordinances. The authors found a statistical relationship

between campaign contributions and how individual legislators voted. Similarly, in the U.S. Congress in 2002, members who sponsored a tobacco regulation bill backed by Philip Morris received on average twenty times more money from the industry than the sponsors of a competing bill sponsored by the public health community.

Tobacco Lobbying in Other Countries

Public health officials know less about tobacco lobbying in other countries, although analyses are beginning to emerge. In 2002, Mark Neuman and colleagues described how lobbying by the industry effectively slowed legislation on tobacco advertising in the European Community. Targeting of key figures in politics, industry, and the mass media successfully enabled the industry to mount “a coordinated and effective effort . . . to make them [legislation] as weak as possible.” Similarly, in the Middle East, a 2000 analysis of internal industry documents by Ross Hammond and Celia White found that a highly organized strategy of lobbying was undertaken, including the enlistment of prominent political figures and third parties, to prevent the adoption of effective tobacco control legislation.

Lobbying by the tobacco industry is increasingly seen as controversial because of the large sums spent compared with the resources available to public health groups, which raises questions about undue corporate influence over an issue of public health concern. Even more questionable is the extent of indirect and often covert lobbying undertaken, much of it undocumented and thus poorly regulated. This is especially problematic in countries, such as in the developing world, where there are weak or nonexistent guidelines on political lobbying.

See Also Documents; Litigation; Politics.

■ KELLEY LEE

BIBLIOGRAPHY

- Givel, Michael S., and Stanton A. Glantz. “Tobacco Lobby Political Influence On U.S. State Legislatures in the 1990s.” *Tobacco Control* 10, no. 124 (2001): 124–134.
- Hammond, Ross, and Celia White. *Multinational Tobacco Industry Activity in the Middle East: A Review of Internal Industry Documents*. Prepared for WHO Tobacco Free Initiative, Eastern Mediterranean Regional Office. Cairo, Egypt: World Health Organization, 2001.
- Monardi, Fred, and Stanton A. Glantz. “Are Tobacco Industry Campaign Contributions Influencing State Legislative Behavior?” *American Journal of Public Health* 88, no. 6 (1998): 918–923.
- Morley, C. P., K. M. Cummings, A. Hyland, G. A. Giovino, and J. K. Horan. “Tobacco Institute Lobbying at the State and Local Levels of Government in the 1990s.” *Tobacco Control* 11 (2002): Supp. 1: 102–109.
- National Center for Tobacco-Free Kids Action Fund and Common Cause. *Buying Influence, Selling Death: Campaign Contributions by Tobacco Interests Quarterly Report, January 2004* Online. 2004. Available: <<http://www.tobaccofreekids.org/reports/contributions>>.
- Neuman, Mark., Asaf Bitton, and Stanton A. Glantz. “Tobacco Industry Strategies for Influencing European Community Tobacco Advertising Legislation.” *The Lancet* 359, no. 13 (April 2002): 1,323–1,330.

Open Secrets. "Philip Morris" Center for Responsive Politics, Washington, D.C. Available: <<http://www.opensecrets.org/orgs/summary.asp?ID=D000000067>>.

Public Citizen. *Blowing Smoke, Big Tobacco's 1998 Congressional Lobbying Expenses Skyrocket*. Online. 1998. Available: <http://www.citizen.org/congress/civjus/prod_liability/tobacco/articles.cfm?ID=897>.

Public Citizen. Willmuth, J., and S. Munger. *Burning Down the Houses: Big Tobacco's 1997 Congressional Lobbying*. Online. 1998. Available: <http://www.publiccitizen.org/print_article.cfm?ID=908>.

Silverstein, K. *Smoke and Mirrors: The Tobacco Industry's Influence of the Phony "Grassroots" Campaign for Liability Limits*. Washington, D.C.: Public Citizen, 1996.



Lucky Strike



plug a small, compressed cake of flavored tobacco usually cut into pieces for chewing.

Noting the success of R.J. Reynolds Tobacco Company's Camel cigarettes, the American Tobacco Company (ATC) resurrected an old name, Lucky Strike, to introduce its own new brand. Originally a trade name for **plug** tobacco during the California Gold Rush (1848–1849), the name Lucky Strike was already well known.

Using a similar tobacco blend as that of the Camel cigarette, which consists primarily of sweetened Burley and Bright tobaccos, ATC needed something to set Lucky Strike apart and found it in the slogan "It's toasted." While all cigarette tobacco was similarly treated, this slogan was nonetheless hammered home in Lucky Strike advertising as unique to "Luckies." Learning from Camel's success, ATC adopted a similar marketing strategy for Lucky Strike. For a period in the 1920s, ATC leased most of its other brands to another company so that it could concentrate entirely on promoting its Luckies.

From 1916, with the introduction of Lucky Strike, until his death in 1946, George Washington Hill controlled every aspect of the brand's promotion. When Hill became ATC's president in 1926, the Camel brand held 40 percent of the American market. In 1930, due to ATC's more aggressive marketing, Lucky Strike surpassed Camel, capturing roughly 35 percent of the domestic market and producing 43 billion cigarettes annually.

Hill's success can be attributed to several strategies. He marketed Lucky Strike to a more upscale clientele than Camel. While ATC was sponsoring the *Your Hit Parade* radio show, for example, Hill made sure that the songs played fit his idea of what a fashionable audience wanted to hear. He was particularly aggressive in targeting women as that gender gradually took up smoking; "Reach for a Lucky instead of a sweet" was one of Hill's more famous slogans directed toward women.

ATC arranged a "Torches of Freedom" parade in which women marched down Fifth Avenue in New York City carrying cigarettes at a time when a degree of social stigma was still attached to women smoking in public. When Hill discovered that women tended to dislike Lucky Strike's dark green pack because it clashed with their couture, magically, in 1934, major fashion designers began to feature green. Years later, in 1942, using the excuse that the copper used to make the green ink for



Advertising for Lucky Strike attempted to present toasting as unique to Lucky Strike, when in fact all cigarette tobacco was toasted. This 1928 advertisement features famous aviatrix Amelia Earhart as the celebrity spokesperson, claiming that Lucky Strikes were carried on her famous trans-Atlantic flight. © BETTMANN/CORBIS

the pack was needed for the war effort, Lucky Strike green “went to war,” and the pack turned white, solving the color problem permanently.

With the increasing popularity of king-size cigarettes, Lucky Strike’s **market share** began declining. Later, filtered brands took an ever-increasing share of the market. By the 1960s, Lucky Strike’s position had declined to less than 10 percent of the domestic market. Attempts to extend the brand to filter and **menthol** versions were largely unsuccessful despite imaginative advertising campaigns such as “Lucky Strikes Again” and “Light My Lucky.”

In 1994 British American Tobacco (BAT), which had owned the international rights to the Lucky Strike brand since 1902, acquired ATC and increased its promotion of the brand worldwide. Because they were marketing it internationally as a quality American cigarette, BAT was reluctant to discount Lucky Strike in its home market, so as not to cheapen its image elsewhere in the world. During the late 1990s, when



market share the fraction, usually expressed as a percentage, of total commerce for a given product controlled by a single brand; the consumer patronage for a given brand or style of product.

menthol a form of alcohol that imparts a minty flavor to some cigarettes.

it was promoted as an “American Original,” Lucky Strike achieved some sales success with the young, urban market in the United States. Although BAT later began price discounting, today Lucky Strike retains only a very small percentage of the American market.

See Also Camel; Cigarettes; Gitanes/Gauloises; Marlboro; Virginia Slims.

■ JOSEPH PARKER

BIBLIOGRAPHY

- American Tobacco Company. *“Sold American!”: The First Fifty Years, 1904–1954*. New York: American Tobacco Company, 1954.
- Jones, Raymond M. *Strategic Management in a Hostile Environment: Lessons From the Tobacco Industry*. Westport, Conn.: Quorum Books, 1997.
- Kluger, Richard. *Ashes to Ashes: America’s Hundred-Year Cigarette War, the Public Health, and the Unabashed Triumph of Philip Morris*. New York: Alfred A. Knopf, 1996.



Lung Cancer

Once a very rare disease, lung cancer emerged during the twentieth century as one of the leading preventable forms of cancer, accounting for about a third of total cancer deaths in the United States in the 1980s. Recent research suggests that smoking is responsible for about 90 percent of lung cancer cases.

Concern about rising mortality from lung cancer gained particular attention in the 1940s and 1950s. Whereas, in the 1930s lung cancer accounted for 5 percent of cancer deaths in men and 2 percent in women in the United States, in the next decade the mortality rate for men doubled. By the 1950s, cancer of the lung was by far the most common form of cancer among men in the United Kingdom and the United States. Between 1956 and 1959, 9,108 male deaths in England and Wales were attributed to carcinomas of the lung (compared to 10,265 deaths from other cancers). In the United States, 18 percent of male cancer deaths in the 1950s were due to lung cancer.

For women the number of deaths from lung cancer increased less rapidly than for men (1,202 deaths in England and Wales between 1956 and 1959, compared to 14,119 from other cancers). This slower increase in mortality corresponded to the smaller numbers of female smokers. The lung cancer rates for men in both Western Europe and the United States reached a peak in the 1990s, after which they started to decrease slowly. However, female lung cancer mortality continues to rise, and carcinomas of the lung have superseded breast cancer as the leading cause of cancer deaths among women. In the United States, in the last decade of the twentieth century, carcinomas of the lung accounted for 33 percent of all cancer deaths in men and 23 percent in women.

By 1980, lung cancer was estimated to be the second most common cancer in the world. By the 1990s, it had risen to first place, representing

about 12 percent of the cancer burden, but with large international variations. Lung tumors are most common in males in North America, Europe, and Oceania. Lower rates can be found in parts of Latin America and most of Asia, though the incidence is expected to rise as a result of the increasing popularity of smoking in those regions.

Responding to the Rise

1900s–1950s. As mortality from lung cancer began to rise in Europe and North America, attention came to focus on possible reasons for the increase. At first, it was unclear whether the rise was real, or an artifact of better diagnosis and reporting. Because lung cancer was not directly visible to physicians, unlike advanced breast cancer, it could often be confused with other chronic lung diseases, such as tuberculosis. But, even as the consensus moved towards acceptance of the reality of the increase, disagreement and uncertainty persisted as to the reason for the rise. Some suggested the rise might be due to an increase in atmospheric pollution, some thought that it was due to the tarring of the roads, some highlighted occupational causes of disease, and some suggested smoking, for the rise in lung cancer appeared to follow rising consumption from cigarettes. Smoking was, thus, only one of many possible causes. For many British and American physicians the link between smoking and lung cancer remained unproven.

Several factors help to explain such uncertainty. From the late nineteenth century, scientific medicine had come to be dominated by ways of thinking derived from the bacteriological and **physiological** laboratory. Causal relationships were usually “proved” by experiments in which a group of animals (the experimental group) was exposed to a suspected causative agent, while another group (the control group) was kept under identical conditions but not given the agent. If the experimental group got the disease and the control group did not, the agent was said to have “caused” the disease. The term “cause” here implied a process in which *A* (smoking) would, by necessity, always lead to *B* (lung cancer). Thus, to be deemed a “cause” a particular agent—a microbe or **carcinogen**, for example—had *always* to be associated with a particular disease. Once identified, research then aimed to clarify the biological processes by which this agent produced the disease.

Cigarettes did not fit into such a model of causation. There seemed to be no consistent relationship between smoking and lung cancer. Not everyone who smoked got the disease, and some nonsmokers succumbed to it. Thus, if smoking was a factor, it was only one of many, and it was unclear how to determine absolutely how much each factor contributed to the disease. Besides, there were other practical problems in determining a causal connection between smoking and lung cancer. For example, the protracted length of time it took for the disease to emerge made it almost impossible to develop evidence of a direct causal relationship. Furthermore, laboratory experiments in which animals were painted with tobacco **tar** or exposed to tobacco smoke gave mixed results.

Other factors also help to explain why lung cancer was not central to the campaigns either against smoking or against cancer. Many physicians were themselves smokers, and some may have seen smoking as an antidote to the anxiety, worry, pressure, and exhaustion that characterized fast-paced, modern, urban living. Physicians who did speak out against



physiology the study of the functions and processes of the body.

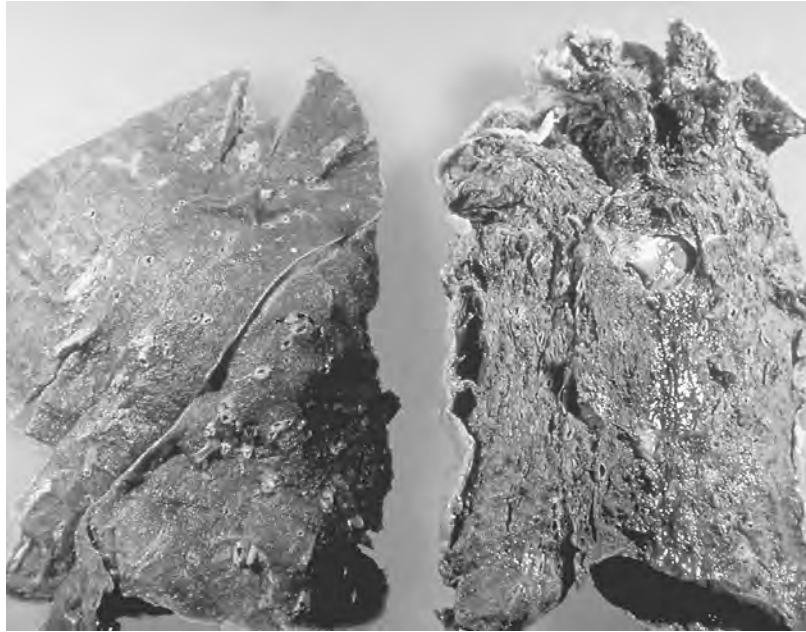


carcinogen a substance or activity that can cause cancer. Cigarette smoking has been proven to be carcinogenic, that is, cancer causing.



tar a residue of tobacco smoke, composed of many chemical substances that are collectively known by this term.

Comparison of a normal lung (left) and a smoker's lung (right). It took many years for the association between smoking and lung cancer to be accepted. PHOTOGRAPH BY A. GLAUBERMAN. NATIONAL AUDUBON SOCIETY COLLECTION/PHOTO RESEARCHERS, INC.



tobacco often did not adopt a scientific position, and sometimes resorted to shaky moral arguments to justify their positions. Ironically, in their efforts to distance themselves from the moralizers, physicians sometimes found themselves tacitly arguing that tobacco was not harmful.

Furthermore, smoking did not fit well with the dominant models of disease control. It was not compatible with the germ theory model of preventing contagion through cleanliness that dominated public health efforts against infectious diseases. If it did not fit bacteriological models of prevention, it also did not easily fit with the early detection campaigns against cancer that emerged in the first half of the twentieth century. The numbers dying of lung cancer were small compared to other major cancers, and the problems of diagnosis were immense. Despite the introduction of the x-ray and the bronchoscope in the early part of the century, most lung cancers were identified postmortem, and physicians found it difficult to distinguish the problem from other lung diseases, such as bronchitis or pneumonia.

The major exception to the tendency to downplay the link between smoking and cancer was Nazi Germany. Before World War II, the Nazis launched perhaps the world's most vigorous antismoking crusade as part of a broader policy of racial hygiene. In their view, tobacco was a genetic poison that caused cancer as well as infertility and heart attacks, and they instituted a wide range of bans on smoking and on advertising tobacco products. Nazi-era scientists also undertook substantial research on the health effects of tobacco. They were among the first to identify a statistical link between smoking and lung cancer, and to identify passive smoking as a danger to nonsmokers. Such research was well known outside of Germany, as was the German antismoking campaign. But many British and American physicians continued to doubt the association between smoking and lung cancer. The outbreak of war (and later the horror at Nazi racial policies) made it even more difficult to adopt policies and beliefs associated with the regime.

1950s. Attitudes changed in the 1950s with the publication of **epidemiological** reports that drew an association between smoking and lung cancer, notably by Richard Doll and Austin Bradford Hill in England, and Ernst Wynder and Evarts Graham in the United States. Downplaying the earlier work in Germany, these researchers began a process that substantially changed the ways in which physicians and scientists thought about the relationship between smoking and lung cancer. Yet, it was a long and hard process, and there was no immediate certainty that they would be successful. Their research did not immediately dispel the doubts, not least because there was considerable disagreement as to whether a statistical *association* between smoking and lung cancer implied that smoking was a *cause* of the disease.

At the heart of this debate was a substantive challenge to the model of causation derived from the bacteriological and physiological laboratory. Epidemiologists thus came to think of a “cause” not as a single event or agent, but as the configuration of circumstances that lead to disease. Such a model implied that *A* (smoking) did *not always* lead to *B* (lung cancer). The best that could be said was that *A* was a contributory factor in the onset of *B*. Such a model of causality was implicit in the new approaches developed by epidemiologists to explore the relations between smoking and lung cancer. One approach, termed retrospective, proceeded by interviewing patients diagnosed with lung cancer about their lifestyle before diagnosis; another, termed prospective, involved interviewing people about their lifestyle, and then correlating this information later with the cause of death.

Substantive differences between scientists and physicians were complicated by the commercial interests at stake in this debate. As epidemiological and clinical data came to implicate cigarettes as a cause of lung cancer, the tobacco industry began an enormous crusade to belittle these scientific studies and fuel a “controversy” about the risks of smoking. In January 1954, U.S. tobacco companies issued a “Frank Statement to Cigarette Smokers”—a full-page advertisement, published in 448 newspapers across the country—accepting “an interest in people’s health as a basic responsibility, paramount to every other consideration in our business.” The tobacco companies stated their belief that their products were “not injurious to health,” claiming that they had cooperated in the past and would continue in the future to “cooperate with those whose task it is to safeguard the public health.” The industry also promised to fund scientific research into smoking and cancer. Yet, in reality, it created a sophisticated public relations operation to deny the harm of smoking. At the same time, as internal corporate documents uncovered in litigation reveal, tobacco industry scientists consistently confirmed the presence of multiple carcinogens in tobacco.

Historians often take reports by the Royal College of Physicians (1962) and the U.S. Surgeon General (1964) as marking a shift in official attitudes toward the acceptance of epidemiological proof that smoking “caused” cancer. The reports also marked the triumph of multicausal explanations of the onset of disease, and represented a key moment in the emergence of the “risk factor” concept of disease. The last stated that persons exposed to the **etiological** agent (smokers) were more likely to develop the disease (lung cancer) than those not exposed to it (nonsmokers). Such a concept raised many questions. How much more likely? What other factors were involved? Was the relationship a direct one or coincidental?



epidemiological pertaining to epidemiology, that is, to seeking the causes of disease.



etiological concerned with the origins of disease.



Dr. Roswell Park, credited with recognizing cancer as a public health issue and organizing against it, is shown in this early 1900s unretouched file photo. Park's legacy lives in the cancer research and treatment center in Buffalo, New York, that bears his name. The Roswell Park Memorial Institute, the world's first center linking laboratory discoveries with patient care and professional and public education, turned 100 in 1998. AP/WIDE WORLD PHOTOS

Scientists and physicians approached such questions from a variety of disciplinary, ideological, and institutional perspectives, which tended to shape the sorts of answers they produced. The tobacco industry further complicated the situation by financing research that, some critics claim, served to sustain artificial uncertainty over causation and risk. While other diseases and forms of cancer came to be linked to smoking as well, lung cancer remained at the center of debates over medical proof because it had received far more scientific study than any other disease linked with smoking. The 1964 Surgeon General's report cited 29 retrospective epidemiological studies of smoking and lung cancer, all of which suggested a causal relationship.

1964 TO PRESENT. The post-1964 period was marked by an expansion and politicization of the issue of the relationship between lung cancer and smoking. First, public health researchers and activists sought to broaden the scope of the debate. Thus, for example, following the publication of epidemiological evidence that associated lung cancer with secondhand smoking, in the 1970s and 1980s they began to focus increasing attention on the harmful effects of passive smoking on so-called "innocent" nonsmokers such as children, spouses, and coworkers. Furthermore, especially in the United States, public health experts also broadened the debate by linking concerns about lung cancer to nicotine addiction. The tobacco industry and libertarian groups defended cigarettes in terms of individual choice. By highlighting the addictive quality of cigarettes, activists fundamentally undermined such a defense by questioning the truth of claims that individuals could fully choose whether or not to smoke. Moreover, by suggesting that the tobacco industry both knew of such addictive qualities and simultaneously publicly denied them, they also opened the door to litigation against the industry over the health effects of cigarettes, including lung cancer.

Second, the period was also marked by continued insistence by the tobacco industry that the case against cigarettes had yet to be scientifically proven. The tobacco industry contended that more research was needed to prove that smoking caused cancer, and that the scientific "controversy" over smoking and lung cancer was not settled. Thus, in 1994, seven tobacco company chief executive officers told a U.S. congressional committee that they did not know whether smoking caused the disease, and that they did not believe cigarettes were addictive. By the end of the 1990s, however, the industry had reversed its position, acknowledging the cancer risks associated with tobacco. Critics argued that such statements were little more than an effort to reduce legal liabilities, and to rehabilitate a stigmatized product and a rogue industry. They also argued that efforts to promote cigarette smoking in Eastern Europe, Asia, and Africa were likely to result in rising lung cancer rates abroad, even as mortality began to drop in the West.

The growing politicization of the issue around lung cancer was also accompanied by growing factionalism over the issue. In the 1950s and 1960s, public health campaigners had often collaborated with the tobacco industry over the hazards of smoking. For example, following reports in the 1950s that painting smoke condensate on the skin of animals produced tumors, industry and government experts collaborated in programs to produce safer (often filtered) cigarettes that would ideally reduce the total particulate matter in cigarette smoke and so reduce the

risk of developing lung cancer. However, by the 1970s and especially the 1980s, the beginnings of tobacco litigation, and the growing influence of public health activists led to the breakdown of such relations. The process was aided by doubts about the effectiveness of filtering in reducing cancer risk, and by the discovery of industry efforts to cover-up and confuse evidence of the association between smoking and lung cancer.

The growing politicization of the debates about smoking and lung cancer was crucial to a broader transformation in cancer control. Whereas, for most of the twentieth century cancer control had focused on early detection and treatment, the identification of smoking as a cause of cancer helped to spearhead a shift in cancer control policies in the 1970s and 1980s toward prevention. Thus, in 1981 Richard Doll (epidemiologist and cancer specialist) and Richard Peto (medical statistician and epidemiologist) attributed 80–90 percent of all lung cancers to smoking. They further concluded that almost a third of preventable cancers were smoking-related. The implication was obvious. Dissuading people from smoking could help to slow the rise in cancer mortality rates, and perhaps send them into decline.

However, if the association of lung cancer with smoking helped to revive cancer prevention, it did less for therapeutics. After early experiments with chemotherapy for certain types of lung cancer in the 1940s, medical oncologists have only recently become interested in lung cancer therapy again, and some feel that there is a far greater stigma attached to this form of cancer than to others. Despite its addictive nature, smoking is often seen as a voluntary act, and this has led to the widespread notion that lung cancer patients are at least partly to blame for their own illness. Diagnostic methods have become more refined, but for most forms of lung cancer surgery has remained the main line of therapy. Operative techniques have not changed dramatically since the 1950s, when chest surgeons found that lung cancer was replacing tuberculosis as their main line of work. While diagnosis and the prediction of treatment outcomes have become more precise and reliable, the chances of survival after being diagnosed with lung cancer are not much better than in the 1960s, as the tumors are usually fairly advanced by the time they cause symptoms.

See Also Disease and Mortality; Doctors; Nazi Germany; Secondhand Smoke; Toxins.

■ DAVID CANTOR
■ CARSTEN TIMMERMANN

BIBLIOGRAPHY

- Berridge, Virginia. "Passive Smoking and its Pre-History in Britain: Policy Speaks to Science?" *Social Science and Medicine* 49 (November 1999): 1183–1195.
- Brandt, Allan M. "Cigarette Risk and American Culture." *Daedalus* 119 (Fall 1990): 155–76.
- Burnham, John C. "American Physicians and Tobacco Use: Two Surgeons General, 1929 and 1964." *Bulletin of the History of Medicine* 63 (Spring 1989): 1–31.
- . *Bad Habits: Drinking, Smoking, Taking Drugs, Gambling, Sexual Misbehavior and Swearing in American History*. New York: New York University Press, 1993.



- Fairchild, Amy, and James Colgrove. "Out of the Ashes: The Life, Death, and Rebirth of the 'Safer' Cigarette in the United States." *American Journal of Public Health*. 94 (February 2004): 192–204.
- Hilton, Matthew. *Smoking in British Popular Culture, 1800–2000: Perfect Pleasures*. Manchester, England: Manchester University Press, 2000.
- Lock, Stephen, Lois Reynolds, and E. M. Tansey, eds. *Ashes to Ashes. The History of Smoking and Health*. Atlanta, Ga.: Rodopi Bv Editions, 1998.
- Patterson, James T. *The Dread Disease. Cancer and Modern American Culture*. Cambridge, Mass.: Harvard University Press, 1987.
- Proctor, Robert N. *Cancer Wars. How Politics Shapes What We Know and Don't Know About Cancer*. New York: Basic Books, 1995.
- . "The Nazi War on Tobacco: Ideology, Evidence, and Possible Cancer Consequences." *Bulletin of the History of Medicine* 71 (Fall 1997): 435–488.
- . *The Nazi War on Cancer*. Princeton, N. J.: Princeton University Press, 1999.
- Royal College of Physicians of London. *Smoking and Health: A Report of The Royal College of Physicians on Smoking in Relation to Cancer of the Lung and Other Diseases*. London, England: Pitman, 1962.
- Schottenfield, David, and Joseph F. Fraumeni, Jr., eds. *Cancer Epidemiology and Prevention*. New York: Oxford University Press, 1996.
- Thatcher, Nick, and Stephen Spiro, eds. *New Perspectives in Lung Cancer*. London, England: British Medical Association, 1994.
- Williams, Christopher. *Lung Cancer: The Facts*. New York: Oxford University Press, 1992.
- Wingo, Phyllis A., Cheryll J. Cardinez, Sarah H. Landis, et al. "Long-Term Trends in Cancer Mortality in the United States, 1930–1998," *Cancer (Supplement)* 97 (15 June 2003): 3133–3275.



Marginal Populations See Advertising; Documents; Ethnicity; Marketing; Sponsorship; Women; Youth Marketing.

Marijuana See Alcohol, Tobacco, and Other Drugs.



Marketing

From the outset of the mass production of cigarettes, cigars, and **plug** tobacco, manufacturers have used diverse and often outrageous means to publicize these products in order to entice nonsmokers and smokers alike to sample their wares. Marketing techniques ranged from package inserts, giveaways, contests, and sponsorships to the targeting of specific populations of nonsmokers. Legislation banning various forms of tobacco advertising following the mountain of evidence confirming the health risks of smoking did not deter the marketers; rather, as the American and Canadian models attest, the companies used marketing to circumvent the bans. By 1984, almost 50 percent of the advertising and promotions budgets of the giant tobacco companies were directed to promotions, compared with 25 percent in 1975.

Package Inserts/ Coupons

James Buchanan “Buck” Duke of Durham, North Carolina, founder of American Tobacco, initiated the age of mass cigarette production with his adoption of the Bonsack rolling machine. Facing the prospect of overproduction by the 1880s, Duke countered with new packaging such as a sliding box with a piece of cardboard to stiffen the package. He printed the cardboards with various images, producing collectible card sets to encourage repurchasing. In an era before graphic reading material was widely available, **cigarette cards** were instantly successful, and the series, which were targeted to the masculine clientele and their sons, ranged from the educational: politicians, soldiers, flags, athletes, and



plug a small, compressed cake of flavored tobacco usually cut into pieces for chewing.



cigarette cards paper trading cards sometimes featuring sports personalities or movie stars packaged with cigarettes and offered as an incentive for purchase.

exotic animals; to the risqué: lithographs of attractive women in scanty garments.

Coupons, either in the packages or attached to advertisements, were targeted to groups short of cash, including children and teens. In the 1880s, Duke provided coupons redeemable for college pennants and rugs for his Lucky Strike and Cameo brands. During the Great Depression (1929–1933), Raleigh Tobacco offered coupons for playing cards and electric toasters. In the 2000s, in magazine advertisements, companies offer one-or two-dollar coupons toward the price of cartons, to counter the effects of high taxes, which discourage young people's access to cigarettes. Coupons have the added bonus of providing the companies with mailing lists for direct mail-outs.

Dealer Promotions

As the first point of contact between the manufacturer and the customer, tobacconists were encouraged to push particular brands. Positive inducements included Lucky Strike clocks and chairs, life-size Native American statues to grace front porches, and a popular diversion of the late nineteenth century, R.J. Reynolds' Schnapps Kicking Machine, which was a metal foot, attached to strings and pulleys, which "kicked" consumers of rival plug tobacco. In the 1940s and 1950s, when Philip Morris used the catchphrase "Calling Philip Morris!" on its sponsored radio shows, so popular was the voice of the "page-boy" that 100,000 cardboard likenesses and life-size statues were sent to tobacconists across the United States.

As the giant tobacco companies diversified their holdings in the late twentieth century, they were able to enforce negative inducements on retailers. Philip Morris and R.J. Reynolds, which owned General Foods and Nabisco respectively, were able to demand prime display territory from grocers and other retailers who needed their other products. Imasco of Canada, parent company of Imperial Tobacco, owns the largest pharmacy chain—Shoppers Drug Mart—resulting in a major health product outlet pushing tobacco sales.

Outdoor Displays

In the pre-radio and television ages, tobacco companies used a variety of publicity stunts to promote brand recognition. George Washington Hill, Duke's successor, introduced skywriting as advertising soon after World War I (1914–1918). The giant Lucky Strike letters formed at 10,000 feet drew crowds of onlookers. No less dramatic (and certainly more dangerous) was the stunt organized by the Canadian "Red Cross" brand in 1903. The company hired a high wire artist to cross Quebec's Montmorency waterfalls, an event that reportedly attracted 30,000 people. Other stunts involved hot air balloons, parachutes, and parades.

More pedestrian outdoor displays involved plastering fences, barns, billboards, and streetcars with advertisements. In 1942, when R.J. Reynolds first began promoting its Camel brand, the company erected a giant two-story billboard in New York's Times Square. The billboard, which displayed the head of an American serviceman blowing real smoke through his mouth, became a city institution for twenty-five years.



Testimonials by film stars have been used by tobacco producers to sell their wares. This 1950s advertisement for Chesterfield featured Ronald Reagan in his film heyday. The advertisement also shows how the packaging was tailored for the Christmas buying season. Marketing often capitalizes on holidays and other special, thematic occasions. THE ADVERTISING ARCHIVE, LTD.

The World Wars

Mass tobacco consumption in North America may well have languished for some time longer in the twentieth century had it not been for the continent's involvement in the two world wars. Prior to World War I, cigarettes retained a slightly effeminate image, but that image was dispelled during the war by their popularity among the troops. Cigarette smoking became associated with all of the positive aspects of war participation, denoting courage under fire and alertness during night watch. Exchanging cigarettes or offering matches became symbols of camaraderie among troops, democratic acts between officers and enlisted men, and even gestures of peace among enemies. Cigarettes became symbols of masculinity, even among those women, such as nurses, who courageously took part in the war effort overseas. Because life in the trenches of France and Belgium was characterized by human carnage, filth, and disease, any efforts to limit the soldiers' access to the momentary pleasures of tobacco were considered unpatriotic and spiteful. General "Black Jack" Pershing, commander-in-chief of the American Expeditionary Forces, appealed to the home front to provide cigarettes to the troops. Families and relief organizations responded to the calls in the United States and Canada alike by sending massive quantities of cigarettes overseas.

Philip Morris cigarette girl at the Cotton Club, New York City, 1936. The Cotton Club was one of the centers of the Harlem music scene of the 1920s, which saw the great crossover of blues/jazz from black to white audiences. Cigarette girls were common in nightclubs in the twenties through the forties and into the fifties.

© BETTMANN/CORBIS



Once war was again declared in 1939 (in Canada) and 1941 (in the United States), the tobacco companies convinced the wartime regulatory agencies in both countries that tobacco was an essential product that could be advertised accompanied by patriotic messages promoting Victory bonds and blood donor clinics. More importantly for the long-term expansion of the smoking market, cigarettes were supplied freely in the daily rations to all in uniform, including women and non-smokers. Whether provided directly by the companies, through their associations such as the Overseas Tobacco League, or through philanthropic agencies like the Canadian and American Red Cross, the Royal Canadian Legion, the Young Men's Christian Association, and the Knights of Columbus, these rations quickly became objects of barter among troops and prisoners of war and with occupied populations. The tobacco companies also sponsored entertainments for the troops overseas during World War II (1941–1945) and the Korean conflict (1950–1953).

During World War II and in the years afterward, smoking became synonymous with patriotism and courage in magazines, films, and television. In the film classic, *Casablanca* (1942), Humphrey Bogart's character and his morally corrupted Vichy colleague find their patriotic core over cigarettes as the film closes. So closely are the Allied leaders—Winston Churchill, Franklin Delano Roosevelt, and Joseph Stalin—identified with their smoking habits that an **iconographic** photograph of an ashtray with a cigar, a cigarette in holder, and a pipe is universally recognized

iconography representing or conveying meaning through visual symbols without words. Certain traffic signs are a common form of iconography.

to signify the Yalta Conference. Adolf Hitler's distaste of smoking is cited to illustrate the characteristic idiosyncrasies of the dictator. World War II was the apex of tobacco's popular esteem.

Targeting Health Concerns

Yet the popular image of cigarettes could not long mask growing concerns about the health consequences associated with the habit. Even before cigarettes were linked to cancer in the 1950s, manufacturers were making health claims in marketing their products. In the 1930s, American Tobacco addressed the concern over "smoker's throat" by devising the statement that Lucky Strike's tobacco was "toasted" and therefore soothing to the throat. Albert Lasker, creator of Lucky's advertising campaigns (see sidebar), enlisted celebrity endorsements from opera singers, stage and screen performers such as Helen Hayes, Billie Burke, and Al Jolson, and even pioneer aviator Amelia Earhart to attest to the company's claims. Even into the 1950s, Canada's Craven "A" cigarettes were claimed to have no irritating effects upon the throat.

The claim that one brand was less harmful than another was standard advertising practice for decades. Camels were advertised in the 1930s as the brand of choice among doctors (indisputable since Camels was the best-selling brand among all groups). In response to growing public concerns and news reports about the health effects of smoking, some tobacco manufacturers introduced filter cigarettes. P. Lorillard Co. launched Kent cigarettes in 1952 with its "micronite" filter, which contained fibers that the company claimed trapped dust particles in the smoke.

Arts Promotion

While their popular image began to sink, the tobacco companies' financial and political clout remained unchallenged, and targeted sponsorship of elite activities such as the fine arts, as well as mass entertainments. Elite institutions such as museums and concert halls were esteemed as high culture, yet they faced perennial financial difficulties. By associating themselves with these institutions, the company giants demonstrated their commitment to the commonweal. At the same time, those who attended elite cultural events and their board of directors tended to be members of the elite. These included media leaders and politicians, who could influence the nature of antitobacco legislation. At a minimum, the directors of these institutions that received financial support from the tobacco companies would be expected to make statements defending the existence of public smoking spaces.

One of the earliest brands to be associated with elite culture was the Canadian Buckingham cigarettes, which in 1929, sponsored the Buckingham Booster radio orchestra, every member of which, the leader confirmed, was a Buckingham smoker. Pall Mall, another Canadian brand marketed to "the elite," was a frequent promoter of concerts and galas. Lucky Strike sponsored the weekly radio broadcasts of the New York Metropolitan Opera and of political commentator Dorothy Thompson. Luckies also backed the radio programming of the popular Kay Kyser, Eddie Duchin, and Jack Benny. Its most popular venture was the Lucky Strike Hit Parade, a favorite with young radio audiences.

Albert and Mary Lasker

Referred to as the "Father of Modern Advertising," Albert Lasker masterminded a monumentally successful Lucky Strike cigarette advertising campaign in the mid-1920s. The campaign came about after Lasker's first wife, Flora, was ordered to stop smoking in a restaurant. Lasker's fury over this incident became the impetus for a series of ads aimed at bringing women into the fold as smokers. The key slogan, "Reach for a Lucky instead of a sweet," made Lucky Strike the best-selling cigarette brand in the country. Lasker remained ad executive until 1942, at that point having made more money in advertising than anyone else in the industry's history. However, after three nervous breakdowns from stress, he abruptly left business and, with the encouragement of his third wife, Mary, turned to philanthropy. Together, the Laskers set up the Lasker Foundation, which supported medical research and advocacy for a variety of diseases—some of which championed an antismoking stance in an effort to curb cancer. Albert died in 1952. Mary, who helped bolster the American Cancer Society by raising one million dollars for their research program in 1946, lived until 1994. The Lasker Foundation remains in the forefront of efforts to raise medical public awareness and the Lasker Award is one of the most coveted in the medical science arena.

■ DONALD LOWE



ubiquitous being everywhere; commonplace; widespread.

Early television programming was replete with both tobacco advertising and consumption. In 1951, Philip Morris sponsored the most popular comedy show of all time, *I Love Lucy*, whose protagonists smoked frequently. One of the most respected American journalists, Edward R. Murrow, interviewed world leaders through a haze of tobacco smoke. By the early 1960s, the epitome of sophisticated cool in the entertainment world was the so-called Rat Pack, led by singers Frank Sinatra, Dean Martin, and Sammy Davis Jr., who drank, wenched, and partied in Las Vegas shows, Hollywood films, and television series accompanied by the **ubiquitous** cigarette.

Fine arts promotion remains a strong component of tobacco advertising. In the 1980s, Brown & Williamson promoted its youth-oriented Kool brand by offering a series of concerts, called The Kool Super Nights, at American military bases. The epitome of the elitist association between arts and cigarettes would have to be the activities of George Weissman. Soon after he retired as the chief executive officer of Philip Morris, Weissman was elected chairman of the board of New York's Lincoln Center for the Performing Arts, one of the most prestigious of American cultural institutions. In February 1987, Lincoln Center hosted the Marlboro Country Music Festival, complete with a huge banner with the red and white logo of Marlboro, the brand's typeface, and a medical warning in the corner adorning the building. Philip Morris also sponsored an art exhibit titled *Treasures of the Vatican*, and a photograph of former first lady Nancy Reagan, Terence Cardinal Cooke, the Metropolitan Museum's director, Philippe de Montebello, and George Weissman subsequently adorned the pages of the *U.S. Tobacco and Candy Journal*.

Sports Promotion

The promotion of sporting events has a venerable history for the tobacco industry, and can have a number of spin-off results that circumvent legislation such as advertising bans. In the late nineteenth century, Duke of Durham's marketing director, Edward F. Small, noted the national craze for roller skating, and convinced Duke to sponsor a touring team, called the Cross Cuts, after one of the company's newer brands. The roller skating events, which attracted thousands of spectators, provided the company with conveniently captive audiences to paper with advertisements for the new cigarettes. During the 1930s, print advertisements for Lucky Strike and other cigarettes used sports endorsements from athletes such as long-distance runners proclaiming that their product "did not get your wind" (although, of course, such references to health concerns made implicit admissions that other cigarettes did indeed affect breathing). In 1932, Turrett brand, geared toward a working-class clientele, held one of the most popular and characteristically Canadian contests—the hockey pool—offering cash to those who accurately estimated the numbers of goals scored in the National Hockey League. Sweet Caporal also sponsored early Canadian football radio broadcasts, including the national championship, the Grey Cup, during the 1930s. A variation on the hockey pool was the Camel Scoreboard; in 1981, R.J. Reynolds published weekly team rankings of a number of sports in newspapers. So popular was this pseudo-news contribution that Philip Morris later introduced the Marlboro Sports Calendar.



A key marketing strategy of tobacco companies is to give away free merchandise, often at concerts and cultural events sponsored by the tobacco industry. This boy in Senegal wears a hat advertising L&M, a brand of the U.S.-based multinational tobacco company Philip Morris. PHOTO BY ANNA WHITE

By the 1980s, the tobacco companies' reliance upon sports promotion was in full swing, particularly since it was an effective way to circumvent bans on television advertising. While American manufacturers had agreed not to use sports stars in celebrity endorsements of their products, the stars' equipment, cars, and clothing (as well as scoreboards, fences, and grandstands) were plastered with the names and logos of the tobacco brands. When these events were televised, the logos reached millions of viewers of all ages, during broadcasts and re-broadcasts.

The industry particularly favored motor sports, skiing, tennis, and golf. In the 2000s, RJR Nabisco (successor to R.J. Reynolds) sponsors many motor sports, ranging from stock cars to motorcycles. The most prestigious of these is the NASCAR circuit, whose glittering prize is the Winston Cup. U.S. Tobacco featured its own Skoal Bandit race car, also on the NASCAR circuit, named for a brand of chewing tobacco, and prior to the voluntary ban on celebrity endorsements, Skoal Bandit race driver Chuck Brown toured shopping malls and fairs throughout the United States signing autographs while samples of Skoal were distributed.

In Europe during the 1970s, Philip Morris expanded the market for Marlboro through its support of Formula I auto racing. The Marlboro name, logo, and colors were plastered on cars, racers' jackets, and signs at the tracks. By the mid-1970s, the Marlboro brand enjoyed one-quarter of Italy's cigarette market and had made significant inroads in the German and French markets. Camel sponsored soccer's World Cup in Mexico City in 1986, in conjunction with its inroads in South America.

Tennis and golf are other favorite sports for the tobacco companies, since they share an elite image. Nabisco sponsors the Nabisco Grand Prix of tennis, while du Maurier has been an important backer of Canadian golf. In 1994, when Du Maurier held its Classic golf tournament in Ottawa, every municipal politician was given free passes to the event. The Canadian industry suffered a setback in 1983 when health groups, forming the Coalition of Health Interests, organized opposition to RJR-MacDonald's Export A's sponsorship of amateur ski events. Dr. Andrew Pipe, a member of the Canadian Ski Association's medical committee, was one of the critics of the industry's involvement, and Pipe later formed Physicians for a Smoke-Free Canada, one of the leading voices of the antismoking cause. After Olympic skiing stars Ken Read and Steve Podborski supported the opposition by refusing to accept the Export A cup, Canadian sports minister Otto Jelinek announced that amateur sports organizations that accepted tobacco sponsorships in the future would not receive federal funding.

Targeting Children and Teenagers

Early antitobacco groups were concerned about children smoking and the reasons for it, many of which bear resonance in the 2000s. The Children's Act of 1908 recognized the decades-long crusade of the British Anti-Tobacco Society by making it illegal to sell tobacco to minors less than sixteen years of age. The nineteenth-century antismoking crusaders noted that children smoked to emulate adult male behavior. In the tracts produced by the Anti-Tobacco Society, children were assured that famous athletes, soldiers, and professionals did not smoke, and the founder of the Boy Scouts movement, Lord Baden-Powell, lectured that smokers were unmanly. Nevertheless, such pronouncements did not make much of a dent among the urban, working-class youth for whom smoking soon became part of the lifestyle.

In North America in the post-World War II era, the cigarette industry began targeting young people. By the 1950s, **snuff** and chewing tobacco were handed out to adolescents at rodeos and other sports events, and endorsed by sports celebrities admired by young boys. U.S. Tobacco created a driver's education film for fifteen- and sixteen-year-olds, which was shown in high schools. Starring a skill for U.S. Tobacco, race car driver Harry Gant, the film displayed Gant's Skoal Bandit race car while he lectured the audience on driver safety. The target audience was not limited to fifteen-year-olds, however. U.S. Tobacco sold toy cars with the words Skoal Bandit, and caps, emblazoned with the company's logos, were available in children's sizes. Even younger children were targeted in the 1950s by Brown & Williamson with the cartoon character of Willie, the KOOL penguin. The mascot for Kool cigarettes, Willie's image appeared on posters and



snuff a form of powdered tobacco, usually flavored, either sniffed into the nose or "dipped," packed between cheek and gum. Snuff was popular in the eighteenth century but had faded to obscurity by the twentieth century.

salt and pepper shakers. From 1951 to 1952, Willie the Penguin appeared in his own comic book. In 1991 Brown & Williamson attempted to resurrect a new, hipper version of Willie complete with punk haircut and sunglasses.

In 1987, RJR Nabisco test-marketed a new cigarette called Magna, whose chrome and cherry-red design resembled a flashy car, which was geared to a younger male audience. The most aggressive youth marketing, however, would be Reynolds' promotion of Camel cigarettes through the character of Joe Camel. Old Joe's visage was plastered on youth-oriented products such as T-shirts, posters, mugs, knapsacks, and beach sandals, which could be purchased with C-Notes—coupons redeemable from empty packages of Camels.

Auto races and other dangerous sports are popular among young working-class males, a disproportionate number of whom will become smokers. At the same time, since the dangers of smoking have become widely known after the 1960s, the companies have replaced their own denials of these dangers with the acceptance of smoking within the constellation of risk-taking behaviors. In other words, smoking may be dangerous, but so are auto racing, snowboarding, and other activities favored by teenagers, who have a keen (albeit mistaken) sense of their personal immortality. Cigarettes therefore are marketed as dangerously cool.

In Canada, the federal government began targeting marketing activities directed toward children and youth in the 1980s. In 1984, Health Minister Jake Epp asked Imperial Tobacco to remove advertisements from Canada's Wonderland, an amusement park. Two years later, Epp's department also was instrumental in RJR-McDonald's abandonment of a new brand, Tempo, which featured youthful models wearing "cool" clothing. When Canada's Tobacco Act of 1997 banned arts and sports sponsorship except the use of the corporate name, many tobacco companies created new names, such as Player's Ltd., Du Maurier Ltd., and Rothman's Ltd. as shell corporations so that the brand name could still be used in signage and programs. An amendment to the Tobacco Act in 1998 attempted to close this loophole by banning tobacco manufacturers from displaying a brand name on a permanent sports or cultural facility. France has passed similar bans on tobacco sponsorships, and other members of the European Union have until 2005 to comply.

Targeting Women

The group with which the tobacco companies made the greatest inroads in the twentieth century was women, and the arguments they used with such success to entice women to smoke were twofold: that smoking equalled liberation, and that smoking aided weight loss. Both of these arguments can be traced to the 1920s, and the superb marketing partnership of American Tobacco's George Washington Hill and his advertising guru, Edward Bernays. In 1929, Bernays, a nephew of Sigmund Freud and early proponent of the psychological bases of advertising, initiated a campaign to encourage women to believe that cigarettes were "torches of freedom." He organized a well-publicized Freedom March on Easter Sunday on New York's Fifth Avenue; debutantes and noted feminists smoked ostentatiously as the cameras clicked, and reports of the event were printed as news items. Similarly, when



Hill encouraged women to “Smoke a Lucky instead of a sweet,” he was pandering to the 1920s fashions of short skirts and slim figures.

Not all of Hill’s ventures were so successful. When surveys showed that women did not like Lucky Strike’s green packaging, he attempted to change the women, rather than the package, by publishing fashion “reports” that green was the color of the day, and psychological “studies” that green conferred mental health. Yet women would not be swayed, and Luckies eventually were repackaged. Canadian advertisements featuring women smokers appeared in 1927, and retailers reported that women no longer preferred perfumed brands but regular masculine brands. Tobacco products directed toward women included brands with red or “rouge” tips and flowery designs.

As the ideal fashion profile became slimmer, so did the cigarettes. Canadian brands such as Matinee Slims and Contessa Slims, geared toward the “modern” woman who used cigarettes as a meal replacement, copied the great leader, Virginia Slims, whose clever ads and slogan, “You’ve come a long way, baby,” represented smoking as both the culmination of a century of struggle for women’s liberation, and the means to get the figure to wear elite fashions. The Virginia Slims logo graced a number of marketing giveaways, such as the Book of Days, an appointment diary chronicling women’s advancements. Its most prestigious venture was the Virginia Slims women’s professional tennis circuit. Fronted by international tennis champion Billie Jean King, the tournaments brought women’s sports to the forefront while the athletes wore snappy costumes modeled after the cigarette packages. In Canada, the Du Maurier Women’s Golf Classic associated smoking with an upscale event, a situation noted by Physicians for a Smoke-Free Canada, who employed guerrilla tactics in 1995 by plastering “Cigarettes kill women” posters on the route to the tournament. Following the ban on advertising, the Matinee Ltd. Fashion Foundation established awards for young Canadian designers, neatly incorporating the female and the hungry, publishing not advertisements but “award winners” with the company logo.

As the tobacco companies absorb or are absorbed by other corporate giants, marketing can be subtle and indirect. For instance, Amer Group PLC, a Finnish company which is licensed to sell Marlboro and L&M brands in Finland, Sweden, Estonia, and Russia, also owns Wilson Sporting Goods and Atomic and Oxygen ski equipment. Wilson Sporting Goods is a corporate sponsor of the Breast Cancer Research Foundation, even though it sells a leading carcinogenic agent to the public. Compagnie Financiere Richemont AG of South Africa, which controls British American Tobacco (BAT), owner of Rothmans brand, has a constellation of luxury consumer brands, such as Cartier, Piaget, and Baume & Mercier watches, and Chloe fashions, as well as Europe’s largest pay-television network. Japan Tobacco Inc., which bought the international tobacco operations of RJR Nabisco, also owns the Japanese Burger King restaurants chain. Japan Tobacco’s Mild Seven brand sponsors auto racing in that country. With such globally interlocking holdings, it will be increasingly challenging for public health regulators to control marketing initiatives.

See Also Advertising; Sponsorship.

■ CHERYL KRASNICK WARSH

BIBLIOGRAPHY

- Burnham, John C. *Bad Habits: Drinking, Smoking, Taking Drugs, Gambling, Sexual Misbehavior, and Swearing in American History*. New York: New York University Press, 1993.
- Cunningham, Rob. *Smoke and Mirrors: The Canadian Tobacco War*. Ottawa: International Development Research Centre, 1996.
- Damon-Moore, Helen. *Magazines for the Millions: Gender and Commerce in the Ladies' Home Journal and the Saturday Evening Post 1880–1910*. Albany: State University of New York, 1994.
- Ewan, Stuart, and Elizabeth Ewan. *Channels of Desire: Mass Images and the Shaping of American Consciousness*. New York: McGraw-Hill, 1982.
- Ferrence, Roberta G. *Deadly Fashion: The Rise and Fall of Cigarette Smoking in North America*. New York: Garland, 1989.
- Glantz, Stanton A. et al. *The Cigarette Papers*. Berkeley: University of California Press, 1996.
- Jacobson, Bobbie. *Beating the Ladykillers: Women and Smoking*. London: Pluto, 1986.
- Kluger, Richard. *Ashes to Ashes: America's Hundred-Year Cigarette War, the Public Health, and the Unabashed Triumph of Philip Morris*. New York: Vintage, 1997.
- Lears, T. J. Jackson. *Fables of Abundance: A Cultural History of Advertising in America*. New York: Basic Books, 1994.
- Lock Stephen, Lois A. Reynolds, and E. M. Tansey, eds. *Ashes to Ashes: The History of Smoking and Health*. Amsterdam: Rodopi, 1998.
- Loeb, Lori Anne. *Consuming Angels: Advertising and Victorian Women*. New York: Oxford University Press, 1994.
- Marchand, Roland. *Advertising the American Dream: Making Way for Modernity, 1920–1940*. Berkeley: University of California Press, 1985.
- Packard, Vance. *The Hidden Persuaders*. New York: D. McKay, 1957.
- Sobel, Robert. *They Satisfy: The Cigarette in American Life*. Garden City: Anchor, 1978.
- Troyer, Ronald J., and Gerald E. Markle. *Cigarettes: The Battle over Smoking*. New Brunswick, N.J.: Rutgers University Press, 1983.
- White, Larry C. *Merchants of Death: The American Tobacco Industry*. New York: Beech Tree Books, 1988.



Marlboro

“Mild as May.” This was how the Marlboro cigarette was advertised shortly after its introduction in 1925. Originally a premium-priced, unfiltered product aimed primarily at women at a time when cigarette brands were not typically marketed to women, Marlboro sold, on average, roughly 250 million cigarettes a year for nearly thirty years before undergoing a sex change in one of the greatest marketing successes of the twentieth century. At the same time, Marlboro’s success propelled Philip Morris (PM) from a relatively minor American producer to the largest cigarette manufacturer in the world.

Following the 1952 publication of Roy Norr’s article “Cancer by the Carton” in *Readers Digest*, filtered cigarettes began increasing in popularity.



“Up in Smoke” cigarette advertisement exhibit in New York City featuring ads praising and attacking cigarette smoking opposite each other in the same room, 2000. © SCOTT HOUSTON/CORBIS SYGMA



merchandising a serious sales effort that typically includes aggressive advertising and promotion.

Slowly at first, but then with increasing speed, the sales of filtered brands increased to roughly 50 percent of the American market by 1960. Sensing an opportunity, PM began developing a filtered cigarette, creating a new blend, and securing the American rights to a new kind of packaging, the flip-top box. Then, to complete the picture, the company designed a new advertising campaign for the introduction of the new Marlboro in 1955, and the old-style cigarette was discontinued.

To counteract the then-current view that filtered cigarettes were somewhat effeminate, PM’s advertising campaign was designed to create a macho image for the new cigarette. Although several masculine images, such as that of the outdoorsman and the navy officer, were used initially, it was the cowboy who proved the most effective marketing image, and therefore he quickly became the centerpiece of Marlboro’s marketing and **merchandising** campaign. Beginning with probably the most complete product image change ever, Marlboro’s campaign became arguably the most successful of all time. So consistently was the message delivered, and for so many years, that, by the 1990s, a picture of the western desert landscape was all that was necessary to evoke images of Marlboro Country.

By the early 1960s, PM had begun marketing Marlboro outside the United States. The company sometimes did this in partnership with local investors rather than exporting cigarettes from the United States. Blends were adjusted to suit local tastes, and international sales began growing. Within a few years, Marlboro became the largest-selling cigarette in the world, although, from 1972 until 1975, it was the second-largest seller in its home market, just behind Winston cigarettes.

PM’s consistent marketing campaign for Marlboro paid off in the early 1970s after Congress banned cigarette advertising on all

broadcast media. Marlboro Country made the transition from broadcast to print far better than the Winston jingles. In short order, producing roughly 150 billion cigarettes annually, Marlboro surpassed Winston in domestic sales, capturing 26 percent of the American market in 1975. PM began challenging British American Tobacco as the largest cigarette manufacturer in the world.

Even as American sales began slowly to decline, PM continued to grow, largely because of Marlboro's international sales. At home, as retail prices increased, lower-priced generic cigarettes began eroding the sales of PM's flagship brand, leading to PM's unprecedented decision to lower wholesale prices on its premium brands by \$4.50 per carton on April 2, 1993. Nonetheless, PM remains the world's largest cigarette manufacturer, largely due to Marlboro's international sales. The Marlboro cowboy and the inverted red "v" package are recognized worldwide as symbols of this American brand.◆

See Also Camel; Cigarettes; Gitanes/Gauloises; Lucky Strike; Philip Morris; Virginia Slims.

■ JOSEPH PARKER

◆ See "Developing Countries" for a photograph depicting today's global reach of Marlboro cigarettes.

BIBLIOGRAPHY

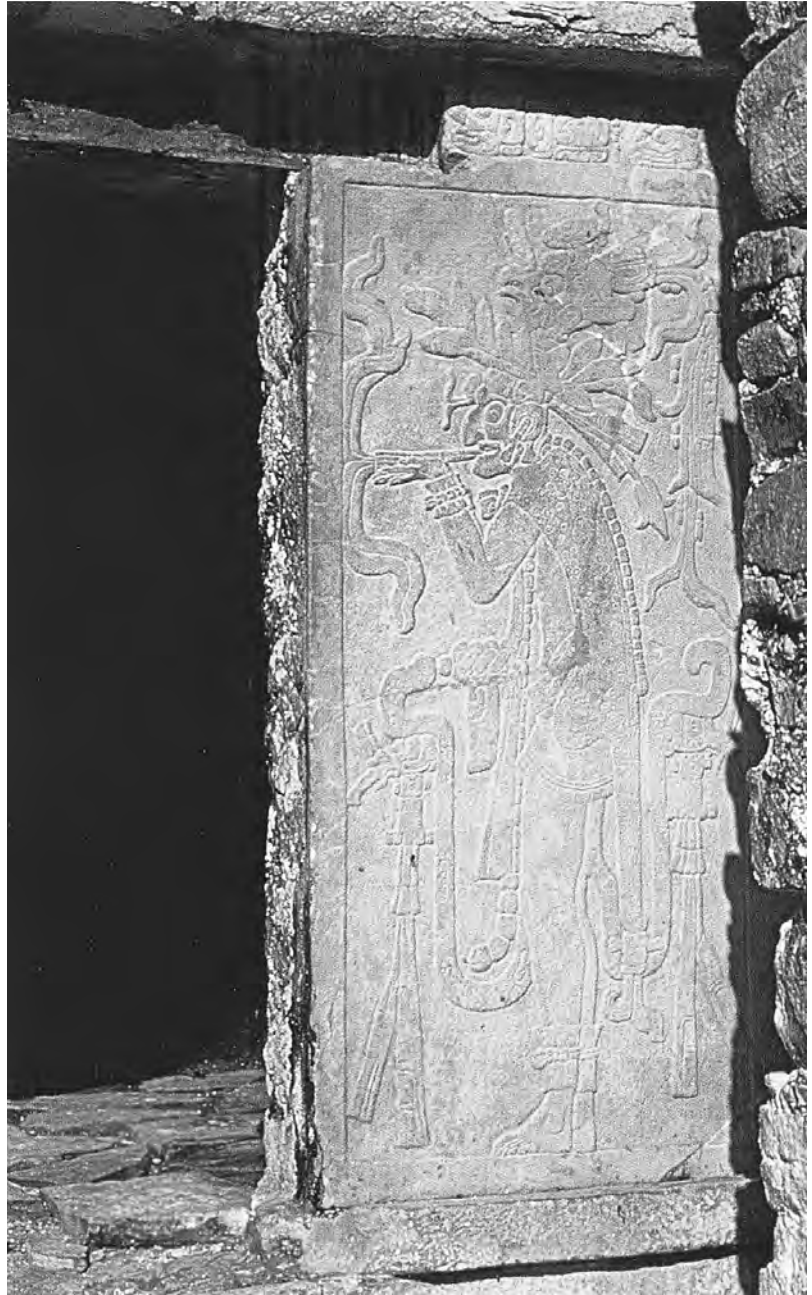
- Cullman III, Joseph F. *I'm a Lucky Guy*. New York: Philip Morris, 1998.
- Jones, Raymond M. *Strategic Management in a Hostile Environment: Lessons From the Tobacco Industry*. Westport, Conn.: Quorum Books, 1997.
- Kluger, Richard. *Ashes to Ashes: America's Hundred-Year Cigarette War, the Public Health, and the Unabashed Triumph of Philip Morris*. New York: Alfred A. Knopf, 1996.



Mayas

The area occupied by the Mayas before the Spanish Conquest of the sixteenth century included most of present Guatemala, all of Belize, a portion of El Salvador, and Honduras, the Mexican states of Yucatán, Campeche, and Chiapas as well as the territory of Quintana Roo. Mayan peoples, who in ancient times developed one of the most advanced aboriginal civilizations in the New World, are still alive; almost two million Indians of the Maya linguistic stock inhabit Central America.

Mayan arts and science reached their astonishing heights during the span of the Classic epoch, which began during the third century C.E. and ended at the turn of the ninth century. This period was followed by a cultural decline that was sudden in some areas and gradual in others. The arriving Spaniards found the Mayas to be ardent tobacco smokers, using the herb and engaging in a habit previously unknown to the Western world. According to ethnological and archaeological evidence, this custom not only was a social pastime, as it is today, but it also had significant religious and mythological implications; it deeply penetrated Mayan folklore and heavily influenced art.



The old God L smoking a large cigar. Door jamb, Temple of the Cross, Palenque, Chiapas, Mexico. FRANCIS ROBICSEK, MD PHD

The Habit of Tobacco Smoking

Among the Maya, the habit of tobacco smoking probably developed from the custom of incense burning during religious and secular ceremonial rites. In feeding the fire, the shamans used dry twigs, resins, and leaves of aromatic plants including tobacco, which in its wild state often attained a remarkable luxuriance of growth. While thus engaged, the acolytes would blow on the embers and inhale the smoke, experiencing the pleasing effects of the herb. It may have been from this primitive form of “smoke sniffing” that the three principal ways of smoking tobacco—in pipes, cigars, and cigarettes—evolved.

According to ethnological and historical data, tobacco smoking played an important role in the ancient religion, folklore, and healing of the Mayas. In describing their ceremonies, several contemporary observers attributed narcotic and hallucinogenic effects to tobacco.

Why did *Nicotiana tabacum*, an herb consumed without such effects by millions, produce those effects in some regions? The question could be answered in one of the following ways: (1) the Mayas smoked a different, more potent tobacco; (2) they smoked *tabacum* in very large quantities; (3) the Maya shamans used nonpharmacological means, such as reverberation, chants, dancing, and different forms of music, to induce trancelike states; or (4) on some occasions they consumed herbs with hallucinogenic properties simultaneously with or instead of tobacco.

Role of Tobacco

The importance of tobacco in Mayan culture is evidenced by its appearance in surviving sacred texts. For instance, it figures in the *Popol Vuh*, a book of the Quiché (a Mayan group native to the midwestern highlands of Guatemala), which recounts the origins of humankind, the actions of gods, and Quiché history through 1550. In one episode, two heroes undergo an ordeal in which they must spend the night in a cave in total darkness and keep their cigars lit. Instead, the men put out their cigars, but they mount fireflies on the cigar ends so as to fool the beings of the underworld (who are testing them) into thinking the cigars remained lit. The following morning the heroes relight their cigars and come out of the cave victorious.

Scenes pictured in the codices (manuscript books), carved on stone monuments, and portrayed on ceramics appear to depict smoking. Scenes in the *Madrid Codex* (an illustrated glyphic book probably dating from the late pre-Conquest period) almost certainly portray figures smoking objects resembling cigars or cigarettes. Similar representations decorate the tablets of city ruins in Palenque (north of Chiapas), ceramic vases, plates, and shell carvings. Scenes that probably portray smoking, but without representing the smoke, are also seen on vases and ceramic sculptures. Objects that could be large cigars, either held in the hands of figures or interspersed in the composition, are portrayed on many of the artifacts. The Flare Gods—supernatural figures with smoking cigars stuck through their foreheads—are depicted on many vases, plates, and other artifacts.

The objects the Mayas appear to have smoked, as represented surviving artifacts, can be divided by size into cigars and cigarettes. Large, flarelike objects held in the hands may be very large cigars. There are also distinct categories in the style in which the smoke is portrayed. In some cases (where the color is determinable) the cigarettes are painted white, giving the impression that the Mayas either wrapped their tobacco in some other substance, like cornhusks, in much the same manner that cigarettes are wrapped nowadays, or applied some coating, such as lime, to the tobacco.

Performed by persons of apparently high rank, smoking in the time of the ancient Mayas was probably an activity of considerable importance rather than just a pleasurable act. Examples of Mayan art



Ceramic vase probably from the Usumacinta region in Guatemala. It shows a seated lord smoking a cigarette. FRANCIS ROBICSEK, MD PHD

and other archaeological artifacts prove that tobacco and the act of smoking had deep religious meaning in the life of the ancient Mayas. Possibly the use of tobacco was at first only esoteric, confined to shamans, priests, and medicine men. Only later, through migrations, the interchange of tribal customs, the abundance of tobacco in some areas, the ease by which the practice of smoking was acquired, and European influence, did the plant pass from its sacerdotal exclusiveness to general use.

The possibility that smoking for pleasure was also a widespread custom among the ancient Maya population can be neither proved nor disproved. The lives of ordinary people were simply not considered important enough to record and preserve for posterity.

See also Shamanism.

■ FRANCIS ROBICSEK

BIBLIOGRAPHY

- Furst, Peter T., editor. *Flesh of the Gods. The Ritual Use of Hallucinogens*. New York: Praeger Publishers, 1972.
- Robicsek, Francis. *The Smoking Gods. Tobacco in Maya Art, History, and Religion*. Norman: University of Oklahoma Press, 1978.
- Robicsek, Francis, and Donald M. Hales. *The Maya Book of the Dead: The Ceramic Codex. The Corpus of Codex Style Ceramics of the Late Classic Period*. Norman: University of Oklahoma Press, 1981.
- Thompson, John E. *Maya History and Religion*. Norman: University of Oklahoma Press, 1970.



Medical Evidence (Cause and Effect)

In the twentieth century, scientific debate over the link between tobacco use and disease has been influential in shaping modern thinking about medical evidence. The centrality of tobacco use in bringing about this transformation is intimately associated with the major shift in patterns of disease and death during this time. At the beginning of the twentieth century, the major cause of disease and death was infectious disease (disease caused by exposure to a particular infecting agent or germ, such as tuberculosis or cholera); at the beginning of the twenty-first century, the major cause of disease and death was chronic disease (disease associated with prolonged exposure to multiple factors and often the result of lifestyle choices on the part of individuals, such as cancer). Historically, these different classes of disease, infectious and chronic, have been investigated using different forms of scientific evidence.

At the end of the nineteenth century, the requirements of what constituted legitimate medical evidence for a cause-and-effect relationship were clearly articulated in a series of famous postulates developed by the German bacteriologist Robert Koch. According to Koch, a particular organism or germ could be regarded as the cause of a particular disease provided that: (1) the organism could be discovered in every instance of the disease; (2) the organism could be isolated from the infected body and be reproduced in a pure culture in a laboratory setting; and (3) the reproduced organism could produce the disease anew when administered to laboratory animals. Central to Koch's view of medical evidence was a specific cause-and-effect relationship—that is, a specific cause always (and unambiguously) produced a specific effect.

About a quarter of a century after Koch had stated his views on causation, an alternative view of causation was developed by Karl Pearson, a professor at University College London and a pioneer in mathematical statistics. For Pearson, scientific reasoning in all fields consisted of nothing but the association of antecedents and consequents, which meant that correlation (the degree of association between two series of events) was seen as a much more fundamental organizing construct for scientific inquiry than specific causation. Implicit in Pearson's view of science was a critique of the notion that one could locate the one cause of any

outcome; rather, one could only determine the likelihood of events based on the degree of association that been observed in the past. The implications of Pearson's ideas for medical evidence would be realized by the pioneering biostatistician Sir Austin Bradford Hill, an individual who learned statistical methods from Pearson while a student at University College.

Causation and Mid-Twentieth-Century Epidemiology

At the end of World War II, Austin Bradford Hill became the head of the Statistical Research Unit of the Medical Research Council in Great Britain. In 1951, Hill and his associate Sir Richard Doll launched a prospective **epidemiological** study to try to determine whether there was a relationship between cigarette smoking and lung cancer. Earlier epidemiological studies (that is, studies of the incidence level of disease within populations) indicated that cigarette smokers were at a higher risk of contracting lung cancer than nonsmokers; however, these studies were retrospective in nature—that is, individuals were interviewed about their smoking habits after they had already developed cancer. By contrast, Hill and Doll's study was prospective in nature because it studied a population before members of that population showed signs of cancer. In the study, Hill and Doll sent questionnaires to all British physicians inquiring about their smoking habits. When individuals who responded to their survey died, Hill and Doll obtained data about their cause of death and tried to determine statistically whether there was an association between individuals who smoked and those who died of lung cancer. At about the same time, E. Cuyler Hammond was conducting a similar prospective study in the United States with the support of the American Cancer Society. By 1954, both studies yielded results consistent with the retrospective studies: Cigarette smoking increased one's risk of contracting cancer.

The potential problem with such studies—from the standpoint of Koch's postulates—was that epidemiological surveys only demonstrated the characteristics of individuals that were either at high or low risk of contracting a disease; they offered only probabilities rather than the one-to-one correspondence between infecting germ and disease appearance that Koch's postulates prescribed. These potential weaknesses of proving cause and effect through studying populations were clearly articulated by various researchers in the 1950s. For example, Wilhelm Hueper, a pioneer in the study of occupational diseases and head of the Environmental Cancer section at the National Cancer Institute from 1948 to 1964, criticized population-based studies because of the tendency for over-rapid generalization of results (that is, conclusions based on particular populations were said to be applicable to the population of an entire nation) and the lack of concrete evidence from animal experimentation to back up these epidemiological findings.

In 1955, Joseph Berkson similarly raised the issue of sampling bias—that is, spurious associations may be found if the evidence did not accurately reflect the characteristics of the population in question. At the end of the decade, Jacob Yerushalmy and Carroll E. Palmer pointed out the difficulty of adequately controlling for all relevant factors when drawing comparisons in human populations. As they observed, "The possibility always exists, therefore, that such associations . . . may . . . Be due to factors other than those under study" (Yerushalmy and Palmer 1959).



epidemiological pertaining to epidemiology, that is, to seeking the causes of disease.



In response to these perceived inadequacies, researchers on both sides of the Atlantic articulated causality criteria for epidemiological studies that could serve as the chronic disease analogue to Koch's famous postulates for establishing causality in infectious disease. As a "first approach" for determining the factors that caused chronic disease, Yerushalmy and Palmer suggested: (1) "The suspected characteristic must be found more frequently in persons with the disease in question than in persons without the disease"; (2) "Persons possessing the characteristic must develop the disease more frequently than do persons not possessing the characteristic"; and (3) "An observed association between a characteristic and a disease must be tested for validity by investigating the relationship between the characteristic and other diseases and, if possible, the relationship of similar or related characteristics to the disease in question" (Yerushalmy and Palmer). More detailed criteria were invoked in the 1964 report of the United States Surgeon General, *Smoking and Health: Report of the Advisory Committee to the Surgeon General of the Public Health Service*, which posited a link between cigarette smoking and lung cancer.

In 1965, Hill outlined a list of criteria by which one could determine whether an association between two phenomena could be construed as implying an underlying causal relationship. These criteria were:

- Strength of association
- The consistency with which the association is observed across different studies

An item from New York's "Up in Smoke" exhibit features an antismoking ad stressing the damage tobacco causes in the heart and lungs. © SCOTT HOUSTON/CORBIS SYGMA

- The specificity of the association (Is the exposure associated with a single disease or with lots of diseases?)
- Temporality (Do the events always occur in the same order?)
- Biological gradient (Is there a clearly delineated dose-response relationship?)
- Plausibility of the causal relationship based on the most up-to-date biological knowledge
- Coherence of the purported causal relationship with other known facts and biology of the disease
- Experimental evidence, when available
- Analogy between the purported causal relationship and similar biological events that have already been shown to be causally related.

To illustrate how these criteria were used in biomedical research practice, Hill discussed the epidemiological findings on the relationship between cigarette smoking and lung cancer in a 1965 lecture, “The Environment and Disease: Association or Causation?” He noted that the twenty-nine retrospective and seven prospective studies used in the U.S. Surgeon General’s Report had shown consistent results of the smoking/cancer connection and that the death rate from lung cancer and the number of cigarettes smoking daily was positively related. He quoted from the Surgeon General’s report, which had found that “in the discussion of lung cancer . . . its association with cigarette smoking [is] coherent with the temporal rise . . . in the two variables over the last generation.” In short, the mid-twentieth-century research on the relationship between smoking and lung cancer proved to be seminal in leading to the development of what came to be called the “Bradford Hill criteria”—one of the most influential and widely used in the 2000s.

The Debate about Secondhand Smoke in the 1990s

Throughout much of the twentieth century, the debate about the health risks from tobacco had been posed in individualistic terms. In other words, what were the health risks posed to particular individuals who elected to consume tobacco products? By the 1990s, however, the issue of health risks came to be framed more in terms of the health risks to society as a whole raised by the presence of secondhand smoke—smoke released into the environment when cigarette smokers exhaled. Central to the ensuing discussion was a 1992 report from the Environmental Protection Agency (EPA), which concluded that secondhand smoke caused lung cancer in adult nonsmokers and that it also impaired the respiratory health of children. In reaching its conclusion, the EPA invoked criteria similar to those articulated by Hill, such as biological plausibility, supporting evidence from animal experiments, consistency of response, and the strong association for the highest exposure groups. The EPA declared that “the widespread exposure to environmental tobacco smoke (ETS) in the United States presents a serious and substantial public health impact” (EPA 1992).

Although the Environmental Protection Agency made no specific public policy recommendations, the implications of its findings were

abundantly clear, namely, the exposure of the public to secondhand smoke should be significantly reduced, primarily through regulation of how and where people could smoke. Such potential restrictions on one's "right" to smoke soon became the focal point of lobbying efforts by the tobacco industry, primarily by claiming that the EPA's conclusions were based on unsound science. In a media campaign, the tobacco industry asserted that the EPA had manipulated its data to reach a predetermined conclusion rather than relying on objective scientific evidence. This charge (that the EPA's study lacked scientific foundation) was developed in the 1999 book *Passive Smoke: The EPA's Betrayal of Science and Policy* by Gio B. Gori and John C. Luik, two researchers with various ties to the tobacco industry. Emphasizing "testability" as the key criterion needed to make a conclusion scientific, Gori and Luik pointed out how the presence of multiple causal factors in epidemiology made the prospect of an unambiguous test virtually impossible. Furthermore, they noted that one of the study's key techniques—the use of "meta-analysis," which combined disparate epidemiological reports into a single risk assessment—meant that the groups under study were not truly comparable; they argued that this could further compound the bias of the results. The virulence of the tobacco industry's lobbying caused the EPA to issue a brief second report to "set the record straight about an indisputable fact: Secondhand smoke is a real and preventable health risk" (EPA 1994).

As the exchange between the tobacco industry and the EPA illustrates, the health risks posed by tobacco pit two societal norms against one another; namely, the individual's right to self-determination (a main argument of the tobacco industry and smokers) against the role of the state in protecting the health of its citizens (the view espoused by various government reports in the second half of the twentieth century). These debates turn centrally on the credibility of medical evidence. When the primary cause of disease was a single infecting agent, the policy implications of the scientific findings were relatively clear (that is, remove the presence of the infecting agent). However, in an era where the nature of disease requires that medical evidence confront multiple causal factors, the policy implications of scientific findings can become much more contentious.

See Also Doctors; Lung Cancer; Secondhand Smoke.

■ J. ROSSER MATTHEWS

BIBLIOGRAPHY

- Brandt, Allan M. "The Cigarette, Risk, and American Culture." *Daedalus: Journal of the American Academy of Arts and Sciences* 119 (Fall 1990): 155–176.
- Goodin, Robert E. *No Smoking: The Ethical Issues*. Chicago: University of Chicago Press, 1989.
- Gori, Gio B., and John C. Luik. *Passive Smoke: The EPA's Betrayal of Science and Policy*. Vancouver, British Columbia: The Fraser Institute, 1999.
- Hill, Sir Austin Bradford. "The Environment and Disease: Association or Causation?" *Proceedings of the Royal Society of Medicine* 58 (1965): 295–300.
- Lilienfeld, Abraham. "On the Methodology of Investigations of Etiologic Factors in Chronic Disease—Some Comments." *Journal of Chronic Diseases* 10 (July 1959): 41–46.



- Magnello, Eileen. "The Introduction of Mathematical Statistics into Medical Research: The Roles of Karl Pearson, Major Greenwood, and Austin Bradford Hill." In *The Road to Medical Statistics*. Edited by Eileen Magnello and Anne Hardy. Amsterdam and New York: Rodopi, 2002.
- Parascandola, Mark. "Cigarettes and the U. S. Public Health Service in the 1950s." *American Journal of Public Health* 91 (February 2001): 196–205.
- Proctor, R. N. *Cancer Wars: How Politics Shapes What We Know and Don't Know About Cancer*. New York: Basic Books, 1995.
- Sellars, Christopher. "Discovering Environmental Cancer: Wilhelm Heuper, Post-World War II Epidemiology, and the Vanishing Clinician's Eye" *American Journal of Public Health* 87 (November 1997): 1,824–1,835.
- U.S. Department of Health, Education, and Welfare. *Surgeon General's Report, Smoking and Health: Report of the Advisory Committee to the Surgeon General of the Public Health Service*. Public Health Service Publication No. 1103. Washington, D. C.: Government Printing Office, 1964.
- U.S. Environmental Protection Agency. *Respiratory Health Effects of Passive Smoking: Lung Cancer and Other Disorders*. EPA document number EPA/ 600/6-90/006F. Washington, D.C.: Office of Health and Environmental Assessment, Office of Research and Development, 1992.
- . *Setting the Record Straight: Secondhand Smoke Is a Preventable Health Risk*. EPA document number EPA 402-F-94-005. Washington, D.C.: Environmental Protection Agency, 1994.
- Yerushalmy, Jacob, and Carroll E. Palmer. "On the Methodology of Investigations of Etiologic Factors in Chronic Diseases." *Journal of Chronic Diseases* 10 (July 1959): 27–40.



menthol a form of alcohol that imparts a minty flavor to some cigarettes.



Menthol Cigarettes

The first **menthol** cigarettes were developed by accident. In the 1920s a young man named Lloyd "Spud" Hughes had been treating his cold symptoms with menthol and happened to store the menthol crystals in the same tin with his smoking tobacco. This resulted in a cigarette that seemed less irritating. He went on to produce the first menthol cigarette brand in 1926, named Spuds. Competing brands were introduced in the 1930s, most notably the brand Kool, which was easily identifiable by its famous penguin marketing character. These early so-called menthol-cooled cigarettes were positioned as specialty products, offering medicinal throat comfort for smokers with colds or as an occasional-use alternative ("In between the others, rest your throat with Kools"). However, menthol brands remained an insignificant player in the overall cigarette market until the introduction of filtered cigarettes in the 1950s.

In 1955, Salem—a filtered, less heavily mentholated brand—was developed and marketed as a refreshing everyday cigarette and showed particular success among women smokers. This marked a major shift in the positioning of menthol brands as more than simply medicinal alternatives. At around the same time, growing public concern over health risks led to market-wide reductions in cigarette **tar** and nicotine deliveries, and menthol brands were repositioned to the new segment of low tar smokers, achieving dramatic sales growth. Although easier to



tar a residue of tobacco smoke, composed of many chemical substances that are collectively known by this term.

smoke, these menthol brands were no lower in tar delivery than non-menthol cigarettes.

In the 1960s menthol brand marketing in the United States began to target the African American consumer market, possibly responding to cultural beliefs regarding the health-enhancing effects of menthol, and in the following decades menthol cigarettes became increasingly identified with the urban African American community. As of 2001, menthol cigarettes made up approximately 26 percent of the total U.S. cigarette market but had been adopted by 70 percent of African American smokers (“First Conference”). The popularity of menthol cigarettes internationally varies, but in some countries, such as the Philippines, Hong Kong, and Cameroon, menthol cigarettes are used by a majority of smokers.

The primary component of a menthol cigarette is tobacco. Menthol is added to commercial menthol cigarettes at less than 1 percent by tobacco weight. Nonetheless, menthol cigarettes are perceived differently from regular cigarettes, are advertised differently, are smoked differently, and demonstrate unique **physiological** and respiratory effects. Menthol stimulates cold receptors, resulting in a sensation of coolness not only in the mouth and throat but also the lungs. It increases the sensation of free breathing when airways are constricted (as demonstrated by menthol lozenges) and significantly increases involuntary breath holding, which may lead to greater uptake of smoke in the lung.

Menthol may also affect drug absorption and metabolism of nicotine and other constituents in tobacco smoke. Studies of smoker perception have found that menthol cigarettes are perceived as less harsh, easier to inhale, and easier to inhale more deeply. These changes in perception may correspond to important differences in measured smoke inhalation patterns (such as puff volume and duration) for smokers of menthol cigarettes, although research to date is inconclusive. Menthol is the only aspect of cigarette design that is explicitly marketed today based on the physiological effects of being cooler and less irritating.

Whether menthol cigarettes differ from regular cigarettes in terms of health, addiction, or related effects is a critical research question that has only recently been raised. In the United States this question is of particular importance with regard to explaining known health disparities among Caucasian and African American smokers. Although African Americans tend to smoke fewer cigarettes per day, the burden of lung cancer and other smoking-related diseases is much higher among African Americans. Whether differences in menthol cigarette use between these groups contribute to this disparity has yet to be answered.

See Also Cigarettes; Ethnicity; “Light” and Filtered Cigarettes; Toxins.

■ GEOFFREY FERRIS WAYNE

BIBLIOGRAPHY

The First Conference on Menthol Cigarettes: Setting the Research Agenda. Nicotine & Tobacco Research. (February 2004). Available: <<http://cancercontrol.cancer.gov/tcrb/>>.




physiology the study of the functions and processes of the body.

Market Science Associates. "The Growth of Menthols: 1933–1977." (1978). Available: <http://tobaccodocuments.org/product_design/249111.html>.

Mercantilism See British Empire; Dutch Empire; French Empire; Retailing; Spanish Empire; Trade.



Tobacco possesses a long and enduring significance in Mexico's culture, society, and economy. Its popularity in Mesoamerican precolombian cultures quickly spread among Spanish settlers in the sixteenth and seventeenth centuries. The Spanish monarchy targeted tobacco as a major source of public revenue and reorganized the tobacco industry in Mexico as a royal monopoly. Post-independence governments in Mexico also attempted to retain monopoly control of the industry. Improvements in the quality of tobacco leaf in the late nineteenth century, mechanization, and investment of foreign capital resulted in a **diversification** of production which targeted export markets as well as domestic markets.



diversification in agriculture, to avoid overdependence upon one crop by producing several different crops.

Pre-Columbian Mexico

In pre-Columbian Mexico, the Aztec, Maya, and other indigenous groups cultivated tobacco and consumed it in various ways and for a variety of purposes. Indigenous peoples smoked tobacco as primitive cigars and cigarettes (crushed tobacco leaves rolled in a wrapper of corn husk or bark cloth, or stuffed into hollow reeds or canes) and in tubular pipes (pottery and stone). Tobacco was inhaled in the form of powdered tobacco and also ingested through chewing, licking, and drinking tobacco juice. The use of pipes appears to have been the prerogative of lords, nobles, and priests, and indicative of social status. Tobacco was used as offerings to the gods, for medicinal purposes, and as protection against witchcraft and wild animals. Tobacco has retained its cultural importance among indigenous groups in contemporary Mexico and serves a fundamental role in both private and community rituals and ceremonies.

Colonial Mexico (1521–1821)

Spanish conquistadors rapidly adopted the use of tobacco as did other colonists in the New World. The Spanish, Portuguese, Dutch, and English soon exported tobacco to Europe. Scholars do not fully understand the structure of tobacco production and trade in the first two-and-a-half centuries of Spanish rule in Mexico (1521–1765). What historians do know is that cultivation of the leaf was widely dispersed throughout colonial Mexico. Prosperous Spanish planters as well as poorer farmers and Indian peasants cultivated tobacco. The manufacture and sale of cigars and cigarettes was carried out by small shopkeepers, and artisans and their families.



The major development of the tobacco trade in colonial Mexico occurred in 1765 when Spain implemented a state monopoly as part of a broader series of reforms designed to produce increased revenues from its American colonies. Between 1717 and 1783 state monopolies of the tobacco trade were implemented in all of Spain's American colonies although the degree of control varied. Only in the case of Mexico and the Philippines did the colonial Spanish government take over all aspects of the domestic tobacco trade, from cultivation of leaf, manufacture of cigars and cigarettes, and distribution through government-licensed stores. Private trading, manufacture, and cultivation of leaf tobacco became punishable offenses. A military corps employed by the monopoly administration enforced compliance with monopoly regulations but **contraband trade** was never eliminated. By the 1790s the tobacco monopoly was one of the largest organized industries in colonial Mexico and employed more than 20,000 individuals. In fiscal terms, tobacco revenues ranked second after the silver tax as the most valuable source of government revenue from Mexico.

The reorganization of the tobacco trade by the state monopoly resulted in the restriction of tobacco cultivation to small areas in Veracruz and Yucatán. Supply of tobacco leaf was regulated through a series of contracts that stipulated amounts of tobacco to be produced, grades, purchase prices, and credit advances. With the exception of the designated production zones, the cultivation of tobacco as a commercial crop was prohibited to peasants and large landowners alike throughout Mexico. During the colonial period Mexican tobacco could not compete

Workers take a break from building a house in the tarahumara community of Basigochic in the Copper Canyon region of Mexico, c. 1998. © NATALIE FOBES/CORBIS



contraband trade trafficking in a banned or outlawed commodity. Smuggling.

with finer tobaccos from Venezuela, Cuba, and Virginia and was not exported. Tobacco cultivation as a cash crop for export would continue until the nineteenth century.

Tobacco supplied to the government monopoly was processed into cigars and cigarettes in six state-run tobacco manufactories, the largest located in Mexico City. The monopoly made it illegal to produce cigars and cigarettes outside of the authorized state manufactories. The Mexico City tobacco manufactory at its peak employed almost 9,000 workers—both men and women—an extraordinary size for a single manufactory anywhere in the world in the eighteenth century. By the 1780s, 90 percent of monopoly revenues derived from sales of cigars and cigarettes to the domestic market. Monopoly cigars and cigarettes were sold in government-licensed stores operated throughout Mexico.

Although profits from the tobacco monopoly were significant, monopoly policies focused on short-term profits and deflection of political conflict with tobacco workers and planters (particularly over prices of leaf). Over the long term, innovations that may have resulted in productivity gains and improved performance of the monopoly were sacrificed.

The Development of the Mexican Tobacco Industry, 1821–2002

After Mexico's independence from Spain in 1821, the tobacco monopoly was repeatedly abolished and reestablished, and redefined in the process. Production of leaf remained a state monopoly nationwide but each state chose whether or not to monopolize the manufacture of cigars and cigarettes. Unable to administer the monopoly directly due to lack of financial and administrative resources, the Mexican state sought help from private investors. In the 1830s new entrepreneurs assumed control of the monopoly as the state withdrew from direct management. The *Empresa del Tabaco* became the largest of a number of joint-stock companies to exploit exclusive rights to control the cultivation, manufacture, and marketing of tobacco products in Mexico. Despite the *Empresa's* attempts to modernize the tobacco industry in the 1840s their efforts were hampered by lack of capital and a national market, poor infrastructure, antiquated cultivation and processing techniques, and political and economic instability.

Major transformations in the development of the tobacco industry occurred during the regimes of Porfirio Díaz (1876–1880 and 1884–1911) facilitated by nascent industrialization, electrification, and infusions of foreign capital. Large tobacco factories were established, especially in Mexico City and Veracruz, which produced for both domestic and export markets such as England, Germany, and Russia. Key to the development of the cigarette industry was its mechanization and aggressive marketing, epitomized by such factories such as *El Buen Tono*. Owned by the French entrepreneur Ernesto Pugibet, *El Buen Tono* began operations in Mexico City in 1894.

With mechanization came the concentration of the industry and worker layoffs. Within a ten-year period, the workforce employed in cigarette factories was almost halved from an estimated 20,392 workers in 1900 to 9,604 in 1910. Increasingly, labor protests and strikes in

the tobacco industry were fueled not by arbitrary fines and dismissals or excessive demands on cigarette output, but by mechanization as cigarette companies installed Decouflé, Bonsack, Comas, and Wistone machines. Such machines revolutionized cigarette production since they could roll off much greater quantities of cigarettes per minute than was possible with manual labor. As a result cigarette production became faster and cheaper.

A consequence of Mexico's industrialization was the establishment of and **acquisition** by foreign-owned enterprises of cigarette factories and tobacco companies. International companies such as British American Tobacco (BAT) created cigarette factories in Mexico City, Irapuato, and Monterrey in 1923 and in 1925 founded the El Águila Manufacturing Company. By the beginning of the twenty-first century, although three major companies dominate the industry—Cigarrera La Moderna (Cigamod), Cigarrera La Tabacalera Mexicana (Cigatam), and La Libertad—99 percent of the national market is controlled by Cigamod and Cigatam, effectively a duopoly, owned by the transnational companies BAT and Philip Morris.

Cigar manufacturing registered much slower growth as consumer preference shifted heavily in favor of cigarettes. The majority of cigars were produced for export markets, their quality increasingly recognized by cigar aficionados. In the 1980s, cigars produced by Tabamex for both domestic and export markets received awards from London, Germany, Switzerland, Spain, and Paris.

The tobacco industry's development in the early twentieth century is demonstrated not only by increased cigarette and cigar production but also by the large volumes of tobacco leaf produced. Oaxaca and Veracruz dominated leaf production for the export market and Nayarit for the domestic market. Increasing demand for cigarettes made with blonde tobaccos stimulated experiments to produce them in Mexico as part of a broader strategy to reduce imports of cigarettes made with such tobaccos. Traditional Mexican varieties have gradually been substituted by those such as Bonanza, Orinoco, and Burley.

Nayarit's climate and soil qualities, suitable for the cultivation of blonde tobaccos, resulted in major expansion of tobacco cultivation and a shift from cotton to tobacco in its coastal regions as the most important cash crop in the state. Approximately 5,000 small farms in Nayarit produce 90 percent of the total Mexican tobacco crop. The remaining 10 percent is produced by the states of Chiapas, Jalisco, Oaxaca, and Veracruz. Mexico is currently the seventeenth largest supplier of tobacco in the world and the ninth largest supplier of Burley tobacco with markets in Japan, the United States, Portugal, Denmark, Germany, Switzerland, and Sweden.

In 1936 the El Águila Manufacturing Company formed a new entity, Tabaco en Rama S.A. (Tersa), located in Nayarit, to aid initiatives for the continued improvement and production of high-quality tobacco leaf. Increasingly disillusioned with Tersa's indifference to their demands, in 1972 tobacco producers in Nayarit, Veracruz, and Chiapas sought the intervention of the president of Mexico. Subsequent discussions resulted in the creation of Tabacos Mexicanos, S.A. (Tabamex) to replace Tersa. Tabamex effectively became a national intermediary between Mexican producers, the Mexican government, and transnational



acquisition the purchase—sometimes called a merger—of a smaller company by a larger one. During the late twentieth century, major tobacco companies diversified their holdings through acquisition of non-tobacco products.

corporations. In 1989, however, it too was replaced with a *comité Regulador* (a regulatory committee) and an Instituto de Tabaco (Institute of Tobacco). The Asociación Rural de Interés Colectivo (ARIC) was also formed with the purpose of representing tobacco producers' interests to multinational buyers.

Despite these changes, transnational tobacco companies continue to impose their own prices and conditions and handle financing of tobacco production directly through a "forward contracts" system. Within this system, farmers sign a one-year contract with a leaf dealer in return for financial support, primarily because the majority of them cannot afford to cover all production costs themselves. Conflict over prices, credit, and inputs remains an integral part of the politics of tobacco production. ARIC has become yet another focus of discontent for tobacco farmers in Nayarit with price levels and corrupt leadership emerging as central issues.

In the twenty-first century, attention has focused on the use of child labor in tobacco cultivation, especially children from indigenous communities who migrate with their parents to work on the tobacco harvest for farmers in Nayarit. In 2001, Cigamod (BAT) implemented Project Blossom designed to eventually eliminate the use of child labor.

Mexico is the fifteenth largest cigarette market in the world and cigarette sales are booming. In the face of increasing restrictions and shifting consumer attitudes toward smoking in the United States and Great Britain, Mexico is attractive to companies such as Philip Morris and BAT not only because of the size of its market but for its cheap labor, cheap supplies of tobacco, and trading privileges with the United States and the European Union. Even so, a growing antitobacco lobby and recognition of health problems caused by tobacco consumption within the medical community and the public in Mexico suggests that the transnational tobacco companies' aggressive expansion into Mexico may not go unchallenged in the future.

See Also Caribbean; Cuba; South and Central America; Spanish Empire.

■ SUSAN DEANS-SMITH

BIBLIOGRAPHY

- Atlas del tabaco en México* (Atlas of tobacco in Mexico). Mexico: Tabamex, 1989.
- Deans-Smith, Susan. *Bureaucrats, Planters and Workers. The Making of the Tobacco Monopoly in Bourbon Mexico*. Austin: University of Texas Press, 1992.
- González Sierra, José G. *Monopolio del humo: elementos para la historia del tabaco en México y algunos conflictos de tabaqueros veracruzanos, 1915–1930* (The smoke monopoly: Tobacco's history in Mexico and conflicts of tobacco producers in Veracruz). Jalapa, Mexico: Universidad Veracruzana, 1987.
- Huerta, E., and Rafael López Castro, eds. *Historia y cultura del tabaco en México* (History and culture of tobacco in Mexico). Mexico: Tabamex, 1988.
- Ladrón de Guevara, L. C. *Nomás venimos a malcomer. Jornaleros indios in el tabaco en Nayarit* ("We come to eat poorly no more": Indigenous tobacco workers in Nayarit). Tepic, Mexico: UAN, 1999.

Robicsek, Francis. *The Smoking Gods: Tobacco in Maya Art, History, and Religion*. Norman: University of Oklahoma Press, 1978.

Walker, David W. "Business as Usual: The Empresa del Tabaco in Mexico." *Hispanic American Historical Review* 64, no. 4 (1984): 675–705.



Middle East

Prior to its breakup after World War I, the Ottoman Empire (1288–1918) controlled, in various degrees, the territories that today constitute most of the Middle East. A discussion of the introduction of tobacco into this area, its reception, and its early production and commerce must therefore include discussion of the Ottoman Empire. Tobacco consumption in the Middle East began in the early seventeenth century, about one hundred years after it first arrived in Europe as a novel curiosity. Upon its introduction many in the Ottoman Empire opposed the new fashion and deemed smoking a despicable social habit. Consumption of tobacco was also argued against for economic reasons because, for example, in seventeenth-century western Anatolia, tobacco cultivation as a cash crop diverted land and resources from much-needed foodstuffs. Furthermore, since smoking required the use of fire, it constituted a constant threat to city dwellers because much of the city's private and public buildings were made of wood.

In 1631 Murad IV (1612–1640) tried to curtail tobacco consumption by outlawing its cultivation, but this campaign was not effective. Therefore, in 1633 he forbade tobacco consumption outright and inflicted severe punishment on smokers. He also banned coffee and ordered the closure of all coffeehouses, where tobacco and coffee were consumed together. This ban, however, did not produce the desired results but proved that coffee and tobacco consumption were already well rooted.

The public debate over the use of tobacco was conducted in religious terms; its use was finally allowed by a **fatwa** by the chief **mufti** of Istanbul, Mehmed Baha-i Efendi, who earlier, in 1634, had been dismissed and exiled for smoking. Despite this early fatwa, smoking remained a source of much legal controversy in the region. Although tobacco consumption spread rapidly soon after its introduction into the Ottoman Empire, several generations passed before it became a legitimate social practice, and it was only in the eighteenth century that smoking became moderately respectable.

The Socio-Cultural Significance of Early and Modern Smoking

Ottomans smoked tobacco in either a long-stemmed pipe, most commonly called the chibouk, or in a water pipe, called the narghile. Such smoking vehicles suggest that tobacco consumption required much time and attention by the smoker and was a socio-cultural celebration of leisure through consumption. The quality of the smoke and the



fatwa a ruling by an Islamic cleric upon a religious issue. Many Islamic clerics have declared cigarette smoking a sin and forbidden Muslims to sell cigarettes.

mufti a Muslim cleric who interprets Islamic law.



smoking device were also visible manifestations of the smoker's place in society. Paintings of the Ottoman elite illustrate that the size of the pipe corresponded to the status of its user. While regular smokers carried their pipes, the affluent kept a servant or a slave who carried their smoking device and prepared their smokes for them. Such distinctions strongly testify to the place of the pipe as a signifier of social hierarchy within Ottoman society.

Smoking also conveyed a variety of messages in accordance with the male-dominated public spheres in which the tobacco was consumed. Because the use of tobacco was so widespread, offering tobacco was a standard act of courtesy when entertaining guests, family, and friends and at official gatherings. Travelers also gave and received gifts of tobacco as a token of appreciation for the help they hired and for their hosts. For the poor, sharing a smoke was a common practice in the countryside as well as in the city. Collective smoking probably reasserted a sense of belonging and communality. The sharing of the pipe also symbolized a mutual commitment to support an individual in times of need. Consumption of tobacco and coffee at the bazaar served to create a bond between buyer and seller in order to smooth the way for business transactions. In sum, smoking on all such occasions suggests the multiple cultural meanings of smoking and the fact that this once imported consumption habit became an integral part of Ottoman material culture and daily life.

It is much harder to infer smoking practices and their meaning for women during this period. European travelers' accounts, the main source of information about early smoking in the Middle East, tend to be biased, for Ottoman women would not ordinarily smoke in public, mostly because they were regularly excluded from such spheres. The women whom travelers encountered in public spheres such as the marketplace were usually of the urban or rural poor. Travelers also encountered women who worked in socially stigmatized professions like prostitution and dancing. These travelers' accounts represent a certain bias toward reporting tobacco consumption among women who were less compelled to follow conventional social practices.

Some travelers, mostly women, did get access to the harems of the Ottoman upper classes. Their accounts indicate the smoking practices of the female Ottoman elite, which were quite similar to those of males of high social status. The evidence above, therefore, allows us a glimpse into the two extreme sides of women's tobacco consumption in the Middle East until the break-up of the Ottoman Empire in the aftermath of World War I. Lower-class women, because they lacked social standing, and upper-class women, because they were rich and powerful, smoked regularly. Other than that, we do not have sufficient information to clearly address the question of whether the majority of women in the city and the countryside consumed tobacco.

Cultivation, Processing, and Commerce

Local cultivation of the tobacco plant started soon after the reception of tobacco for consumption, and tobacco became a widespread cash crop even before the political and religious controversy over its consumption



This 1858 portrait by the Italian painter Amadeo Preziosi shows a wealthy lady being served coffee while she smokes a water pipe, or hookah. Because this painting was created during a period when men, especially Europeans, had little access to the harem where such upper-class women lived, it most likely represents an Orientalist European image of the time rather than an actual Ottoman upper-class woman of the period. © HISTORICAL PICTURE ARCHIVE/CORBIS

had settled down. The same was true regarding the taxation of tobacco. Against the objections of some state officials, tobacco nevertheless became an important financial resource for Ottoman coffers. This was especially so because the state rendered tobacco an immoral commodity and a luxury item, which meant that it could be taxed with little popular resistance.

To benefit from taxation further the state increased its level of control over tobacco production and sale. During the seventeenth century, when commerce in tobacco first started in Egypt, a guild of tobacco sellers in Egypt was registered on the lists of the *subashi* (police prefect). The *subashi* was responsible for all so-called immoral and criminal guilds, and tobacco sellers were placed under his supervision together with prostitutes and pickpockets. This further strengthens the impression that the Ottoman authorities made little socio-cultural discrimination regarding the source when it came to extracting revenues. Rather than trying in vain to eradicate certain occupations, they choose to tax them. Because tobacco was widely used among Ottoman subjects from different social backgrounds, industry and commerce developed to serve a variety of tastes and budgets. Like other professions the industry tended to concentrate in one part of the bazaar, which was the center of trade and commerce in the city.

From Pipes to Cigarettes

In the mid-nineteenth century the cigarette found its way to the Ottoman Empire from France, a not surprising event considering the general increase in circulation of commodities and people between the two countries during that period. Upon its arrival, the cigarette quickly gained a popular following; according to one source, about a quarter of all tobacco consumers in the Ottoman Empire smoked cigarettes in the late 1850s or early 1860s (Issawi).

The transition from pipes to cigarettes represented broader changes in the region. The cigarette became part of a new office culture that first developed with the establishment of a large state bureaucracy and educated professionals. The *fallah*, or peasant, in the countryside switched to the cigarette after the workload increased significantly due to the introduction of industrialized cash-crop agriculture. As traditional manufacturing gradually made way for production in workshops and, to a lesser extent, factories, the work became more regimented, and the pipe was not welcomed. Even old bazaar practices such as smoking the *chibouk* and drinking coffee with clients disappeared. The cigarette also became a popular smoking device in the modern army. In all these cases the transition to cigarette consumption was closely related to the intensification of work and an increase in workload. Unlike the pipe, the cigarette offered quick satisfaction or comfort while at work. Furthermore, the cigarette became an icon representing a break from the past and a certain dynamism associated with modernity.

The cigarette was not confined to the workplace or the battlefield. It also entered Ottoman social life, where it provided a business-like atmosphere in spaces of leisure. Women of the Ottoman elite also adopted the new fashion, and the cigarette became a favorite smoke in the harem. Because cigarette consumption was not limited to the upper class and the cigarette was adopted simultaneously (and enthusiastically) by various segments of Ottoman society, the demand for this new product rapidly increased, and the *chibouk* soon disappeared. The water pipe fared better because it was protected by the interests of coffeehouse owners, who benefited from renting it to their clients. The water pipe has enjoyed a revival more recently as a symbol of the traditional lifestyle in an ongoing search for local meaning and identity.

Because the cigarette industry in the United States was developed initially by Armenian, Greek, and Turkish immigrants from the Middle East, Egyptian and Turkish brands (both manufactured from Middle Eastern tobacco cultivated in these areas) had a lasting influence on American cigarette manufacturing. Handmade cigarettes from the Middle East enjoyed tremendous popularity among American consumers even after James Duke of the American Tobacco Company (ATC) began selling cheaper brands made from American tobaccos in the early 1880s. At this time the ATC, a conglomerate that came to control most U.S. cigarette production, engaged in a negative advertising campaign against Middle Eastern brands. When it failed, the company took over major Middle Eastern tobacco manufacturers in the United States. It later manufactured cigarettes developed from a blend of Middle Eastern and American tobaccos to compete with the Middle Eastern brands. Once undertaken by the ATC, blending became a standard practice in the production of cigarettes.

In 1913 the American company R.J. Reynolds introduced its Camel brand, the first American brand to be sold nationwide. The company selected the name Camel to evoke exotic images of the Middle East. The manufacturer further associated its brand with the Orient by printing pyramids, palm trees, and Islamic architecture on the packages. Many years later, after the reputation of the Middle Eastern cigarette had all but disappeared, Camel continued to stand as a reminder of its past glory and its influence on international production and consumption of cigarettes.

Modern Production and Consumption

World War I brought an end to the Ottoman Empire and with it the end of Ottoman state monopoly. Starting in 1860 and increasingly so in the years to come, this monopoly effectively controlled cultivation, production, and sale of tobacco and cigarettes in Ottoman lands; its revenues first went to Ottoman coffers and later to European lenders to whom the Empire owed extensive sums of money.

Nevertheless, in most of the countries that emerged after its demise the tobacco trade was also reinstated as a state monopoly. This happened either in the aftermath of the war, or later, after World War II, when the majority of Middle Eastern states received independence and with it entered a stage of state-led economic development in which they nationalized and later managed major sectors of the local economy including tobacco. Privatization of tobacco industries, and with it competition from abroad, started during the 1990s. The latter part of the twentieth century also witnessed the renewed involvement of multinational cigarette companies in local markets, especially Philip Morris.

Throughout the twentieth century and still today, the majority of consumers have chosen tobacco products based on price rather than quality. Per capita cigarette consumption increased during the oil boom and subsequent economic upturn between the early 1970s and mid-1980s but leveled off when this period ended and economic conditions deteriorated. Smoking is mostly limited to cheap brands and male consumers. According to a 1995 World Health Organization report, 44% of men in the Middle East smoked (World Bank, *Economics of Tobacco Control*). This number translates into many millions of smokers in the region. For example, in the year 2000 an estimated 19 million people in Egypt smoked (World Bank, "Economics of Tobacco in Egypt").

The World Health Organization report cited above suggests that only 5% of women in the Middle East smoke. For the majority of females in the region smoking is what might be called a veiled practice, and their social and economic dependence on their family and spouses as well as their limited opportunities to work and play outside the home continue to play against their freedom to smoke. Youth smoking is underreported. In many cases the young are not expected to smoke in the company of their family. The gradual development of youth culture, which includes more opportunities for (mostly male) adolescents to study and frequent leisure environments and an increase in youth employment, explain an increase in smoking among young people in the Middle East. While in recent years antismoking campaigns have been promoted by government ministries and other officials responsible for health



ulema the body of Islamic scholars who interpret and advise on matters of religious law and practice.

and environmental issues, World Health Organization workers, anti-globalists who resist tobacco multinationals' interference, and Islamic **ulema**, they have been only partially successful in curtailing smoking in the Middle East; there is a growing public awareness of the perils of smoking, but de facto decrease in smoking is still to come.

See Also American Tobacco Company; Antismoking Movement From 1950; British American Tobacco; Camel; Cigarettes; Islam; Philip Morris; Pipes.

■ RELLI SHECHTER

BIBLIOGRAPHY

Issawi, Charles. *The Economic History of the Middle East, 1800–1914*. (Chicago: University of Chicago Press, 1966.

World Bank. *Economics of Tobacco Control*. Available: <<http://www1.worldbank.org/tobacco/book/html/chapter1.htm>>.

———. "Economics of Tobacco in Egypt." Available: <<http://www1.worldbank.org/tobacco/pdf/country%briefs/egypt.doc>>.



Missionaries

For centuries, many missionaries have reflected the ambivalent and sometimes shifting views held by their peers back home, with their actions shaped by local circumstances as well as moral debates. In other cases, missionaries—most notably Mormons, Seventh Day Adventists, and members of various evangelical sects of Protestantism—have long been opposed to smoking. Today, most missionaries around the world at least publicly speak out against tobacco use because of associated health risks. Whether only by example or as direct introducers or suppliers, missionaries joined other colonial agents in the spread and support of tobacco use historically, regardless of what their common attitudes might be today.

Changing Views

By the late sixteenth century tobacco seeds had been brought to Europe from the New World, and European gardens commonly included tobacco as a medicinal herb. This practice reflected **humoral theory** and other ancient views that identified tobacco as a curative agent for certain maladies. The cleansing effects of tobacco also were seen as leaving the user more able to resist temptations of the flesh. Consequently, by the early 1600s many European clergy were addicted. Smoking and taking **snuff**, even during Mass, were common in Spain and Italy.

In the seventeenth century, however, tobacco use became somewhat controversial. King James I of England published a strong condemnation of tobacco in 1604, largely because of its association with the so-called savages of the New World. Clergy all over Europe debated whether tobacco was a gift from God or a tool of the Devil, with some



humoral theory the idea, first advanced by the ancient Greeks, that health and temperament were determined by the balance of the four humors, or bodily fluids: blood, phlegm, choler (yellow bile), and melancholy (black bile). This idea dominated medicine until the late 1700s.

snuff a form of powdered tobacco, usually flavored, either sniffed into the nose or "dipped," packed between cheek and gum. Snuff was popular in the eighteenth century but had faded to obscurity by the twentieth century.



Woodcut of Father Marquette approaching the Indians with a peace pipe. Many missionaries not only used tobacco but also traded it to maintain friendly relations and to support financial and practical objectives. © BETTMANN/CORBIS

arguing that Noah, and even Adam, had been tempted to fall from grace through tobacco provided by Satan.

The sneezing, smell, and fumes accompanying tobacco use, together with behavior associated with excessive use, resulted in Papal bulls in 1642 and 1650 condemning tobacco use as unseemly and profane and carrying the threat of excommunication. However, by 1655 addiction was so widespread (including among the clergy) and the sale of tobacco produced such considerable revenue for papal states that these threats were virtually meaningless. The next two centuries would see little such opposition.

Missionaries Caught in the Middle

When Spanish and Portuguese ships arrived in the New World in the late fifteenth and early sixteenth centuries they found that tobacco use spread from Brazil through Mexico and into North America. Initially they recorded amazement at this custom, but by the late sixteenth to the mid-seventeenth centuries ambivalence and contradiction best characterized their attitudes. Both feeding and reflecting controversies back home, many were faced with a dilemma. While the Franciscan missionaries in the American Southwest adopted smoking themselves and dispersed tobacco to the natives without qualms, the Jesuits in the Northeast were conflicted, reporting alarm at the association of tobacco with what they considered **heathen** rituals, but they also understood that it was beneficial to one's health. In any event, they



heathen any person or group not worshipping the God of the Old Testament, that is, anyone not a Jew, Christian, or Muslim. May also be applied to any profane, crude, or irreligious person regardless of ethnicity.



tithe a one-tenth portion of produce or income given to the church. Historically, tithes were sometimes levied without the consent of the population.

claimed they needed to give tobacco as gifts to maintain friendly relations with the indigenes.

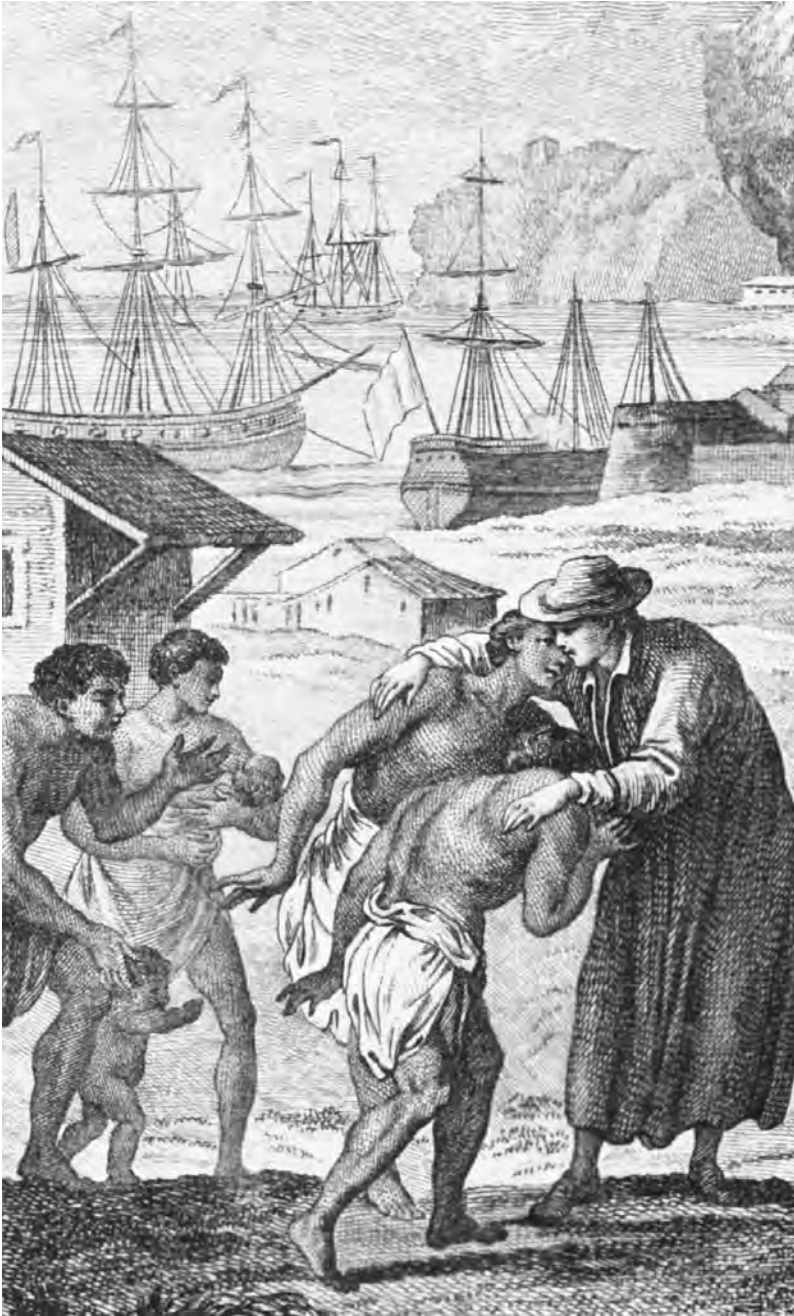
Moreover, as tobacco began to be cultivated for export, **tithes** received were beneficial to the Church. In the late sixteenth century both the Mexican Council and the Lima Provincial Council forbade the use of tobacco in church, but this was largely ineffectual because by then many of the clergy were themselves addicted.

In China in the early seventeenth century Jesuits tried to replace tobacco smoking with the use of snuff, but for the next two centuries contradictory practices and pronouncements would be the norm as missionaries tried to reconcile their own habits and moral qualms with local realities. In the early eighteenth century French missionaries in Canada were significant suppliers of tobacco, using it to lure the native people to church, but the missionaries often required abstinence after conversion. In 1832 a missionary-led campaign against smoking failed in Hawaii, as did an attempt by Wesleyan missionaries in the 1880s in Fiji, where blue ribbons were awarded to abstainers, but this resulted in strife with a colonial government that wanted the revenue from taxation on tobacco. In some cases, as in British New Guinea in the 1880s (where the London Missionary Society vessel was called locally “the tobacco ship”), conflict arose within the organization as the director back home expressed opposition to “buying converts,” while on-site missionaries complained that it was impossible for them to survive without payments of tobacco for food and labor as well as souls.

Missionaries as Promoters of Tobacco

While some missionaries in the New World of the sixteenth and seventeenth centuries were sometimes conflicted, others apparently were not. Very early in the seventeenth century Spanish and Portuguese colonists, accompanied by Catholic priests, carried tobacco seed from the Americas to the Philippines, Persia, India, Indo-China, Java, and Japan, cultivating it for their own use and teaching people to acquire a craving for what would become a very useful trade item. In Virginia in the 1630s Protestant ministers’ salaries were paid in tobacco. In the eighteenth century Moravian missionaries in New York and later in the Midwest were often the first white settlers seen by the indigenous people, with whom they happily joined in smoking sessions and distributed tobacco and pipes.

By the mid-nineteenth century tobacco use was common throughout most of the world, but was still unknown in much of the South Pacific. There, whalers and traders often introduced smoking, although not usually tobacco cultivation, lest the native people grow their own and be less dependent on foreign suppliers. This helped create a situation in which many missionaries found themselves under pressure to be among the suppliers. But it is also clear that they often created, as well as responded to, such demands. For example, the first missionary to land among the Wamira people of southeastern New Guinea immediately offered tobacco to people who had no idea what it was. After they were taught to smoke, with the mission as the sole source of commercially produced tobacco, food, labor, and converts were readily available. This scenario was doubtless repeated many times in the last part of the world to receive tobacco, as witnessed by a pattern of



An engraving from 1800 of Christian missionaries looking for converts and embracing native villagers. GETTY IMAGES

widespread tobacco addiction among former nonsmokers within two decades after the arrival of European missionaries.

See Also Calumets; Christianity; Native Americans; Oceania; Sailors.

■ TERENCE E. HAYS

BIBLIOGRAPHY

Arents, George, Jr. *Tobacco: Its History Illustrated by the Books, Manuscripts, and Engravings in the Library of George Arents, Jr.* Vol. 1, 1507–1615. New York: Rosenbach Company, 1937.

- Goodman, Jordan. *Tobacco in History: The Cultures of Dependence*. London: Routledge, 1993.
- Hays, Terence E. "‘No Tobacco, No Hallelujah’: Missions and the Early History of Tobacco in Eastern Papua." *Pacific Studies* 14, no. 4 (1991): 91–112.
- Marshall, Mac. "The Second Fatal Impact: Cigarette Smoking, Chronic Disease, and the Epidemiological Transition in Oceania." *Social Science and Medicine* 33, no. 12 (1991): 1327–1342.
- Von Gernet, Alexander. "Nicotian Dreams: The Prehistory and Early History of Tobacco in Eastern North America." In *Consuming Habits: Drugs in History and Anthropology*. Edited by Jordan Goodman, Paul E. Lovejoy, and Andrew Sherratt. London: Routledge, 1995.



Music, Classical

The tobacco plant has attracted the imagination of Western classical composers and musicians almost from the start of its introduction to Europe. Classical music has often celebrated the enjoyment of tobacco in the lyrics of its songs and in operas, while smoking has been an important element in the participation and enjoyment of music making in a variety of contexts.

Early-Seventeenth-Century England

One of the first connections between smoking and music making is found in late-sixteenth-century Elizabethan England, where men gathered to sing madrigals, ballads, and songs. These gatherings gave rise to some of the first musical pieces advocating the pleasurable and medicinal qualities of tobacco, including a five-part madrigal, "O Metaphysical Tobacco" (1606) by Michael East; "Tobacco, Tobacco, Sing Sweetly" (1605) by Captain Tobias Hume; and "Of Drinking Ale and Tobacco" in Thomas Ravenscroft's *Briefe Discourse of Music* (1614), the beginning of which reads, "Tobacco fumes away all nastie rheumes." A song about tobacco by Thomas Weelkes in his *Ayeres or Phantasticke Spirites* (1608) includes the lines:

Fill the pipe once more,
 My braines daunce *trenchmore* [a popular dance tune],
 It is headdy,
 I am geedy,
 My head and braines,
 Back and raines,
 Jointes and vaines,
 From all paines
 It doth well purge and make cleanne.
 (Weelkes)

The song "Tobacco's an Indian Weed," which also evolved during this time, has been enduringly popular in England and has become part of the folk tradition in that country; versions of it have been made by, among others, Samuel Wesley (1800) and Ralph Vaughan Williams (1934).

Even more directly related to smoking is the round “A Catch on Tobacco” by Dr. Henry Aldrich (1686), which not only has content celebrating tobacco but also the instruction that it is to be “Sung by 4 Smoaking their Pipes.”

Seventeenth- and Eighteenth-Century Europe

The seventeenth-century Dutch song “Tabakslied” demonstrates the negative reception of tobacco smoking by describing the disputes between smoking men who defend tobacco use and women who point out tobacco’s negative effects on the smokers.

In eighteenth-century France certain verses published in the *Recueil des plus belles Chansons et Airs de Cour* (1714) speak ironically of **snuff** taking, notwithstanding that this was the customary method of tobacco consumption in Europe at this time. In contrast, the widely known folk song “J’ai du bon tabac dans ma tabatière” (I have good tobacco in my snuff-box) was also popular during this period. References to tobacco usage also appear in many German vocal compositions, such as Georg Philipp Telemann’s lied “Sing-, Spiel-, und Generalbassübungen” (1733–1734), Christoph Gluck’s arietta “Je n’aime pas le tabac beaucoup,” (I don’t care much for tobacco) and Johann Sebastian Bach’s “Erbauliche Gedanken eines Tobackrauchers” (Uplifting thoughts of a tobacco-smoker).



snuff a form of powdered tobacco, usually flavored, either sniffed into the nose or “dipped,” packed between cheek and gum. Snuff was popular in the eighteenth century but had faded to obscurity by the twentieth century.

Nineteenth- and Twentieth-Century Compositions

In nineteenth-century England, early Victorian moralists and opponents of smoking cautioned their contemporaries that those songs written in praise of smoking and sung on the stage were “paid for by the proprietors of cigar-divans and tobacco shops, to make their trade popular” (*Hints* 1854). One such song, by John Cooke Jr., is “Milly’s Cigar-Divan,” celebrating the cozy cigar divan in Piccadilly and its owner Milly. Songs praising the qualities of tobacco continued to appear in the nineteenth and early twentieth centuries, such as the American song “Smoking” (1915) by Gladys Hall.

Tobacco consumption is referred to in ballet and opera as early as the middle of the seventeenth century, such as in the interlude “Le Récit des preneurs de tabac” (*The snuff-taker’s tale*) of the *Ballet Royal de l’Impatience* (1661) by Isaac de Benserade and Jean-Baptiste Lully. During the prelude of Pierre Gaveaux’s song “Contre les chargins de la vie . . . Quand j’ai ma pipe de tabac” from his one-act opera *Le Petit Matelot* (The little sailor, 1796), the stage directions indicate that the singer “bat le briquet en mesure, allume sa pipe et fume” (“Beats the lighter in time with the music, lights his pipe and smoke”); about 1800 this song reached the United States, published with the title “La Pipe de Tabac” (The tobacco pipe). The last quarter of the nineteenth century saw the first act of Georges Bizet’s opera *Carmen* (1875) set in a cigarette factory; some years later the English composer J. Haydn Parry composed the music to the romantic opera *Cigarette* (1891), and the main narrative thrust of E. Wolf-Ferrari’s opera *Il Segreto di Susanna* (Susanna’s secret, 1909) concerns the female protagonist’s secret smoking habit.

Tobacco Themes in Musical Entertainment and Advertising

Not only has musical content often reflected an engagement with tobacco culture, but musical performance has a long established relationship with the practice of smoking. In the seventeenth and eighteenth centuries, amateur music making encouraged the creation of numerous private musical societies and clubs for music making at different social levels. Many such groups held their “Musique Meetings” in taverns, where music was accompanied by liquid refreshments and occasionally supper, and where audience participation and smoking were essential elements of the entertainment. Smoking gave the performance of art music an informal feel.

SMOKING CONCERTS. In England during the second half of the nineteenth century, a new form of entertainment emerged, the “smoking concert,” in which smoking was allowed during a musical performance itself. These “smoking concerts” started in the 1860s as private and exclusively male forms of entertainment, but became increasingly fashionable in the 1880s and 1890s. They developed into a type of concert in their own right and facilitated the acceptance of smoking during the performance of art music in both private gatherings and at public concerts. They promptly spread to other countries such as the United States, Canada, and Australia. Although initially established by aristocratic and bourgeois amateur music societies, smoking concerts gradually evolved to accommodate a socially diverse audience, including women, and became so popular among all classes that they were a characteristic feature of the times.



The violinist Joyce Nixon smokes a cigar during rehearsals at the Royal Opera House, for Richard Rodney Bennett's opera *Victory*, April 1970, London, England. © HULTON-DEUTSCH COLLECTION/CORBIS

Overall smoking concerts represented an evolution from private smoking concerts to public smoking concerts, and then to the acceptance of smoking in certain mainstream public concerts. Their appearance in such public concert halls in the later part of the Victorian era reflected changes not only in Victorian society, but also in its attitude toward the performance of art music. These smoking concerts were distinguished by the social status of their members and patrons, by the venue, and by the musical content and form of entertainment they offered. In the aristocratic and upper-class smoking concerts, the music consisted of mixed programs of overtures, symphonies, light orchestral items, virtuoso or sentimental pieces, modern compositions, and songs, thus combining a convivial occasion with educational and intellectual experience. In the smoking concerts for the lower-middle and working classes the programs reflected the more populist taste of the audience, with the entertainment consisting mainly of part songs, comic songs, sketches, recitations, a few instrumental solos, and particularly audience participation, all accompanied by liberal amounts of drinking and smoking.

The working-class smoking concert eventually dominated this particular musical scene and survived well into the twentieth century (with several still given in the twenty-first century for charity or as variety events). Thus, by the late nineteenth century a wide variety of events across all social classes were described as smoking concerts, and they had become a notable feature of the Victorian era's musical landscape on both sides of the Atlantic. They also contributed substantially to increasing sales of sheet music and tobacco products.



Spanish cellist, composer, and conductor Pablo Casals (1876–1973) during his recording of Dvorak's concerto for violoncello in Prague, Czechoslovakia, 1 April 1937. ERICH AUERBACH/GETTY IMAGES

In these social settings, smoking served an inclusive function. Where tobacco was welcome, it was seen as a contributor to friendship and companionship, and it is this positive approach to smoking that led to the social development of music making in eighteenth-century music clubs and nineteenth-century smoking concerts. In particular, in the second half of the nineteenth century smoking played an important role in changing social attitudes toward both the enjoyment of music and the nature of the performance event in which it was found, the consequences of which were felt throughout the twentieth century.

In the aristocratic and upper-middle classes the association of smoking with high-class art music, through the vehicle of the smoking concert, legitimized smoking and drinking and made them more socially acceptable. Simultaneously, the association of art music with smoking, a cultural practice more readily identified with informality and easy conviviality, contributed to the demystification of this form of music by presenting it in less formalized contexts. For the lower classes smoking similarly informalized art music, while simultaneously elevating singing

club culture, and the particular types of entertainment designated as smoking concerts clearly demonstrate an aspiration toward upper- and middle-class practices.

Smoking concerts acted as agents of cultural change, and this trend changed the function and appreciation of the music performance event.

TOBACCO ADVERTISING. Smoking concerts were not the only means by which music contributed to increasing tobacco sales. In the later part of the nineteenth century cigarette advertising by the major manufacturers emphasized the pleasant and supposed medicinal qualities of the cigarette, and opera singers were used to testify to the throat-easing qualities of certain brands. Such endorsements by musicians were further underlined when the United Kingdom's Wills of Bristol became the first company to issue a series of **cigarette cards** depicting musical celebrities; this particular series of cards, however, was among the casualties of World War I, not only because of the need to reduce production costs but also because they depicted a number of musicians of Germanic origin. Classical music has subsequently been used by both advocates and opponents of smoking in support of their various causes.

The use of classical music in tobacco advertising, thus attempting to imbue a given product with class and refinement, continued well into the twentieth century. Perhaps the most famous example of this was a 1980s English advertisement suggesting that "Happiness is a cigar called Hamlet," accompanied by a sentimental arrangement of Bach's "Air on a G String"; thereafter the piece became popularly known as the "Hamlet music." In contrast, light and classical music has also been used by antitobacco campaigners as a means to facilitate quitting smoking, with "stop smoking" compact discs and cassettes common in the record market of the late twentieth and early twenty-first centuries.

See Also Film; Literature; Visual Arts.

■ EVA MANTZOURANI

BIBLIOGRAPHY

- Apperson, George L. *The Social History of Smoking*. New York: G. P. Putnam's Sons, 1916.
- Fairholt, Frederick W. *Tobacco: Its History and Associations*. London: Chatto and Windus, 1876.
- Hints on Etiquette and the Usages of Society with a Glance at Bad Habits*, 28th ed. London: n.p., 1854.
- Mack, Peter H. *The Golden Weed: A History of Tobacco and of the House of Andrew Chalmers, 1865–1965*. London: Newman Neame, 1965.
- Penn, W. A. *The Sovereign Herbe: A History of Tobacco*. New York: E. P. Dutton, 1901.
- Pepys, Samuel. *The Diary of Samuel Pepys: A New and Complete Transcription*. Edited by Robert Latham and William Matthews. Berkeley: University of California Press, 2000.
- Scholes, Percy A. *The Mirror of Music, 1844–1944*, Vol. 1. London: Novello, 1947.
- Tollison, Robert T., ed. *Smoking and Society: Toward a More Balanced Assessment*. Lexington, Mass.: Lexington Books, 1986.



cigarette cards paper trading cards sometimes featuring sports personalities or movie stars packaged with cigarettes and offered as an incentive for purchase.

Van den Borren, Charles. "Tobacco and Coffee in Music." *Musical Quarterly* 18, no. 3 (July 1932): 355–374.

Weekles, Thomas. *Ayeres or Phantasticke Spirites*. London: William Barley, 1608.

West, Gordon, ed. *A History of Smoking from Elizabeth I to Elizabeth II*. London: Tobacco, 1953.



Music, Popular

The heritage of cigarette imagery and tobacco themes in American music is long standing. Long before Joe Camel and the Marlboro Man appeared on 1990s billboards, there were televised chants ("Call for Phillip Morris!"), dancing girls garbed in Old Gold cigarette packs, catchy radio acronyms ("L.S.M.F.T.—Lucky Strike means fine tobacco!"), and often-repeated advertising phrases ("So round, so firm, so fully packed—so free and easy on the draw"). Just as Old Gold sponsored "Your Hit Parade," the "Camel Caravan of Musical Stars" was led on tour by Vaughn Monroe and His Royal Canadians.

The pre-World War II period featured a variety of tobacco tunes. Hit songs included "Let's Have Another Cigarette" by the Benny Goodman Orchestra, "Love Is Like a Cigarette" by Duke Ellington, "One Cigarette for Two" by Freddy Martin and His Orchestra, "Two Cigarettes in the Dark" by Bing Crosby, "Weed Smoker's Dream" by the Harlem Hamfats, and "While a Cigarette Was Burning" by Paul Whiteman and His Orchestra. After World War II songsmiths and recording artists promulgated the most remarkable spectrum of audio images concerning cigarette smoking.

Smoking Themes Reflected in Popular Music

Since smoking is a personal habit, it is hardly surprising that many songs depict the activity as a time of individual relaxation and private reverie. Comfortable memories glow like embers on a cigarette ash. Whether alone blowing "Smoke Rings" and contemplating "My Cigarette and I," or waiting impatiently in "Smoky Places" for someone who may say "Let's Have a Cigarette Together," a smoker tries to be at ease. The 1957 Fred Waring recording of "A Cigarette, Sweet Music, and You" captures the romantic theme. Still positive, but much more assertive and challenging, are youthful smokers like "Charlie Brown," who vent their cynicism about school rules and adult authority figures by "Smokin' in the Boys' Room."

The most frequently illustrated feelings of individuals who smoke alone are attitudes of melancholy and sadness. "Cigarettes of a Single Man," "Share with Me a Lonely Cigarette," and "Smoking My Sad Cigarette" are laments to better times. The same sentiments of despair pervade "Cigarettes and Coffee Blues," "Coffee, Cigarettes, and Tears," and "I'm Down to My Last Cigarette." The rolled tobacco tube is imaged as a consoling companion, the same way that one's own reflection is treated in songs like "My Echo, My Shadow, and Me" and "Me and



My Shadow." The recent loss of a loved one is symbolized in Benny Spellman's haunting "Lipstick Traces (On a Cigarette)."

More difficult problems facing an individual smoker appear to stem from social stigma, self-deception, and self-ridicule. Addiction to nicotine is usually not understood by nonsmoking friends or family members. Excessive use of tobacco and the corollary compulsion to interrupt ongoing conversations, card games, or even romantic encounters is often puzzling, frustrating, and annoying. Although Paula Abdul maintains that "Opposites Attract," the reality is that former smokers and nonsmokers often find chain-smoking habits to be incomprehensible. Heartfelt and humorous commentaries on cigarette use are found in "Smoke! Smoke! Smoke! (That Cigarette)," "Trying to Live My Life Without You," and "Smoke Smoke Smoke (But Not Around Me)." The latter song, which hit the airwaves in the 1960s, appears to be a precursor to the passive smoking or secondhand smoke arguments that gained prominence during the late 1980s and early 1990s.

The frustration of a smoker who genuinely wants to terminate association with the so-called "evil weed" is revealed in many songs. Once again, solitary reflection is usually the setting, with lyrics that feature hostility born of a genuine love/hate relationship. Jimmy Martin concedes "I Can't Quit Cigarettes." Jerry Reed takes "Another Puff" while debating when to stop. Merle Haggard and Willie Nelson look for "Reasons to Quit." And Jim Nesbitt finally acknowledges, "I Love Them Nasty Cigarettes." Helplessness abounds. Stern advice that seems reasonable: If you want to quit, don't ever start.

Tobacco use is also a cultural phenomenon. The notion of being trapped in an isolated, single-crop economy American town has provided lyrical material for such diverse artists as Roy Clark, Jamul, the Nashville Teens, and Lou Rawls. The early 1960s song "Tobacco Road" is a challenge to the freedom and individual spirit more than to the addictive nature of cigarettes. Location and setting are also defined by poor air quality in many tunes. Bars, saloons, juke joints, and basement cabarets are illustrated in "Dim Lights, Thick Smoke, and Loud, Loud Music," "Hangin' Out in Smoky Places," and "Smoky Places." The Corsairs' 1961 version of the latter song depicts a secret affair that can only be carried on in a dark, cloudy venue. A more humorous acknowledgment of enforced tobacco isolation is Helltrout's 1990 recording "Smoking Lounge."

Social settings blend easily into workplaces. Occupational associations with tobacco use may be either voluntary or involuntary. Billy Joel's "Piano Man" cannot control the smoky atmosphere he encounters during his club's Happy Hours. But many workers treasure the opportunity to take a smoke break, like the young female model in Van Morrison's "Blue Money." The western image of casual, roll-your-own tobacco use is featured in "The Cowboy's Serenade (While Smoking My Last Cigarette)" of 1941 and "The Gambler" of 1978. For the long-distance trucker, however, nicotine is just one of several over-the-counter drugs used to sustain lengthy periods of boring highway coverage. Jerry Reed pleads this case in "Caffeine, Nicotine, and Benzedrine (And Wish Me Luck)." Finally, Jim Croce lionizes a southern racetrack hero known for rolling his pack of cigarettes into his T-shirt sleeve. This hard-driving man is "Rapid Roy the Stockcar Boy." From bartenders to those behind bars, there are numerous settings where

A chronological list of selected songs featuring cigarette references and tobacco images or themes, 1947–1993

Year of release	Song title (record number)	Performing artist(s)	Year of release	Song title (record number)	Performing artist(s)
1947	"Cigareetes, Whuskey, and Wild, Wild, Women"	Sons of the Pioneers	1969	"Smoke Smoke Smoke (But Not Around Me)"	Grandpa Jones
1947	"Smoke! Smoke! Smoke! (That Cigarette)"	Tex Williams	1970	"Cigarette Grubber"	Sam Taylor, Jr.
1948	"Cigarette Song (Always Grabbing Someone's Butt)"	Larry Vincent	1971	"Blue Money"	Van Morrison
1948	"Don't Smoke in Bed"	Peggy Lee	1971	"Cigarette Blues"	Roger Hubbard
1948	"Coffee, Cigarettes, and Tears"	Larks	1971	"I Love Them Nasty Cigarettes"	Jim Nesbitt
1952	"Coffee and Cigarettes"	Johnny Ray	1972	"Another Puff"	Jerry Reed
1952	"Smoke Rings"	Les Paul and Mary Ford	1972	"Tobacco, White Lightning, and Women Blues, No.2"	Buck Owens
1953	"Smoking My Sad Cigarette"	Jo Stafford	1973	"Smoke"	Roger Cook
1955	"Smoke From Your Cigarette"	Billy Williams Quartet	1973	"Smoke! Smoke! Smoke! (That Cigarette)"	Commander Cody and His Lost Planet Airmen
1956	"Smoke Another Cigarette"	Harry Revel	1973	"Smokin' in the Boys' Room"	Brownsville Station
1956	"While a Cigarette Was Burning"	Patti Page	1974	"Cigarettes and Muskatel Wine"	Little Joe Cale
1957	"Ashtrays for Two"	Bob Crosby	1974	"Fool for a Cigarette"	Ry Cooder
1957	"Share with Me a Lonely Cigarette"	Daniel DeCarlo	1974	"Should I Smoke"	Badfinger
1957	"Three Cigarettes in an Ashtray"	Patsy Cline	1974	"Smokin' Room"	Rufus
1957	"A Cigarette, Sweet Music, and You"	Fred Waring and the Pennsylvanians	1974	"Smoking Cigarettes"	Golden Earring
1958	"Cigarettes and Coffee Blues"	Lefty Frizzell	1974	"Workin' at the Car Wash Blues"	Jim Croce
1958	"Got a Match?"	Frank Gallop	1975	"Candy, Brandy and a Carton of Cigarettes"	Lou Carter
1958	"Let's Have a Cigarette Together"	Vaughn Monroe	1976	"Smokin'"	Keith Hudson
1959	"Charlie Brown"	Coasters	1977	"Flick the Bic"	Rick Dees
1960	"Don't Smoke in Bed"	Nine Simone	1977	"Lipstick Traces"	Jimmie Peters
1961	"Cigarettes"	Yaffa Yarkoni	1978	"A Beer and a Cigarette"	Terraplane
1961	"Jet Song" from <i>West Side Story</i>	Russ Tamlyn and The Jets	1978	"Cigarettes"	City Boy
1961	"Saved"	LaVerne Baker	1978	"The Gambler"	Kenny Rogers
1961	"Smoke! Smoke! Smoke! (That Cigarette)"	Jimmy Dean	1978	"Smoke Rings and Wine"	Ralph MacDonald
1961	"Smoky Places"	Corsairs	1979	"You Burn Me Up-I'm a Cigarette"	Robert Fripp
1962	"Cigarette Gil"	Bob Peck	1981	"Caffeine, Nicotine, Benzedrine (and Wish Me Luck)"	Jerry Reed
1962	"Lipstick Traces (On a Cigarette)"	Benny Spellman	1981	"Smokin' and Drinkin'"	James Brown
1962	"Twenty Cigarettes"	Little Jimmy Dickens	1981	"Tryin' to Live My Life Without You"	Bob Seger
1962	"When You Smoke Tobacco"	Ernie Sheldon	1983	"A Beer and a Cigarette"	Hanoi Rocks
1963	"Cigarette"	Visions	1983	"Reasons to Quit"	Merle Haggard and Willie Nelson
1963	"Cigarettes and Coffee Blues"	Marty Robbins	1984	"Cigarette Head"	Hype
1963	"Cigareetes, Whusky, and Wild, Wild Women"	Johnny Nash	1985	"Cigarettes"	Full Nelson
1963	"Smoke Rings"	Sam Cooke	1985	"Smokin' in the Boys' Room"	Motley Crue
1964	"Down to My Last Cigarette"	Billy Walker	1986	"Cigarette"	Smithereens
1964	"My Cigarette and I"	J's with Jamie	1986	"Smoke Rings"	Laurie Anderson
1964	"Smoke from Your Cigarette"	Drake Sisters	1986	"Cigarettes of a Single Man"	Squeeze
1965	"Cigarettes and Whiskey"	Sammy Jackson	1987	"No Smokin'"	Todd Rundgren
1965	"Get Off of My Cloud"	Rolling Stones	1988	"I'm Down to My Last Cigarette"	k.d. lang
1965	"King of the Road"	Roger Miller	1988	"Love Is Like a Cigarette"	Kip Hanrahan
1965	"Lipstick Traces (On a Cigarette)"	O'Jays	1988	"Smoke Another Cigarette"	Toll
1965	"Smoke, Drink, Play 21"	Tony Williams	1989	"Cigarette"	Sidewinders
1966	"Cigarettes and Coffee"	Otis Redding	1989	"Cigarette in the Rain"	Randy Crawford
1966	"I Can't Quit Cigarettes"	Jimmy Martin	1989	"Opposites Attract"	Paula Abdul
1966	"Tobacco"	George Hamilton IV	1989	"Pack 'O Smokes"	Prisonshake
1967	"Cigarette Ashes"	Ed Henry	1990	"Cigarette Breath"	Shinehead
1967	"One Little Packet of Cigarettes"	Herman's Hermits	1990	"Smoking Lounge"	Helltrout
1968	"Cigarette"	Mike Stewart	1992	"Ashtray"	Screaching Weasel
1968	"May I Light Your Cigarette"	Beacon Street Union	1992	"Cigarette Ashes on the Floor"	Miki Howard
1968	"Smoke, Smoke, Smoke -'68"	Tex Williams	1992	"Smokers"	Cancer Moon
1969	"Cigarette Smoking"	Brother Sammy Shore	1993	"Three on a Match"	Mickey Finn
1969	"The Cigarette Song" from <i>Promenade</i>	Sanda Schaeffer, Ty Connell, and Gilbert Price			

cigarettes are so ubiquitous that notions of "smoke-free" environments are laughable.

One might consider a match, a lighter, or an ashtray to be the most logical accompanying elements to cigarette use. Lyrically, this assumption is only partially accurate. Recordings highlighting smoking equipment include "Ashtray," "Ashtrays for Two," "Flick the Bic," "Got a

Match," "Three Cigarettes in an Ashtray," and "Three on a Match." However, the items most frequently linked with a smoker's activity tend to be coffee and alcohol. Failure to note that addictive behavior toward nicotine is often associated with surrender to other nonprescription drugs is a frequent error among tobacco apologists. Lyricists are not so gullible. The chain-smoker/alcoholic personality is depicted, often tongue-in-cheek, in the following tunes: "A Beer and a Cigarette," "Candy, Brandy, and a Carton of Cigarettes," "Cigarettes, Whiskey, and Wild, Wild Women," "Cigarettes and Coffee," "Cigarettes and Muscatel Wine," "Cigarettes and Whiskey," "Smoke, Drink, and Play 21," "Smoke Rings and Wine," "Smokin' and Drinkin'," and "Tobacco, White Lightning, and Women Blues, No. 2." Two more extreme tobacco and drug use songs are "Dope Smokin' Moron" by the Replacements and "My Mom Smokes Pot" by the Lookouts.

Smoking Slang and Metaphor

The seemingly endless list of pejorative slang terms that relate to smoking provide a roomful of gallows humor. From terms like "butt," "cancer stick," and "evil weed" to "fag," "gasper," and "coffin nail," the cigarette is an object of linguistic condemnation and ridicule. Comedians have jumped on the lyrical bandwagon to satirize, mock, and degrade the smoking habit. Bob Peck threatens to put his "Cigarette Girl" into a flip-top box (coffin) if she doesn't stop smoking. Larry Vincent's "Cigarette Song" condemns a cheap colleague who is described as always grabbing someone's butt. Mooching behavior is also chided by Sam Taylor, Jr. in "Cigarette Grubber." Phil Harris attacks compulsive nicotine pursuit in "Smoke! Smoke! Smoke! (That Cigarette)" and Tex Williams extends this same joke in "Smoke, Smoke, Smoke—'68." Recorded comedy sketches by Steve Martin ("Smokin'") and Brother Sammy Shore ("Cigarette Smokin'") attack the society that permits self-inflicted vaporous suicide. Other less caustic, more offbeat jabs at cigarette use include "Got a Match?," "Nick Teen and Al K. Hall," "Smokin' in Bed," and "You Burn Me Up—I'm a Cigarette."

Native American Influences

Many smoking terms have been borrowed from the Native American culture and adapted to popular songs. Beyond references to calumets (highly ornamented ceremonial pipes), numerous illustrations of cultural and socioeconomic distinctions are lodged in smoking songs. These themes include poverty ("King of the Road"), prison life ("Twenty Cigarettes"), daydreaming ("Workin' at the Car Wash Blues"), urban gangs ("The Jet Song"), and the Salvation Army ("Saved"). Often, lyrics depict cigarette use as a code that identifies stratified ranks in society.

Beyond Cigarettes

Tobacco products other than cigarettes are featured in popular lyrics as well. "Chew Tobacco Rag" by Arthur Smith honors chewing tobacco. But the dominant option in recordings is not smokeless tobacco, but the cigar. Although once the comic physical trademark of Groucho Marx, the honor of singing about "A Real Good Cigar" was reserved for comedian George Burns. Cigar songs are few in number, unencumbered

by associated addictions, and generally upbeat. In addition to “Working at the Carwash Blues,” songs that laud cigars include “Cigar Eddie,” “Have a Cigar,” “A Man Smoking a Cigar,” and “There Goes a Cigar Smoking Man.”

See Also Film; Literature; Visual Arts.

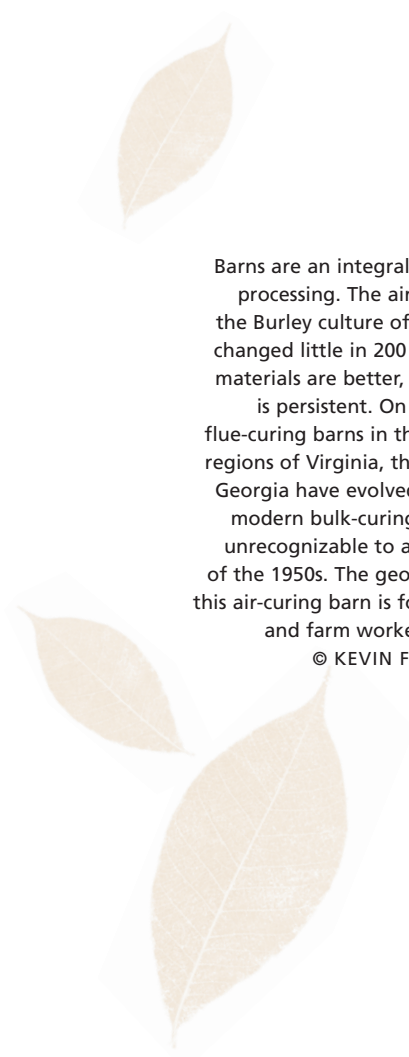
■ B. LEE COOPER

BIBLIOGRAPHY

- Cooper, B. Lee. “Processing Health Care Images from Popular Culture Resources: Physicians, Cigarettes, and Medical Metaphors in Contemporary Recordings.” *Popular Music and Society* 17 (Winter 1993): 105–124.
- Cooper, B. Lee, and William L. Schurk. “Smokin’ Songs: Examining Tobacco Use as an American Cultural Phenomenon through Contemporary Lyrics.” *International Journal of Instructional Media* 21 (1994): 261–268.
- Klein, Richard. *Cigarettes Are Sublime*. Durham, N.C.: Duke University Press, 1993.
- Koop, C. Everett. Foreword to *Merchants of Death: The American Tobacco Industry*. New York: Beech Tree Books, 1988.



Europeans discovered snuffing, or snuff taking, from Native Americans. Snuff was the most fashionable method of tobacco consumption in the eighteenth century and it was still used in the nineteenth and twentieth centuries, though it lost popularity to other forms of consumption. The ladies in this 1824 image by L. Roilly daintily take snuff, presumably thinking—as the caption suggests—“’Tis very good! (Indeed).”
© HULTON-DEUTSCH COLLECTION/CORBIS



Barns are an integral part of tobacco processing. The air-curing barns of the Burley culture of Tennessee have changed little in 200 years; while the materials are better, the basic design is persistent. On the other hand, flue-curing barns in the Bright culture regions of Virginia, the Carolinas, and Georgia have evolved a great deal; a modern bulk-curing barn would be unrecognizable to a tobacco farmer of the 1950s. The geometric design in this air-curing barn is formed by beams and farm workers in Tennessee.

© KEVIN FLEMING/CORBIS



Pipes in traditional societies continue to be made from materials easily available. This modern-day G/wi bushman from Botswana's Kalahari Desert smokes tobacco in a crude device known as a tobacco tube. It is made from the shinbone of a gemsbok oryx.

© PETER JOHNSON/CORBIS



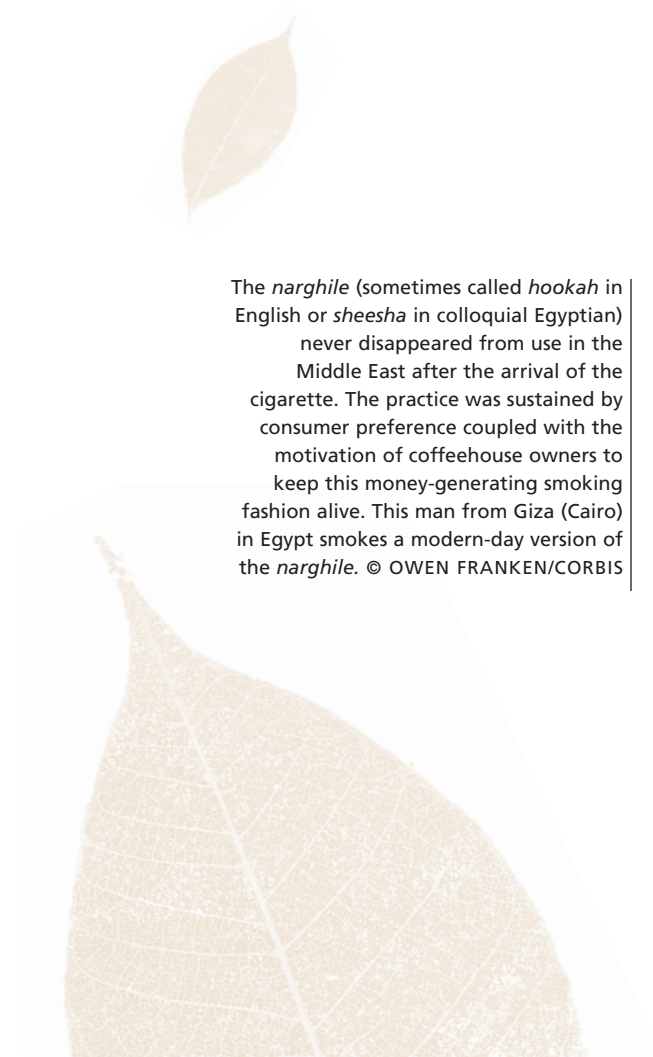


Cigar advertisements often depicted women in sexually suggestive poses and as the objects of desire for cigar-smoking men. This image is unusual because women were seldom shown blowing smoke or wearing smoking jackets in cigar commercials, even though by the end of the eighteenth century European women were beginning to adapt the smoking habits of men.
© BETTMANN/CORBIS



Botanical descriptions of the tobacco plant (genus *Nicotiana*) appeared in Europe in the sixteenth century, first in exploration accounts and conquest narratives, and then in pharmaceutical treatises. This French print of *Nicotiana tabacum* is from the eighteenth century.
© STAPLETON COLLECTION/CORBIS





The *narghile* (sometimes called *hookah* in English or *sheesha* in colloquial Egyptian) never disappeared from use in the Middle East after the arrival of the cigarette. The practice was sustained by consumer preference coupled with the motivation of coffeehouse owners to keep this money-generating smoking fashion alive. This man from Giza (Cairo) in Egypt smokes a modern-day version of the *narghile*. © OWEN FRANKEN/CORBIS



A Thai man smokes from a large bong in front of his village house. Although it isn't certain what is being smoked, the big bong suggests that the product is cannabis, as tobacco and opium are seldom smoked in such bongs. © BOHEMIAN NOMAD PICTUREMAKERS/CORBIS





This intricate cigar box label (c. 1910) is for a brand of the Imperial Royal Tobacco Monopoly of Austria. The phrase is an abbreviation of *Kaiserliche Königliche Tabak-Regie*, which means the Kaiser's Royal Tobacco Administration. Until recently, it was a government monopoly; the double spread eagle symbol identifies the item as a product of the monopoly. Every tobacco-related product manufactured or sold in Austria carried this symbol. © AUSTRIAN ARCHIVES/CORBIS



Pipes range from simple creations to works of art. This exceptionally radiant Meissen pipe bowl from the early nineteenth century features the head of the king's jester ("le Bouffon du Roi"), gilt helmet, and raised blue bead décor, with an ornately turned ivory stem. FROM THE COLLECTION OF DR. SARUNAS PECKUS



Tobacco advertisements of the early twentieth century often featured children but they were not usually depicted consuming the product. When they were shown smoking cigarettes or pipes, it was often either in jest or to portray the product's mildness. The idea of children using tobacco was not popularly approved. This image of a child smoking a pipe is from a Russian movie poster from the 1930s. © SWIM INK/CORBIS



Amérique Septentrionale.



Natives of North and South America were the first to use tobacco in its various forms. This illustration shows a Native American preparing tobacco leaves for a ceremony. The calumet (ceremonial pipe) rests on two supports while preparations are made.
© LEONARD DEL SELVA/CORBIS

(A.D.)
Indien Kisteneau vidant le Sac des remèdes pour la cérémonie du calumet
1811



In this modern-day powwow, a Narraganset medicine man in full headdress holds a pipe in the air as he puffs.
PHOTO RESEARCHERS, INC.



This advertisement (c. 1860), for snuff and other tobacco products of the Peter Lorillard Company, is a typical representation of the “primitive” or Native American, holding a calumet (ceremonial pipe) and giving raw material (tobacco) to the “civilized” white culture, represented by an idealized nude figure placed at a higher level than the Native American. All the animals and vegetation are probably references to the American habitat. © MUSEUM OF THE CITY OF NEW YORK/CORBIS



Deadly air pollution emanates from smoker—artist Richard Abarno's reminder of the dangerous consequences of secondhand smoke. © RICHARD ABARNO/CORBIS



SCRIBNER *TURNING POINTS* LIBRARY

Tobacco

in History and Culture

AN ENCYCLOPEDIA



Editorial Board

Editor in Chief

JORDAN GOODMAN

Honorary Research Fellow
Wellcome Trust Centre
University College, London

Board Members

MARCY NORTON

Assistant Professor of History
George Washington University

MARK PARASCANDOLA

Cancer Prevention Fellow
National Cancer Institute

SCRIBNER TURNING POINTS LIBRARY

Tobacco

in History and Culture

AN ENCYCLOPEDIA

JORDAN GOODMAN
Editor in Chief

VOLUME

2

Native Americans–
Zimbabwe

Index

CHARLES SCRIBNER'S SONS

An imprint of Thomson Gale, a part of The Thomson Corporation

THOMSON
★
GALE

Tobacco in History and Culture: An Encyclopedia

Jordan Goodman

© 2005 by Thomson Gale,
a part of the Thomson Corporation.

Thomson and Star Logo are trademarks and
Gale and Charles Scribner's Sons are regis-
tered trademarks used herein under license.

For more information, contact
Charles Scribner's Sons
27500 Drake Road
Farmington Hills, MI 48331-3535
Or visit our Internet site at
<http://www.gale.com/scribners>

ALL RIGHTS RESERVED

No part of this work covered by the copy-
right hereon may be reproduced or used in
any form or by any means—graphic, elec-
tronic, or mechanical, including photocopy-
ing, recording, taping, Web distribution, or
information storage retrieval systems—
without the written permission of the
publisher.

For permission to use material from this
product, submit your request via Web at
<http://www.gale-edit.com/permissions>, or you
may download our Permissions Request form
and submit your request by fax or mail to:

Permissions Department
The Gale Group, Inc.
27500 Drake Rd.
Farmington Hills, MI 48331-3535
Permissions Hotline:
248-699-8006 or 800-877-4253, ext. 8006
Fax: 248-699-8074 or 800-762-4058

LIBRARY OF CONGRESS CATALOGING-IN-PUBLICATION DATA

Tobacco in history and culture : an encyclopedia / Jordan Goodman, editor in chief.
2 v. cm. – (Scribner turning points library)
Includes bibliographical references and index.
Contents: v. 1. Addiction—Music, popular—v. 2. Native Americans—Zimbabwe.
ISBN 0-684-31405-3 (set hardcover : alk. paper) – ISBN 0-684-31406-1 (volume 1) – ISBN
0-684-31407-X (volume 2) – ISBN 0-684-31453-3 (e-book)
1. Tobacco—History—Dictionaries. 2. Tobacco—Social aspects—Dictionaries. 3. Smoking—
History—Dictionaries. I. Goodman, Jordan. II. Series.
GT3020.T594 2004
394.1'4—dc22

2004007109

This title is also available as an e-book.
ISBN 0-684-31453-3 (set)
Contact your Gale sales representative for ordering information.

Printed in the United States of America
10 9 8 7 6 5 4 3 2 1



Contents

Color Plates

**EIGHT PAGES OF COLOR
PLATES APPEAR NEAR THE
CENTER OF EACH VOLUME**

Volume 1

Preface **ix**
Timeline **xiii**

A

Addiction **1**
Additives **6**
Advertising **11**
Advertising Restrictions **19**
Africa **23**
Age **31**
Air Travel **33**
Alcohol, Tobacco, and Other
Drugs **35**
American Tobacco Company **42**
Antismoking Movement Before
1950 **45**
Antismoking Movement From
1950 **51**
Antismoking Movement in
France **59**
Appetite **61**
Archaeology **66**
Architecture **71**
Arents Collection **73**

B

Bad Habits in America **77**
Black Patch War **80**

Body **81**

Botany (History) **85**
Brazil **88**
British American Tobacco **92**
British Empire **96**

C

Calumets **103**
Camel **105**
Caribbean **107**
Chemistry of Tobacco and Tobacco
Smoke **111**
Chesapeake Region **117**
Chewing Tobacco **125**
China **129**
Christianity **135**
Cigarettes **144**
Cigars **150**
Class **153**
Connoisseurship **155**
Consumption (Demographics) **167**
Cuba **186**

D

Developing Countries **193**
Disease and Mortality **199**
Doctors **214**
Documents **216**
Dutch Empire **219**

E

English Renaissance Tobacco **223**
Ethnicity **226**

F

Film **231**
Fire Safety **238**
French Empire **240**

G

Genetic Modification **245**
Gitanes/Gauloises **248**
Globalization **251**

H

Hallucinogens **259**

I

Industrialization and
Technology **261**
Insurance **267**
Intellectuals **270**
Iranian Tobacco Protest
Movement **272**
Islam **274**

J

Japan **277**
Judaism **281**

K

Kentucky **285**
Kretek **287**

L

Labor **291**
"Light" and Filtered
Cigarettes **298**
Literature **302**

CONTENTS

Litigation **307**
Lobbying **314**
Lucky Strike **318**
Lung Cancer **320**

M

Marketing **327**
Marlboro **337**
Mayas **339**
Medical Evidence (Cause
and Effect) **343**
Menthol Cigarettes **348**
Mexico **350**
Middle East **355**
Missionaries **360**
Music, Classical **364**
Music, Popular **369**

Volume 2

Timeline **vii**

N

Native Americans **375**
Nazi Germany **382**
New Deal **385**
Nicotine **387**

O

Oceania **393**
Opium **396**
Origin and Diffusion **397**
Ostracism **403**

P

Philip Morris **407**
Philippines **410**
Pipes **414**

Plantations **423**
Politics **428**
Portuguese Empire **440**
Processing **447**
Product Design **450**
Prohibitions **456**
Psychology and Smoking
Behavior **467**
Public Relations **473**

Q

Quitting **481**
Quitting Medications **488**

R

Regulation of Tobacco Products in
the United States **491**
Retailing **496**

S

“Safer” Cigarettes **505**
Sailors **509**
Secondhand Smoke **512**
Shamanism **517**
Sharecroppers **522**
Slavery and Slave Trade **525**
Smoking Clubs and
Rooms **533**
Smoking Restrictions **535**
Smuggling and Contraband **542**
Snuff **547**
Social and Cultural Uses **551**
Soldiers **568**
South and Central America **570**
South Asia **575**
South East Asia **579**
Spanish Empire **585**
Sponsorship **593**

Sports **597**
State Tobacco Monopolies **599**

T

Taxation **603**
Therapeutic Uses **609**
Tobacco as an Ornamental
Plant **616**
Tobacco Control in
Australia **619**
Tobacco Control in the United
Kingdom **622**
Tobacco Industry Science **625**
Tobacco Mosaic Virus **628**
Toxins **630**
Trade **634**

U

United States Agriculture **653**

V

Virginia Slims **663**
Visual Arts **665**

W

Warning Labels **675**
Women **679**

Y

Youth Marketing **689**
Youth Tobacco Use **694**

Z

Zimbabwe **699**

Contributors List **703**
Index **707**



Timeline

- c. 50,000 B.C.E.:** Australia populated. Humans there may have begun chewing tobacco species: *Nicotiana. gossei*, *N. ingulba*, *N. simulans*, *N. benthamiana*, *N. cavicola*, *N. excelsior*, *N. velutina*, and *N. megalosiphon*.
- c. 15,000–10,000 B.C.E.:** Americas south of the Arctic populated. Humans there may have begun to pick and use wild tobacco species.
- c. 5000 B.C.E.:** Maize-based agriculture develops in central Mexico, probable beginnings of tobacco cultivation as well.
- c. 1400–1000 B.C.E.:** Remains of cultivated and wild tobacco dating from this period have been found in High Rolls Cave in New Mexico. Dates established by radiocarbon methods.
- 1492:** Columbus sees Taíno (Indians of Greater Antilles) with leaves that are probably tobacco. Two men among Columbus's crew explore the interior of Cuba and see people smoking.
- 1518:** Juan de Grijalva, leader of expedition to Yucatan and Gulf of Mexico, accepts offerings of cigars or pipes.
- 1535:** Publication of Gonzalo Fernández de Oviedo's *Historia general de las Indias*, which has first published reference to tobacco. It condemns it as a "vile vice" but also notes that the habit spread to "Christians" and black slaves as well.
- 1535:** Jacques Cartier encounters natives using tobacco on the island of Montreal.
- 1555:** Franciscan Friar André Thevet of Angoulême (France) witnesses Brazil's Tupinamba Indians smoking tobacco; following year sows tobacco seeds in France.
- 1560:** Jean Nicot, France's ambassador to Portugal, writes of tobacco's medicinal properties, describing it as a panacea. Nicot sends *rustica* plants to French court.
- 1561:** Nicot sends snuff to Catherine de Medici, the Queen Mother of France, to treat her son Francis II's migraine headaches.
- 1565:** Sir John Hawkins's expedition observes Florida natives using tobacco.
- 1571:** Publication of Nicolas Monardes's *Segunda parte del libro, de las cosas que se traen de nuestras Indias Occidentales, que sirven al uso de medicina* [The second part of the book of the things brought from our Occidental Indies which are used as medicine], which has the most extensive and positive description of tobacco to that date.
- 1583:** Council of Lima declares that priests cannot consume tobacco in any form before saying mass, under threat of excommunication.
- 1585:** Francis Drake expedition trades for tobacco with Island Caribs of Dominica.
- 1587:** Gilles Everard's *De herba panacea* (Antwerp) is first publication devoted entirely to tobacco.
- 1588:** Thomas Hariot publishes *A Brief and True Report of the New Found Land of Virginia*, in which he describes Virginia native people smoking tobacco.
- 1595:** Anthony Chute publishes *Tabacco*, the first book in the English language devoted to the subject of tobacco.
- 1600:** Franciscan missionary presents tobacco seeds and tobacco tincture to Tokugawa Ieyasu, who will become Shogun of Japan in 1603.
- 1603:** Spanish colonies of Cumaná and Caracas (Venezuela) produce 30,000 pounds of tobacco.
- 1604:** King James I publishes *A Counterblaste to Tobacco*, in which he condemns tobacco smoking as unhealthy, dirty, and immoral.
- 1606:** King of Spain prohibits the cultivation of tobacco in Caribbean and South America to thwart contraband trade between Spanish settlers and English and

TIMELINE

- Dutch traders. Edict rescinded in 1612.
- 1607:** Inhabitants of Sierra Leone seen sowing tobacco.
- 1607:** Jamestown, the first permanent English colony in the Americas, is founded.
- 1612:** John Rolfe raises Virginia's first commercial crop of "tall tobacco."
- 1617:** Mughal Shah Jahangir (reigned 1605–1627) bans smoking because tobacco consumption creates "disturbance in most temperaments."
- 1624:** Texts by Chinese physicians Zhang Jiebin (1563–1640) and Ni Zhumo (c. 1600) mention tobacco in section on pharmacopoeia.
- 1627:** Tobacco cultivation in Ottoman territory is banned.
- 1636:** First state tobacco monopoly established in Castille (Spain).
- 1642:** Papal Bull forbids clerics in Seville from using tobacco in church and other holy places.
- 1674:** Tobacco monopoly established in France.
- 1682:** Virginia colonists rebel when the government fails to decree a cessation in tobacco crops after bumper crops lead to low prices. Disgruntled planters destroy thousands of tobacco plants; six ringleaders are executed.
- 1698:** In Russia, Peter the Great agrees to a monopoly of the tobacco trade with the English, against church wishes.
- 1724:** Pope Benedict XIII learns to smoke and use snuff, and repeals papal bulls against clerical smoking.
- 1753:** Linnaeus names the plant genus *nicotiana*, and describes two species, *nicotiana rustica*, and *nicotiana tabacum*.
- 1760:** Pierre Lorillard establishes a "manufactory" in New York City for processing pipe tobacco, cigars, and snuff. P. Lorillard is the oldest tobacco company in the United States.
- 1794:** U.S. Congress passes the first federal excise tax on snuff, leaving chewing and smoking tobacco unaffected.
- 1827:** First friction match invented.
- 1828:** Isolation of nicotine from tobacco by Wilhelm Posselt and Karl Reimann.
- 1832:** Paper-rolled cigarette is invented in Turkey by an Egyptian artilleryman.
- 1839:** Discovery that flue-curing turns tobacco leaf a bright brilliant yellow and orange color. The bright-leaf industry is born.
- 1843:** French tobacco monopoly begins to manufacture cigarettes.
- 1847:** In London, Philip Morris opens a shop that sells hand-rolled Turkish cigarettes.
- 1849:** J. E. Liggett and Brother is established in St. Louis, Missouri, by John Edmund Liggett.
- 1854:** Philip Morris begins making his own cigarettes. Old Bond Street soon becomes the center of the retail tobacco trade.
- 1868:** British Parliament passes the Railway Bill of 1868, which mandates smoke-free cars to prevent injury to nonsmokers.
- 1880:** James Bonsack is granted a patent for his cigarette-making machine.
- 1881:** James Buchanan (Buck) Duke starts to manufacture cigarettes in Durham, North Carolina.
- 1889:** Five leading cigarette firms, including W. Duke Sons & Company, unite. "Buck" Duke becomes president of the new American Tobacco Company.
- 1890–1892:** Popular revolts against imposition of British-controlled monopoly on sale of tobacco take place in Iran.
- 1899:** Lucy Payne Gaston founds the Chicago Anti-Cigarette League, which grows by 1911 to the Anti-Cigarette League of America, and by 1919 to the Anti-Cigarette League of the World.
- 1902:** Imperial Tobacco (U.K.) and American Tobacco Co. (U.S.) agree to market cigarettes in their respective countries exclusively, and to form a joint venture, the British American Tobacco Company (BAT), to sell both companies' brands abroad.
- 1907:** The U.S. Justice Department files anti-trust charges against American Tobacco.
- 1908:** The U.K. Children Act prohibits the sale of tobacco to children under 16, based on the belief that smoking stunts children's growth.
- 1910:** Gitanes and Gauloises cigarette brands are introduced in France.
- 1911:** U.S. Supreme Court dissolves Duke's trust as a monopoly, in violation of the Sherman Anti-Trust Act (1890). The major companies to emerge are American Tobacco Co., R.J. Reynolds, Liggett & Myers Tobacco Company (Durham, N.C.), Lorillard, and British American Tobacco (BAT).
- 1913:** R.J. Reynolds introduces the Camel brand of cigarettes.
- 1913:** China has its first harvest of Bright leaf tobacco, grown from imported American seeds and using American growing methods.
- 1916:** Henry Ford publishes an anti-cigarette pamphlet titled *The Case against the Little White Slaver*.
- 1924:** Philip Morris introduces Marlboro, a women's cigarette that is "Mild as May."

- 1927:** Long Island Railroad grants full rights to women in smoking cars.
- 1933:** United States Agricultural Adjustment Act of 1933 compels tobacco farmers to cut back on output by reducing acreage devoted to tobacco production, in return for price supports. They are saved from economic ruin.
- 1938:** Dr. Raymond Pearl of Johns Hopkins University reports to the New York Academy of Medicine that smokers do not live as long as nonsmokers.
- 1950:** Five important epidemiological studies show that lung cancer patients are more likely to be smokers than are other hospital patients.
- 1954:** Results from two prospective epidemiological studies show that smokers have higher lung cancer mortality rates than nonsmokers. The studies were conducted by E. Cuyler Hammond and Daniel Horn in the U.S. and Richard Doll and Austin Bradford Hill in the U.K.
- 1957:** First Japanese-made filter cigarette, Hope, is put on the market.
- 1964:** *Smoking and Health: Report of the Advisory Committee to the Surgeon General*, the first comprehensive governmental report on smoking and health, is released at a highly anticipated press conference. It concludes that smoking is a cause of lung cancer, laryngeal cancer, and chronic bronchitis and “is a health hazard of sufficient importance in the United States to warrant appropriate remedial action.”
- 1965:** U.S. Congress passes the Federal Cigarette Labeling and Advertising Act, requiring health warnings on all cigarette packages stating “Caution—cigarette smoking may be hazardous to your health.”
- 1970:** U.S. Congress enacts the Public Health Cigarette Smoking Act of 1969. Cigarette advertising is banned on television and radio.
- 1970:** World Health Organization (WHO) takes a public position against cigarette smoking.
- 1972:** First report of the surgeon general to identify involuntary (secondhand) smoking as a health risk.
- 1977:** American Cancer Society (ACS) sponsors the first national “Great American Smokeout,” a grassroots campaign to help smokers to quit.
- 1986:** Congress enacts the Comprehensive Smokeless Tobacco Health Education Act, requiring health warnings on smokeless (spit) tobacco packages and advertisements and banning smokeless tobacco advertising on radio and television.
- 1988:** Liggett Group (L&M, Chesterfield) ordered to pay Antonio Cipollone \$400,000 in compensatory damages for its contribution to his wife Rose Cipollone’s death (she died in 1984). First-ever financial award in a liability suit against a tobacco company. However, the verdict was later overturned on appeal, and the lawsuit was dropped when the family could no longer afford to continue.
- 1988:** Publication of *The Health Consequences of Smoking: Nicotine Addiction*, the first surgeon general’s report to deal exclusively with nicotine and its effects.
- 1990:** Airline smoking ban goes into effect, banning smoking on all scheduled domestic flights of six hours or less.
- 1991:** U.S. Food and Drug Administration (FDA) approves a nicotine patch as a prescription drug.
- 1992:** World Bank establishes a formal policy on tobacco, including discontinuing loans or investments for tobacco agriculture in developing countries.
- 1994:** Six major domestic cigarette manufacturers testify before the U.S. House Subcommittee on Health and the Environment that nicotine is not addicting and that they do not manipulate nicotine in cigarettes.
- 1995:** *Journal of the American Medical Association (JAMA)* publishes a series of articles describing the contents of secret documents from the Brown & Williamson Tobacco Corporation indicating that the industry knew early on about the harmful effects of tobacco use and the addictive nature of nicotine.
- 1996:** President Bill Clinton announces the nation’s first comprehensive program to prevent children and adolescents from smoking cigarettes or using smokeless tobacco. Under the plan, the Food and Drug Administration would regulate cigarettes as drug-delivery devices for nicotine.
- 1998:** California becomes the first state in the nation to ban smoking in bars.
- 1999:** U.S. Department of Justice sues the tobacco industry to recover billions of dollars spent on smoking-related health care, accusing cigarette makers of a “coordinated campaign of fraud and deceit.”
- 1999:** Attorneys general of 46 states and 5 territories sign a \$206 billion Master Settlement Agreement with major tobacco companies to settle Medicaid lawsuits.
- 2000:** In Canada, Health Minister Allan Rock unveils new health labels that include color pictures.
- 2000:** U.S. Supreme Court issues a 5–4 ruling that existing law does not provide the Food and Drug Administration with authority over tobacco or tobacco marketing, thus invalidating the 1996 Clinton Administration’s regulations.
- 2001:** BAT breaks into Vietnam market, announces that it has been granted a license for a \$40 million joint venture with

TIMELINE

Vintaba to build a processing plant in Vietnam.

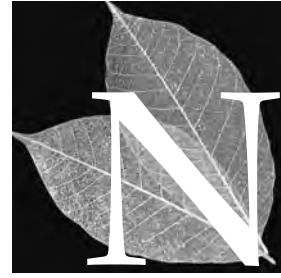
2003: First stage of the Tobacco Advertising and Promotion Act 2002 bans new tobacco sponsorship agreements, advertising on

billboards and in the press, and free distributions. The ban also covers direct mail, Internet advertising, and new promotions.

2003: New York City's smoking ban goes into effect, forbidding

smoking in all restaurants and bars, except for a few cigar lounges.

2004: Complete public smoking ban goes into effect in Ireland.



Native Americans

Many Native Americans throughout North and South America believe that tobacco is so powerful that it was involved in the very act of creating the world. In the Pima or O'odham origin story, for example, Blue Gopher lit a huge cigarette made out of Coyote's tobacco wrapped in a cornhusk. He puffed toward the east in a great white cloud that cast a shadow over the land. A carpet of grass grew in the shadow. Blue Gopher scattered the seeds of other plants across the grassy area, thereby causing corn to grow.

In one version of the Navajo creation story, Sky Father and Earth Mother smoked tobacco, before creation began, to help them plan the awesome task that lay ahead. Morning Star—a Crow Indian deity—turned into the first tobacco plant after he fell from the sky. The first tobacco grew from the head of Earth Mother, one of the Haudenosaunee (Iroquois) creator spirits, while the Cahuilla creator Mukat drew the first tobacco and pipe from his heart, then made the sun to light them. After he was killed, tobacco grew from his heart. The Kickapoo creator Kitzihiat also used a piece of his heart to make the first tobacco. Pulekukewerek, one of the Yurok creator *woges*, grew from a tobacco plant; then tobacco continued to grow from the palms of his hands, so that he never ran out.

The Huichol in the mountains of western Mexico have similar beliefs, as do the Shipibo along the upper Amazon in Peru and the Haida and Tlingit in southern Alaska and many native peoples in between. In one version of the Huichol creation story, the first tobacco grew from the semen of Deer Person, one of their most powerful deities, who turned into corn and peyote and whose blood is still used to nourish corn and bless babies. Huichol tobacco belongs to Grandfather Fire—the most powerful deity of all—tobacco was once a hawk and even today it is the spiritual essence of the gods. Huichol tobacco (*makutsi*) is also the most powerful tobacco on earth, almost as powerful as peyote and able to cause visions, with up to 18 percent nicotine.

The belief that tobacco is so powerful that it figured into creation itself is widespread throughout North and South America. Even the tribes

that lack this belief have similar concepts; for example, that the spirits are addicted to tobacco. American Indians view tobacco, almost without exception, as an essential, core element of their religions and rituals. Taken together, these widespread beliefs and practices strongly suggest that tobacco use is a very ancient activity in the Americas, so old and elemental that it probably began very early on, in prehistoric humankind's existence in the Americas.



Evidence for the Early Use of Tobacco

Of the seven species of *Nicotiana* that have been and still are being used by Native Americans, two were domesticated by prehistoric Indians to the extent that the plant species could not survive, beyond a few generations, without the help of people who planted them, weeded them, and otherwise tended to their basic needs. These domesticated species and their regions of use by Native North Americans (exclusive of commercial tobacco and recent introductions) are as follows:

Species	Regions of Use
<i>Nicotiana rustica</i> L.	Eastern U.S. and Canada; MesoAmerica; Southwestern U.S.; probably Caribbean
<i>Nicotiana tabacum</i> L.	MesoAmerica; parts of U.S. Southwest; probably Caribbean

The five other tobacco species, in contrast, are wild plants that can and do thrive from generation to generation without the help of humans, though they do prefer disturbed environments, such as arroyo beds (stream sides), road cuts, and burned over areas, which humans readily provide. The species *Nicotiana quadrivalvis* is somewhere in between domesticated and wild: Two of its varieties (*wallacei* and *bigelovii*) are wild, though they are often cultivated, whereas the other two (*quadrivalvis* and *multivalvis*) are known only in cultivation. The wild species and their regions of use are as follows:

Species	Regions of Use
<i>Nicotiana attenuata</i> Torr.	U.S. Southwest; Great Basin; California; Pacific Northwest; extreme northern Mexico; southwest Canada
<i>Nicotiana quadrivalvis</i> Pursh.	southern California to Washington; Missouri River Valley; Canadian Plains; extreme southern Alaska; upper Columbia and Snake River Valleys
<i>Nicotiana clevelandii</i> Gray	northwest Mexico; possibly southern California
<i>Nicotiana glauca</i> Grah.	Mexico; southern California; western Arizona
<i>Nicotiana trigonophylla</i> Dun.	southwestern U.S.; southern California; Mexico

Archeological evidence from North America indicates the use of several tobacco species for thousands of years. The earliest known tobacco in South America is only a few hundred years old. Earlier evidence is

undoubtedly there, since the ancestors of all of these tobacco species originated in South America millions of years ago, then slowly expanded their ranges north through Central America and on into North America or later were carried there. ♦

The archaeological evidence of tobacco comes primarily in the form of carbonized seeds and preserved pollen, which are very difficult to recover and identify. Even the largest tobacco seed is smaller than the period at the end of this sentence, which means that it takes a very fine mesh screen with holes no larger than one-quarter of 1 millimeter across to recover a seed. And while tobacco pollen is fairly distinctive down to the generic level (*Nicotiana*), it is not possible to distinguish among the various species (*rustica* or *tabacum*) based on pollen. Also, the pollen of one of tobacco's close relatives (*lycium*, or Wolfberry) is similar to *Nicotiana*, so the use of pollen can be problematic.

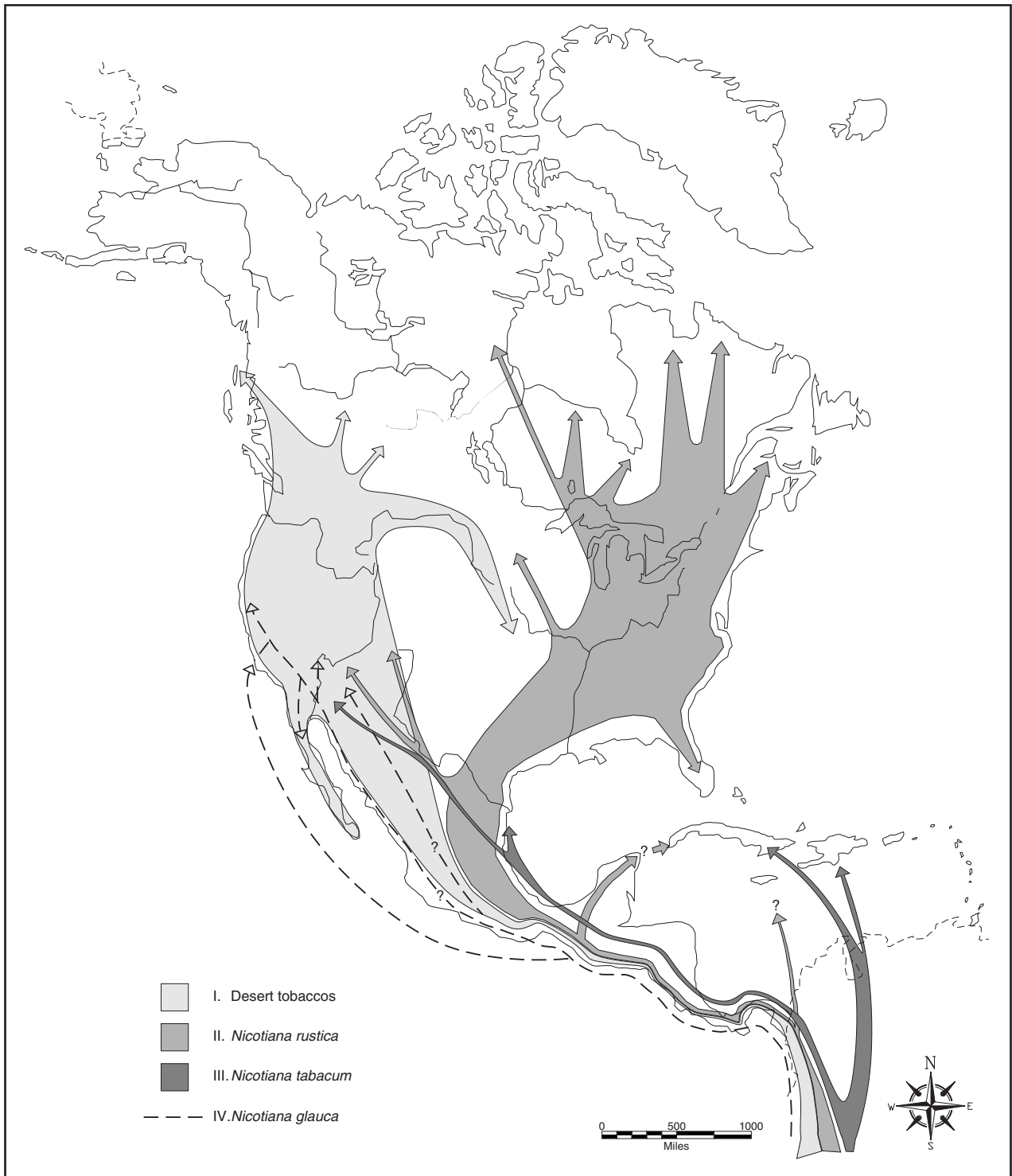
Despite these drawbacks, archeologists in North America have been successful in finding prehistoric tobacco, and there is good evidence for its initial use as early as 1400 B.C.E. in the Southwestern deserts, and by about 180 C.E. in the Eastern woodlands.

The sequence of development, as shown in the map, is summarized as follows. The roman numerals correspond to the map categories.

Species	Description
I. Desert tobaccos (<i>N. attenuata</i> , <i>N. trigonophylla</i> , <i>N. quadrivalvis</i>)	Ancestral South American species slowly expanded their ranges naturally, reaching Mexico after the end of the Pleistocene, when conditions warmed enough to allow them to spread north. Helped northward to present extent by human activity, beginning no later than 1000 B.C.E.
II. <i>Nicotiana rustica</i>	Domesticated 7,000 to 10,000 years ago in Andes Mountains, then taken north by early farmers, reaching American Southwest by 1000 to 1400 B.C.E. and Eastern Woodlands by 180 C.E.
III. <i>Nicotiana tabacum</i>	Domesticated several thousand years ago in the Andes Mountains, then taken east and north through the lowlands. May have reached Southwestern U.S. in late prehistoric times.
IV. <i>Nicotiana glauca</i>	Introduced accidentally into Mexico, California, Arizona, and Florida in historic times (for example, in the ballast of ships). Since then, the western Navajo, Barona Digueno, and a few other tribes have adopted it and now consider it traditional tobacco.

ANCIENT FARMING. In both the Southwest and the Eastern woodlands, domesticated tobacco first appeared with other cultivated plants as part of a larger horticultural complex that also included wild plants.

♦ See the map in "Origin and Diffusion."



Sequence of Development of Native American Tobacco Use. RONALD STAUBER

In the Southwest, this gardening tradition consisted of cultivated tobacco, and two species of wild tobacco, along with maize, squash, beans, wild and cultivated amaranths, goosefoot and other weedy annuals that were encouraged or at least tolerated in the farm fields. In the East, early gardening focused on cultivated sunflowers, goosefoot,



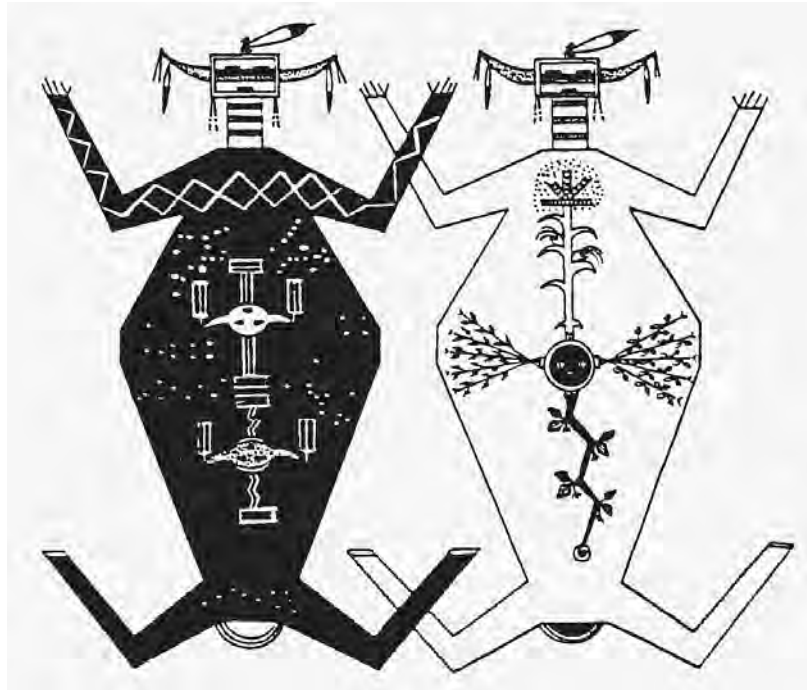
Native American pipes and cigarettes come in many forms. Upper left: Cochiti Pueblo pipe; upper center and right: Kayenta Navajo "cloud blower" pipes; lower right: Cocopa reed cane cigarettes; lower center: Hopi clay pipe; lower left: Navajo clay pipe. COURTESY OF THE MAXWELL MUSEUM OF ANTHROPOLOGY, UNIVERSITY OF NEW MEXICO. PHOTOGRAPHER DAMIAN ANDRUS.

and marsh elder, with corn and cultivated tobacco added 1,000 years later.

Wild plants were clearly involved in the adoption of corn, tobacco, squash, and beans by the prehistoric Native Americans. In both the Southwest and later the East, maize and tobacco did not arrive out of a vacuum, nor did they drop into one. They were already being grown to the south, in central Mexico, where maize-based agriculture began around 5000 B.C.E., then moved slowly north, as local hunters and foragers added it to their plant husbandry tradition. Or perhaps small agricultural groups expanded their ranges or maybe even migrated from one region to another. However it spread, farming was added to an already existing husbandry complex that involved the encouragement and even planting of a number of wild plants. Two species of wild tobacco, as well as amaranth, goosefoot, purslane, globe mallow, and other plants that preferred disturbed soils, were included in the complex in the Southwest. The early gardening culture in the east grew goosefoot, marshelder and sunflowers, and may have grown wild squash and gourds, maygrass, knotweed and a few other plants.

After the addition of cultivated tobacco, corn, squash, and beans, agricultural societies rapidly evolved throughout North and South America. By the eve of European contact, cultivated tobacco was traded far to the north of its range, into northern Canada, and even the wild *Nicotiana quadrivalvis* variety *multivalvis* was encouraged, if not cultivated, in southern Alaska. Similar processes were at work in South America, and by the time the Europeans arrived, the use and veneration of tobacco was a key, core element of all Native American cultures, with the exception of the Inuit (Eskimo) and Aleut, who were too far away to participate in the tobacco trade system.

From the southern tip of South America to southern Alaska, tobacco was ingested in many forms, including pipes, reed cane and corn husk cigarettes, even in maple and other wild plant leaves. It was also chewed, licked, snuffed, taken as eye drops, and even administered in enemas. Some tribes preferred to smoke tobacco in carved stone, calumet-style pipes, such as those used by the Plains Indians, while



The four sacred plants of the Navajo—corn, beans, squash, and tobacco—growing on Mother Earth. Father Sky and Mother Earth are sometimes shown in sandpaintings and on rugs. COURTESY OF JOSEPH WINTER

others used smaller stone and clay pipes, reed and leaf wrapped cigarettes, or, most simply of all, a wad of tobacco leaves packed between a person’s cheeks and teeth or between the lips and teeth.

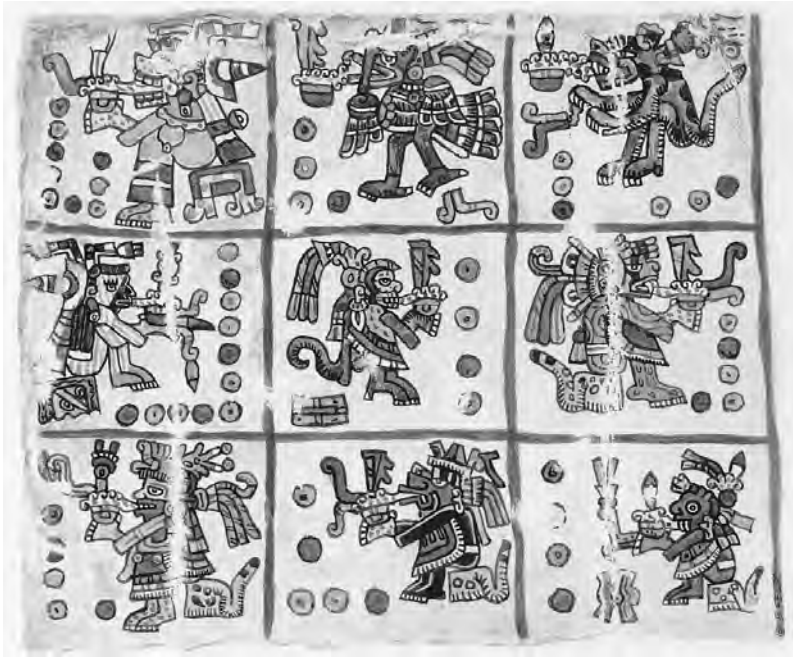
Tobacco in Native American Religion

Tobacco is the heart of Native American religion and the core of American Indian culture. Tobacco has remained a constant unifying force, linking all tribes together, linking all generations together for thousands of years. Even as Native American religions changed and became organizationally more complex, tobacco use also became more complex, as did the activities of the deities who created it and who were created by it.

Many Native Americans continue to use tobacco in a sacred manner, while others smoke, chew, and **snuff** it in the same manner as non-Indians, as a recreational drug. For the traditionalists, there is nothing recreational about tobacco, for it is considered a sacred plant, a life-affirming force, a food of the spirits, at times a god itself. From southern Chile to Alaska, Native Americans have used and continue to use *Nicotiana rustica*, *N. tabacum*, *N. attenuata*, and several other species of tobacco as a ritual narcostimulant—a psychotropic, mind-altering substance that serves as a medium between the ordinary world of humans and the super-ordinary world of spirits. Tobacco leaves were and are smoked in pipes, cigars, and cigarettes. Leaves are chewed (often with lime from shells) and sometimes eaten. Resin and concentrates are licked. An infusion is drunk, occasionally with *Datura* and/or other hallucinogenic plants. Tobacco powder is snuffed. Tobacco smoke is blown on the body and leaves are used medically as a poultice. Tobacco incense is burned. Tobacco offerings are buried, cast on the ground, into the air, onto the water.



snuff a form of powdered tobacco, usually flavored, either sniffed into the nose or “dipped,” packed between cheek and gum. Snuff was popular in the eighteenth century but had faded to obscurity by the twentieth century.



This detail from a larger illustration shows four Aztec deities “drinking” tobacco. The full illustration, showing nine panes, was redrawn from a figure in the *Codex Vaticanus*. © BRIGITTE FELIX

TOBACCO AND MEDICINE SOCIETIES. Beginning with individual medicine men and women who ministered to the religious and medical needs of their bands and other groups, American Indian religion became more organized as populations increased, beliefs changed, and outside political and economic relations evolved. After the individual medicine people came the medicine societies, composed of most if not all of the members of the group, with different societies providing different medicines and religious ceremonies. And eventually the societies evolved into priesthoods, whose memberships were restricted and often hereditary, and whose leaders became so powerful that theocracies often emerged, such as the Aztecs and Incas, whose leaders were the highest priests in the land.

But whatever the level and scope of religious power, tobacco was and is still used, with even the medicine people, medicine societies, and priesthoods taking on tobacco-oriented themes and identities. Thus there are Tobacco shamans in South and Central America who ingest the plant almost constantly, not only to heal and bless but also to commune directly with the tobacco spirits.

There are also tobacco medicine societies, such as among the Crow on the upper Missouri, whose sole function is to grow two kinds of sacred tobacco, *Nicotiana quadrivalvis* varieties *quadrivalvis* and *multi-valvis*, which are essential for the survival of the tribe. And there are or were even tobacco priesthoods, such as the Cult of Cihuacoatl among the Aztecs, the mother of the other gods, the Snake Woman whose physical manifestation on earth was the tobacco plant and whose chief priest—also called Snake Woman—was second in power only to the great Montezuma himself.

Tobacco shamans, tobacco medicine societies, and tobacco priesthoods were part of an array of Native American religious groups that ranged from the individual medicine-people of tiny bands of Caribou hunters in northern Canada to the deified leaders of huge city-states in Peru that

Tobacco Use During the *Inipi* Sweat Lodge Ceremony

Most contemporary Native American ceremonies involve the use of tobacco. One of the most popular rituals is the *Inipi* purification ceremony of the Lakota, which has been adapted by many individuals and pan-tribal groups throughout the United States. Most tribes have their own sweat lodge purification ceremonies, and the amalgam of Lakota *Inipi* and another tribe's purification rite, such as the Navajo's, is a ceremony that is filled with the smoke of sacred tobacco. In most sweat lodges a Plains Indian-style carved stone and wooden pipe is used; in others, especially in the Southwest, Navajo and Pueblo-style corn husk cigarettes are smoked. All of the participants in the ceremony are purified in two ways: by the steam from the hot rocks and by the smoke from the tobacco. Each participant is given the opportunity to smoke one or more times, and to blow out the smoke and rub it on his (and in some case her) legs, head, and other body parts. It is also puffed in the four directions, and a prayer is often said for one of the participants. There are many variations to this theme, but the overall thrust is that tobacco smoke is a sacred, purifying element that not only cleanses the body and soul but also pleases the Great Spirit and other deities as it wafts its way into the heavens. *The Sacred Pipe: Black Elk's Account of the Seven Rites of the Oglala Sioux* provides detailed descriptions of tobacco use during the *Inipi* and other Lakota ceremonies.

controlled vast empires. All used tobacco as a universal means of communicating with each other as well as with the spirit world.

That done they blew the tobacco in all four directions where it appeared as a fog in which they moved away. Those were the sun's inner form, the moon's inner form, and the inner forms of the mountains that had been made. For these the (smoke) ceremony had been performed (to show respect for the inner forms to be). For these, what was to be dark cloud and dark mist, male rain and female rain, sunray, pollens of dawn and evening twilight, rainbow, all of these were laid down before them, in these they clothed themselves (from the Blessingway Songs of Earth's Inner Form, in Wyman, pp. 124–127).

See Also Caribbean; Mayas; Origin and Diffusion; Shamanism; South and Central America.

■ JOSEPH WINTER

BIBLIOGRAPHY

- Bohrer, Vorsila. L. "Flotation Analysis from High Rolls Cave (LA 114103) Otero County, New Mexico." In *Southwest Ethnobotanical Enterprises Report* 39. Portales, N. Mex., 2003. This unpublished work contains the earliest archaeological dates of tobacco. Eventually it will be published by the state of New Mexico.
- Brown, Joseph E. *The Sacred Pipe: Black Elk's Account of the Seven Rites of the Oglala Sioux*. Norman and London: University of Oklahoma Press, 1953.
- Gerstel, D. U. "Tobacco *Nicotiana tabacum* (Solanaceae)." In *Evolution of Crop Plants*. Edited by N. W. Simmonds. London: Longman, 1976.
- Russell, Frank. *The Pima Indians*. Tucson, Ariz.: University of Arizona Press, 1975.
- Wilbert, Johannes. *Tobacco and Shamanism in South America*. New Haven, Conn: Yale University Press, 1987.
- Winter, Joseph C. "Feeding the Ancestors: The Role of Tobacco in the Evolution of Southwestern Agriculture and Religion." In *La Frontera, Papers in Honor of Patrick H. Beckett*. Paper 24. Las Cruces, N.Mex.: Archaeological Society of New Mexico, 1999.
- , ed. *Tobacco Use By Native North Americans Sacred Smoke and Silent Killer*. Norman, Okla.: University of Oklahoma Press, 2000.
- Wyman, Leland C. *Blessingway*. Tucson: University of Arizona Press, 1987.



Nazi Germany

One of the most morally repugnant regimes of the twentieth century was a pioneer in cancer prevention. Following their rise to power in 1933, the Nazis launched what historian Robert Proctor argues was the most dynamic antismoking crusade in the world, at the time. It included a comprehensive range of prohibitions on smoking that would not be rivaled for fifty years or more, and the promotion of pioneering studies

on the relationship between smoking and lung cancer, more than a decade before **epidemiological** research in the United Kingdom and the United States identified smoking as a cause of the disease.

Among the measures the Nazis introduced were bans on smoking in certain public, military, and work spaces including post offices, hospitals, government offices, and the German Air Force, the Luftwaffe. They forbade all uniformed police and special police (SS) officers from smoking on duty; imposed a similar prohibition on midwives; and, in 1944, banned smoking on all civic transport in Germany. Tobacco advertising was also restricted. It was not to appear on billboards, in sports facilities, or on public transportation. It was not to be sent by mail or accepted for publication in the text sections of newspapers or magazines. Advertising was not to associate smoking with sports, driving, or women, or to portray it as healthful or harmless. By contrast, the Nazis stigmatized smoking as the habit of Jews, decadent women, and degenerate intellectuals.

National Socialist opposition to tobacco was consistent with the regime's larger emphasis on racial hygiene. In its view, tobacco was a genetic poison that caused cancer, infertility, heart attacks, and other problems. The particular concern was that tobacco might harm the reproductive performance of the race. The Nazis believed women were particularly vulnerable to the effects of smoking, endangering not only themselves, but also their children, and consequently the German race. In their efforts to protect the race, they created an antitobacco campaign that drew on the broader policy of a doctor-directed health leadership (*Gesundheitsführung*), which emphasized health prevention and elevated the public good over individual liberties, the so-called "duty to be healthy." The Nazis also initiated wide-ranging programs of clinical, experimental, and epidemiological research into tobacco and health. In 1941 they created an Institute for Tobacco Hazards Research at the University of Jena. Its director, the physician and SS member Karl Astel, advocated opposition to tobacco as a "National Social duty" (Proctor).

Such opposition was underpinned, in part, by pioneering research that identified smoking as a major cause of cancer and other ailments. For example, in a 1939 survey of 8,000 publications, the Chemnitz physician Fritz Lickint concluded that tobacco was the cause of cancers in what he called the "smoke alley," or *Rauchstrasse*, the lips, tongue, lining of the mouth, jaw, esophagus, windpipe, and lungs. He argued that tobacco caused arteriosclerosis, ulcers, halitosis, and many other ills. It was a cause of infant mortality; an addiction, akin to morphine. Dr. Lickint suggested that passive smoking (*Passivrauchen*, as he called it) was a danger to nonsmokers.

Other physicians added to the evidence against tobacco. In 1939 the Cologne-based Franz H. Müller published a study "Tabakmissbrauch und Lungencarcinom" comparing the behavior of 96 lung cancer patients with a healthy control group. According to Müller, nonsmokers were more common in the healthy group than in the lung-cancer group; those with lung cancer smoked more than twice as much per day as the members of the healthy group; and 16 percent of the healthy group were nonsmokers, compared with 3.5 percent of the lung-cancer group. In 1943 Erich Schöniger and Eberhard Schairer of the Jena Institute added to this research. They found only 3 nonsmokers



epidemiological pertaining to epidemiology, that is, to seeking the causes of disease.



Despite leading what has been called the most dynamic antismoking crusade in the world at that time, Nazi Germany was not successful in reducing tobacco consumption during its first seven years of rule. Here a Nazi soldier is shown smoking a cigarette.

© BETTMANN/CORBIS

among a group of 109 lung cancer cases, a much lower number than would be expected in the general population. Furthermore, when they sent 555 questionnaires to the families of patients who had died of other kinds of cancer, they also found that smokers were no more likely to develop other forms of cancer than were nonsmokers, suggesting that these victims of lung cancer were not constitutionally predisposed to the disease.

Despite these findings, tobacco consumption rose dramatically for the first six or seven years of Nazi rule. This rise may have symbolized opposition to the regime. However, it was a consequence of poor enforcement, fears of alienating soldiers, economic recovery in the first six or seven years of the regime, and the efforts of the tobacco industry. The latter vigorously opposed the antitobacco crusade, creating a scientific commission to discredit Nazi-inspired antismoking efforts. Tobacco consumption began to fall in 1942, as World War II turned against Germany. Germany's low postwar mortality rate from cancer, therefore, may have had less to do with Nazi policies than the hardships of

the war and the postwar years. The one exception may be female lung cancer. The historian Robert Proctor estimates that pressure to stop smoking may have prevented 20,000 lung cancer deaths in German women.

See Also Disease and Mortality; Lung Cancer; Medical Evidence (Cause and Effect).

■ DAVID CANTOR

BIBLIOGRAPHY

- Cantor, David. "Cancer and the Nazis." *Science as Culture* 10 (2001): 121–133.
- Proctor, Robert N. "The Nazi War on Tobacco: Ideology, Evidence, and Possible Cancer Consequences." *Bulletin of the History of Medicine* 71 (1997): 435–488.
- . *The Nazi War on Cancer*. Princeton, N.J.: Princeton University Press, 1999.



New Deal

As the Great Depression deepened in the months following the 1929 stock market crash, foreign and domestic consumption of all types of American tobacco declined, causing prices to plummet. The average price of **flue-cured** tobacco (the most important variety because of its use by American cigarette manufacturers), which had not dropped below 20 cents per pound from 1920 to 1927, plunged to 8.4 cents by 1931. Revenues for tobacco growers in 1932 were down to only 40 percent of the average received during the 1920s. After 1932, any further slump in prices would have spelled economic ruin for most producers in the tobacco-growing states.

During the 1932 presidential campaign, Franklin Roosevelt endorsed a remedy called the domestic allotment plan. Heavily promoted by the agricultural economist Milburn L. Wilson, the proposal called for the government to pay growers of certain crops to reduce production voluntarily. Farmers would not only benefit from checks financed by a tax on processors, but also from price gains on the crops they did produce. Wilson also desired active grower participation in the programs. Farmers would vote in **referenda** for acceptance of the programs and help oversee implementation by choosing producer committees to ensure compliance and resolve disputes.

After winning the election, Roosevelt worked with Congress to establish the Agricultural Adjustment Administration (AAA)—the New Deal agency established by the Agricultural Adjustment Act of 1933 to administer the production control programs largely based on Wilson's allotment plan. New Dealers modified the programs over the years in reaction to farmer discontent, judicial decisions, and political influences. The result was four distinct tobacco programs for the 1933, 1934–1935, 1936–1937, and 1938–1939 periods, respectively.



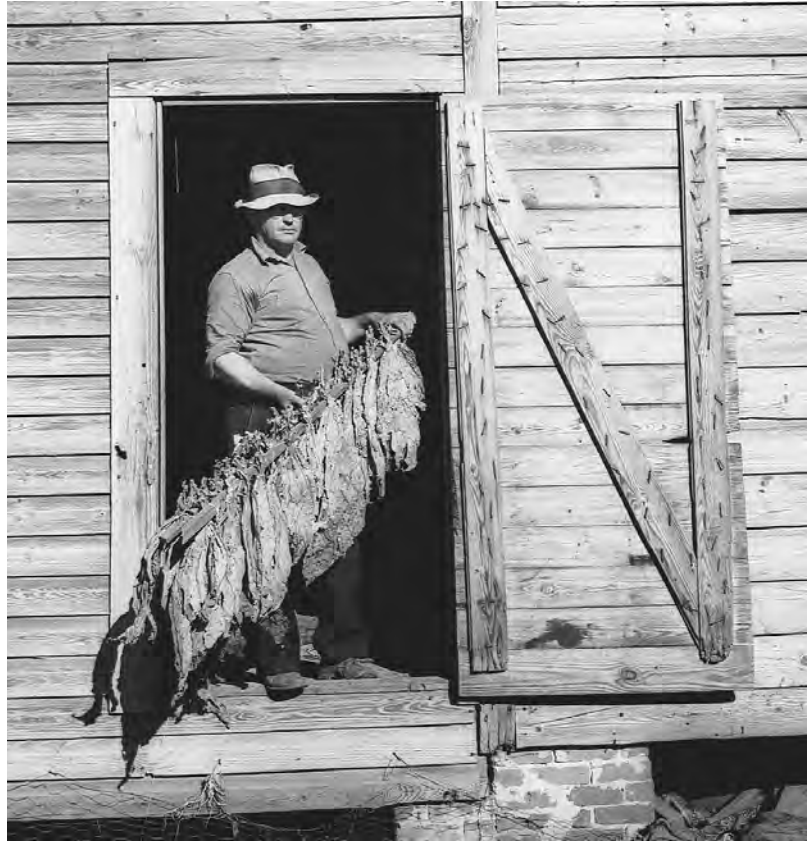
flue-cured tobacco also called Bright Leaf, a variety of leaf tobacco dried (or cured) in air-tight barns using artificial heat. Heat is distributed through a network of pipes, or flues, near the barn floor.



referendum an election where voters choose between policies or actions rather than between candidates; for the electorate to vote directly on a law or tax rather than indirectly through representatives.

New Deal programs in the 1930s helped tobacco growers weather the hard economic times of the Great Depression. This North Carolina farmer, holding leaf tobacco, represents the American farmers who benefited from government subsidies.

© CORBIS



In 1933 the AAA negotiated a marketing agreement with buyers to boost prices. After a requisite number of farmers agreed to reduce their 1934 planted acreage up to 30 percent in exchange for government payments, buyers consented to pay at least 17 cents per pound for flue-cured tobacco. The first tobacco program was a success, as evidenced by the fact that growers in North Carolina (the largest flue-cured tobacco state) received over \$85 million for their crop compared to only \$35 million in 1932.

The programs changed over the next two years as a majority of farmers rallied behind an effort to compel participation. The fact that a minority of growers did not participate but still benefited greatly from the increased prices on fully planted acreage angered many cooperating producers. Their pressure on the president and Congress resulted in the Kerr-Smith Tobacco Act of 1934. Under this law, producers were assigned a quota based on past production. Tobacco sold over a farmer's limit would have a prohibitive tax placed on it, thus creating a disincentive to overproduce. Meanwhile, the AAA continued payments to growers in exchange for reduced planting.

After the shock wore off from the Supreme Court's January 1936 ruling in the *Hoosac Mills* case (declaring the unconstitutionality of the AAA's production control contracts and processing taxes), Roosevelt supported an important expedient—the **Soil Conservation and Domestic Allotment Act (SCDAA)**. Growers would now be paid from the Treasury for planting less "soil-depleting" crops, including tobacco, and planting more "soil-building" crops such as grasses and legumes. The goal was to achieve



soil conservation the husbandry of the land; making careful use of soils to prevent erosion and maintain fertility and value.

production control indirectly under the auspices of soil conservation. Because Congress repealed the Kerr-Smith Act after the high court's decision, the SCDA was a completely voluntary program. It was only marginally effective in reducing surpluses; payments were less than under the first AAA Act, and many growers increased their planted acreage.

With a friendlier pro-New Deal Court in place, Congress passed the Agricultural Adjustment Act of 1938. Building on the existing soil conservation legislation, **marketing quotas** were added during high-surplus periods, subject to a two-thirds approval vote by the growers. This law governed the tobacco programs until World War II.

By the end of the 1930s, the AAA successfully helped American tobacco farmers weather the storm of the Depression. It enabled growers to better adjust supply to demand while maintaining prices at the 1920s average level. In North Carolina, growers' incomes tripled while land values doubled for farms holding a tobacco allotment. Tenants and sharecroppers in tobacco-growing areas were not as adversely affected by AAA policies as those in the cotton regions, due mainly to the relatively larger labor requirements for raising tobacco. While many cotton regions suffered a tremendous drop in nontenured laborers, North Carolina, for example, experienced only a 10-percent decline in tenants.

In creating the first farm subsidies programs in American history, the AAA helped most tobacco farmers avert economic calamity. The New Deal for tobacco was generally a successful holding operation until the prosperous World War II years. It also had a lasting impact on the nation's tobacco growers. The government's relationship with tobacco producers has never been the same, as farm subsidy programs have become part of America's political economy.

See Also Politics; Sharecroppers; United States Agriculture.

■ KEITH VOLANTO

BIBLIOGRAPHY

- Badger, Anthony J. *Prosperity Road: The New Deal, Tobacco, and North Carolina*. Chapel Hill: University of North Carolina Press, 1980.
- Rowe, Harold B. *Tobacco under the AAA*. Washington, D.C.: The Brookings Institution, 1935.
- Rowley, William D. *M. L. Wilson and the Campaign for the Domestic Allotment*. Lincoln: University of Nebraska Press, 1970.



Nicotine

At the beginning of the twentieth century, lung cancer was a rare medical disease. The "cigarette," a new product, was becoming popular among the wealthy and trendsetters, while in England, Professor John N. Langley of Cambridge University was exploring the effects of nicotine, a powerful chemical and effective pesticide extracted from tobacco. It was known that nicotine could be absorbed through the skin, causing



marketing quota the amount of cured leaf tobacco (usually expressed in pounds) that a tobacco grower may produce and sell in a given year. The United States Department of Agriculture began setting marketing quotas for tobacco in 1933.

sickness in humans. Understanding of how the brain and nervous system work (called “neuroscience” today) was just emerging at the beginning of the century. Little was known about the functioning of the brain or how it sent messages through the body’s network of nerve fibers to move muscles or stimulate the heart, or how these nerves transmitted information to the brain. Nicotine would become one of the chemicals used to help unravel these mysteries and jumpstart the field of neurophysiology.

By the end of the twentieth century, a groundswell of scientific research had transformed our understanding of nicotine from being an obscure poison to being an addicting drug responsible for taking millions of tobacco smokers to premature death. Many secrets of the brain and nervous system were also unraveled through the help of nicotine, because nicotine has profound effects on parts of the nervous system (now termed “nicotinic”). Thus, nicotine emerged as a vital laboratory tool in understanding the functioning of the nervous system. From the standpoint of public health, one of the most striking features in the history of nicotine science was the recognition that nicotine was an addicting drug, and that tobacco addiction was among the deadliest addictions in the world. Nearly one-half of daily smokers would die prematurely of tobacco-attributed diseases—primarily cancer, lung, and cardiovascular diseases.

What led to the development and understanding of nicotine as a deadly drug? How does nicotine affect the nervous system, and what role does it play in tobacco use? These are some of the vexing questions that scientists around the world grappled with as they learned about nicotine and its effects on the body.



Jean Nicot (c. 1530–1600), French ambassador to Portugal, 1559–1561. Brought use of tobacco to France from Portugal. “Nicotine” and “herba” nicotina, literally, Nicot’s herb, are derived from his name. HULTON ARCHIVE/GETTY IMAGES

History of Nicotine

Nicotine derives its name from Jean Nicot, a French ambassador to the Portuguese court from 1559 to 1561. The story is that the thirty-year-old diplomat paid a visit to a famous Portuguese horticulturalist, Damiao de Goes, who gave him leaves from a strange plant reputed to have marvelous effects. Nicot dried the leaves, crushed them, and sent the powder back to the queen mother Catherine de Medici, who suffered from severe headaches. Reportedly, the remedy worked, and the tobacco plant quickly gained popularity in France, making Nicot something of a celebrity. The plant came to be called the Herb of Nicot.

But it was not until the nineteenth century that the chemical nicotine was identified as a distinct ingredient in tobacco. In 1809, Louis Nicolas Vauquelin (a French chemist) extracted a “potent, volatile, and colorless substance” from tobacco which he named essence de tabac, though it was not pure nicotine that was derived. In 1828 two chemistry students at the University of Heidelberg, Ludwig Reimann and Wilhelm Heinrich Posselt, first isolated nicotine, which they named after Nicot, as the active ingredient in tobacco.

In 1905, John Newport Langley, a British physiologist, discovered that a minuscule drop of nicotine stimulated muscle fibers while a similar amount of another poison, curare, paralyzed them when administered simultaneously to anesthetized birds. Langley correctly concluded that muscles and nerves must contain what he termed “receptive substances” (now called “receptors”). In response to different chemicals,

these receptors were either activated or deactivated. Drugs that activate receptors are called “agonists.” For example, the deadly poison, curare, exerted its lethal paralysis of muscles, including those working the lungs, by blocking nicotinic receptors. But the right dose of nicotine could reactivate muscles depressed by curare. Nicotine was one of a particularly interesting type of chemicals in which a small amount (called the “dose”) could produce activation while a larger dose could produce deactivation. In other words, the strength of nicotine’s effects was closely related to the dose administered and repeated dosing led to weaker effects (or tolerance). These discoveries helped to explain how muscles could be stimulated or relaxed by the same nerve. By the end of the twentieth century, thousands more of the body’s receptor types and subtypes had been identified, helping to explain many aspects of physical, behavioral, and cognitive functioning. This led to the discovery of medicines for treating hundreds of diseases.

Nicotine’s Effect on the Body

Nicotine is the cerebrally acting drug in tobacco that defines its addicting effects, similar to the way cocaine in the coca leaf and morphine in the **opium** poppy define the addictive effects of those substances. Nicotine affects the brain by binding to specific receptors (called nicotine cholinergic receptors) on the surface of brain cells. This stimulates the cells to release neurotransmitters such as **epinephrine** and **dopamine**. Epinephrine provides the fast “kick” to the smoker, causing a release of glucose and an increase in heart rate, blood pressure, and breathing. Dopamine is fundamental to reward and pleasure pathways in the brain and is boosted by other addictive drugs, such as cocaine and heroin, as well as by nicotine.

Nicotine produces an entire range of physical and behavioral effects characteristic of addicting drugs. These effects include activation of brain reward systems (creating behavioral effects and **physiological** cravings that lead to chronic drug use), tolerance and physical dependence, and withdrawal with drug abstinence. Nicotine alters a person’s mood, feelings, and behavior, and its effects can be complicated. At very high doses, the effects of nicotine on heart rate and blood pressure can be dangerous, even fatal, but there is no conclusive evidence that modest doses of nicotine—like those received from a nicotine patch—are detrimental to health.

The fast action of inhaled nicotine makes cigarette smoking the most addictive route for administering nicotine, which reaches the smoker’s brain less than 10 seconds after inhalation. Because inhaled nicotine reaches the bloodstream so quickly, it produces an intense but short-lived spike in its levels. In contrast, nicotine from a skin patch works its way into the bloodstream slowly, over about three hours, and never reaches the peak levels that inhaled nicotine does, even when the overall dose is the same (nicotine nasal spray and nicotine chewing gum fall somewhere in the middle). Not surprisingly, smokers report that their habit is highly reinforcing (they want to keep repeating the experience), but they do not show the same enthusiasm for the nicotine patch.

Nicotine dependence is far more common than cocaine, heroin, or alcohol dependence following initial use of these drugs. Approximately



opium an addictive narcotic drug produced from poppies. Derivatives include heroin, morphine, and codeine.

epinephrine also called adrenaline, a chemical secretion of the adrenal gland. Epinephrine speeds the heart rate and respiration.

dopamine a chemical in the brain associated with pleasure and well-being. Nicotine raises dopamine levels and intensifies addiction to cigarette smoking.

physiology the study of the functions and processes of the body.

one-third to one-half of those who try smoking increase to more regular or daily use, and most daily smokers become addicted. In contrast, less than one in four persons who try cocaine or heroin develop addiction, and less than 15 percent of alcohol users develop addiction. Nicotine, alone and in combination with other substances, appears to help regular smokers control their mood and body weight and maintain attention when working. Daily smokers will claim that they function best on nicotine. Even a brief period of tobacco abstinence can leave some addicted individuals unable to complete their office- or school-work, or to perform adequately.

Tobacco Product Design

Nicotine accounts for approximately 1–4 percent of the weight of a typical tobacco leaf, which is transferred into the bloodstream by chewing products made for oral use or by inhaling the smoke of burning tobacco. Tobacco products can be viewed as nicotine storage and delivery systems. The tobacco industry has used a variety of techniques to enhance the delivery of nicotine to the user by controlling the nicotine dosing characteristics of cigarettes and other products. The modern cigarette is intricately designed, involving numerous patents for cigarette wrappers, filter systems, and processes for making “tobacco filler” from tobacco materials and other substances. William Dunn, a senior Philip Morris scientist, has eloquently described the cigarette’s function:

The cigarette should be conceived not as a product but as a package. The product is nicotine. Think of the cigarette as a dispenser for a dose unit of nicotine. . . . Think of a puff of smoke as the vehicle of nicotine. Smoke is beyond question the most optimized vehicle of nicotine and the cigarette the most optimized dispenser of smoke

(CAMPAIGN FOR TOBACCO-FREE KIDS 1998,
CITED IN HURT AND ROBERTSON).

Tobacco is a complex “cocktail” of more than 4,000 distinct chemical substances, some of which can interact to increase the addicting effects of tobacco-delivered nicotine, far above those produced by nicotine alone. For example, buffering compounds in smokeless tobacco products can alter the speed and amount of nicotine delivered in those products. The addition of **menthol** apparently allows smokers to inhale larger quantities of smoke, and nicotine, by making them feel less harsh. Techniques are also employed to control the size of smoke particles allowing the efficient inhalation of nicotine deep into the lungs where absorption is rapid and virtually complete. Among the many chemicals in tobacco smoke, scientists are only now beginning to unravel the many individual chemicals and their combinations that bolster the addictive effects of tobacco.

Nicotine Addiction “Drives” Smoking Behavior

While early antitobacco campaigns warned that cigarette smoking could be habit forming, drawing parallels with narcotics, it was not until the 1980s that leading scientists and health organizations recognized cigarettes to be addicting. The 1988 United States Surgeon General’s report focused on the role of nicotine in smoking and concluded



menthol a form of alcohol imparting a mint flavor to some cigarettes.

that “Cigarettes and other forms of tobacco are addicting,” “Nicotine is the drug in tobacco that causes addiction,” and “The pharmacologic and behavioral processes that determine tobacco addiction are similar to those that determine addiction to drugs such as heroin and cocaine.”

Smokers become very adept at getting the dose that provides the desired effects. This is associated with a phenomenon known as “tolerance,” which refers to increasing the amount of drug to experience the same effects once received at lower doses. When tolerance develops and tobacco intake increases, a person typically becomes physiologically dependent. Quitting is accompanied by withdrawal symptoms, including impaired concentration, irritability, weight gain, depressed mood, anxiety, difficulty sleeping, and persistent craving for a cigarette. During withdrawal, resumption of smoking provides rapid relief of withdrawal effects, leading the smoker to believe that smoking is a mood and performance-enhancing substance. However, resumption of smoking prevents withdrawal that occurs because physical dependence results from daily use of tobacco. Although there is individual variation, withdrawal usually peaks within a few days and subsides within a month.

Nicotine and Public Health

The World Health Organization, the United States Public Health Service, and most major health organizations worldwide endorsed efforts to make tobacco abstinence a major health priority by the end of the twentieth century. The overwhelming weight of scientific study has shown that quitting smoking at virtually any age results in a reduced disease risk and better health outcomes if tobacco-attributed disease has already developed. The results of smoking cessation are quite dramatic. For example, the risk of heart disease—the leading cause of death among smokers—is reduced nearly to that of nonsmokers within one to two years of cessation.

Preventing the development of tobacco addiction is vital to the long-term health of generations to come. But the road to longer and healthier lives is in cessation for today’s 50 million cigarette smokers in the United States and more than 1.2 billion smokers worldwide. Therefore, major governments and health organizations have launched important initiatives to motivate people to quit smoking. In recognition of the power of addiction and the need for people to quit, these organizations have also made smoking cessation treatments more accessible. Many people can now receive medical assistance to achieve freedom from tobacco by contacting the public health service of their nation, cancer institutes, the World Health Organization, and various voluntary organizations such as local cancer societies and lung health organizations.

See Also Addiction; Genetic Modification; “Light” and Filtered Cigarettes; Toxins.

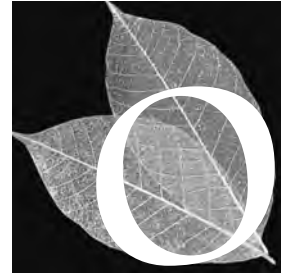
■ PATRICIA B. SANTORA
■ JACK E. HENNINGFIELD

BIBLIOGRAPHY

Benowitz, N. L. “Cigarette Smoking and Cardiovascular Disease: Pathophysiology and Implications for Treatment.” *Progress in Cardiovascular Diseases* 46 (July–August 2003): 91–111.



- Campaign for Tobacco-Free Kids. Available: <<http://www.tobaccofreekids.org/research/factsheets/pdf/0009.pdf>>.
- Centers for Disease Control and Prevention. Available: <<http://www.cdc.gov>>.
- Fiore, Michael C., Bailey, W. C., Cohen, S. J. et al. *Treating Tobacco Use and Dependence. Clinical Practice Guidelines*. Rockville, Md.: Department of Health and Human Services, United States Public Health Service, 2000.
- Hurt, R. D., and C. R. Robertson. "Prying Open the Door to the Tobacco Industry's Secrets about Nicotine: The Minnesota Tobacco Trial" *Journal of the American Medical Association* 280 (1998): 1173–1181.
- Kessler, David. *A Question of Intent: A Great American Battle with a Deadly Industry*. New York: Public Affairs, 2001.
- National Cancer Institute. Available: <<http://www.cancer.gov>>.
- Royal College of Physicians of London. *Nicotine Addiction in Britain. A Report of the Tobacco Advisory Group of the Royal College of Physicians*. London, England: Royal College of Physicians, 2000.
- United States Department of Health and Human Services. *The Health Consequences of Smoking: Nicotine Addiction. A Report of the Surgeon General*. Washington, D.C.: United States Government Printing Office, 1988.
- . *Reducing Tobacco Use: A Report of the Surgeon General*. Rockville, Md.: Department of Health and Human Services, United States Public Health Service, 2000.
- United States Department of Health, Education, and Welfare. *Smoking and Health: Report of the Advisory Committee to the Surgeon General of the Public Health Service*. Public Health Publication No. 1103. Washington, D.C.: United States Government Printing Office, 1964.
- World Health Organization, Tobacco Free Initiative. Available: <<http://www.who.int/tobacco/en>>.



Oceania

Covering half the earth's surface and containing thousands of islands, the Pacific Ocean, locus of the world region called Oceania, is so vast and inhabited by such diverse peoples with widely varying histories that almost any generalizations are problematic, and this certainly is the case regarding tobacco use.

Early History

The earliest historical record of tobacco use in Oceania dates from 1616 on islands off the northwest coast of New Guinea. Tobacco cultivation may have been introduced to the Philippines by the Spanish as early as 1575, but it was after large-scale cultivation began to flourish in Europe in the 1590s that the use of tobacco, if not always its cultivation, rapidly spread, with introductions by the Dutch in Java in 1601 and almost immediate diffusion throughout what is now Indonesia, with Halmahera becoming a center of cultivation and export (as was Java) by 1616.

So far as the Western Pacific is concerned, while there are severe limitations in the historical record, especially for the seventeenth and eighteenth centuries, it appears that the adoption of smoking and cultivation of tobacco spread generally eastward, becoming established in most of New Guinea by the time of sustained European colonial presence in the mid- to late-1800s. However, early European sources indicate that tobacco was then still unknown in many parts of eastern New Guinea and on numerous islands of Melanesia, as when German entrepreneurs found it necessary to create smoking schools in the Bismarck Archipelago in 1875. The purpose of the schools was to instruct the people regarding how to stuff and light a pipe, inhale, and then—importantly—blow out the smoke amidst much coughing and choking.

Where tobacco use was established prior to the arrival of Europeans, people in rural areas cultivated it for their own individual use or obtained it through trade from neighbors, as is still true today in most of New Guinea and Melanesia. Moreover, smoking was often highly restricted, usually to adult males and often to ritual contexts. While the




Two young women from the Solomon Islands lighting up pipes, 1950. Pipe smoking is particularly popular among the women on the islands. © HULTON-DEUTSCH COLLECTION/CORBIS

sharing of a pipe or cigarette was a widespread gesture of sociality, casual recreational smoking appears to have been a product of more modern times and forces.

Diffusion and Trade

Throughout the nineteenth century, traders, whalers, labor recruiters, colonial officials, and missionaries created, or simply amplified, a passion for smoking that soon made commercially produced tobacco (usually in the form of twists or plugs) a nearly universal trade commodity in Oceania. Spaniards had planted tobacco in Tahiti in 1774 and 1775, but by the mid-1800s the smoking of trade tobacco was rapidly becoming promoted and established throughout Polynesia, and by 1850 the island of Guam had become a major supply station for the islands of Micronesia, with large consignments also being sent out of Sydney, Australia, to serve the Western Pacific market by 1848.

Beginning in 1886, the Neu Guinea Compagnie began to establish tobacco **plantations** in colonial Kaiser Wilhelmsland on the northeastern coast of what is now Papua New Guinea. By 1888, tons of tobacco leaf

 **plantation** historically, a large agricultural estate dedicated to producing a cash crop worked by laborers living on the property. Before 1865, plantations in the American South were usually worked by slaves.

were being shipped to Germany for consumption in Europe, but periodic droughts and health problems among laborers (mostly imported Asians) added to other difficulties, and production for export ceased after 1903.

Throughout Oceania, all manufactured cigarettes were imported until recent decades, with cigarette factories being founded in Fiji first in 1955, then Papua New Guinea, Tonga, and Western Samoa in the 1960s and 1970s. Both domestic and foreign brands are now commonly smoked in those countries as well as in Cook Islands, Kiribati, Solomon Islands, and Vanuatu. In none of these countries, however, is tobacco or cigarette production a major source of export income. In fact, cigarette imports substantially exceed exports in all of the Oceanic nations for which recent information is available. Despite health-related antismoking campaigns by virtually all Pacific governments, in most areas imports of cigarettes have shown steady rates of increase over the past three decades.

Demographics of Consumption

While tobacco consumption (overwhelmingly through smoking) is **ubiquitous** in Oceania today, rates of adult smokers vary considerably. According to the World Health Organization, in 2002 nine of the 100 countries with the highest percentages of adult smokers were Pacific island nations, with Nauru (54%) at the top of the list ranging down to Samoa, in ninety-sixth place with 23 percent adult smokers. In some cases, such as French Polynesia, recent decades have seen a decrease in adult smoking, but more often rates of consumption show steady increases, especially among the younger population.

World Bank reports indicate that in almost all Pacific nations male smokers outnumber females among young adults, with the highest rates for males appearing in urban Kiribati (95%) and Tonga (60%), corresponding to 63 and 10 percent respectively, for young adult females. However, for much of Oceania, widespread smoking—indeed, smoking itself—is a relatively recent phenomenon.

See Also Philippines.

■ TERENCE E. HAYS

BIBLIOGRAPHY

- Haddon, Alfred C. *Smoking and Tobacco Pipes in New Guinea*. Philosophical Transactions, Series B, no. 232. London: Royal Society of London, 1946.
- Marshall, Mac. "An Overview of Drugs in Oceania." In *Drugs in Western Pacific Societies: Relations of Substance*. Edited by Lamont Lindstrom. Lanham, Md.: University Press of America, 1987.
- . "The Second Fatal Impact: Cigarette Smoking, Chronic Disease, and the Epidemiological Transition in Oceania." *Social Science and Medicine* 33, no. 12 (15 December 1991): 1327–1342.
- Riesenfeld, Alphonse. "Tobacco in New Guinea and the Other Areas of Melanesia." *Journal of the Royal Anthropological Institute* 81, nos. 1–2 (1951): 69–102.
- World Bank. "Economics of Tobacco Control: Country & Regional Profiles and Economics of Tobacco Briefs." Available: <<http://www1.worldbank.org/tobacco/countrybrief.asp>>.



ubiquitous being everywhere; commonplace; widespread.



Opium

Before concerted international efforts appeared in the first decades of the twentieth century to crack down on opium, the substance was widely available around the world.

In Europe, opium could be dissolved in beer, wine, or vinegar or simply taken as an infusion prepared out of boiled poppy heads, while powdered opium was used in suppositories and raw opium was rolled into pills and preparations such as laudanum. In the Middle East and South Asia, it was more often than not ingested orally. In China and parts of South East Asia, however, opium was frequently mixed with tobacco. Javanese opium, for instance, was blended with roots of local plants and hemp, minced, boiled with water in copper pans, and finally mixed with tobacco. This blend was called *madak*.

Madak was first introduced to Taiwan (Formosa) between 1624 and 1660. The mixture was prepared by the owners of smoking houses and brought prices significantly higher than for pure tobacco. Opium house owners also provided the smoking implement: a bamboo tube with a filter made of coir fibers, produced from local coconut palms. The habit of smoking *madak* spread throughout the coastal provinces of south China, even though it never exceeded the popularity of tobacco.

A precise chronology of *madak* is not possible in the absence of reliable source material, although the first references to the blend date from the early eighteenth century and come from Fujian and Guangdong, the same ports of entry as for tobacco. “The opium is heated in a small copper pan until it turns into a very thick paste, which is then mixed with tobacco. When the mixture is dried, it can be used for smoking by means of a bamboo pipe, while palm fibers are added for easier inhalation.” The earliest description of pure opium smoking dates from 1765.

The reasons for a shift away from *madak* toward pure opium after the 1760s are complex. One hypothesis is that pure opium was used to enhance sexual performance. Another explanation is that an early edict against the smoking of *madak* by the Yongzheng emperor in 1729 prompted local users to resort to pure opium instead, the use of which could be justified for medical reasons. It is also possible that the smoking of pure opium served as a marker of social status, as large amounts of money could be spent in one evening on pure opium. The quality of Patna opium—produced in India under British control—improved after poppy cultivation in Bengal was monopolized by the East India Company in 1793, a factor which may also have prompted some *madak* smokers to smoke opium on its own.

Throughout the eighteenth century, however, *madak* remained widespread, as pure opium would only become the norm in the nineteenth century with the lowering of the cost of opium and the spread of local poppy cultivation in China. Tobacco thus allowed opium to become part of a thriving smoking culture well before the “First Opium



Two Indonesian men smoking opium. Before worldwide efforts to reduce opium use began in the first decades of the twentieth century, it was widely available around the world. In China and parts of Southeast Asia, it was frequently mixed with tobacco. © SEAN SEXTON COLLECTION/CORBIS

War” between Britain and China (1839–1842), which revolved partly around the issue of the opium trade.

See Also Alcohol, Tobacco, and Other Drugs.

■ FRANK DIKÖTTER

BIBLIOGRAPHY

- Dikötter, Frank, Lars Laamann, and Xun Zhou. *Narcotic Culture: A History of Drugs in China*. Chicago: Chicago University Press, 2004.
- Newman, Richard K. “Opium Smoking in Late Imperial China: A Reconsideration.” *Modern Asian Studies* 29 (October 1995): 765–794.
- Spence, Jonathan D. “Opium Smoking in Ch’ing China.” In *Conflict and Control in Late Imperial China*. Edited by Frederic Wakeman and Carolyn Grant. Berkeley: University of California Press, 1975.



Origin and Diffusion

The tobacco of worldwide commerce belongs to the species *Nicotiana tabacum*. It belongs to the family Solanaceae, which includes the potato, tomato, eggplant, petunia, and many other cultivated and ornamental plants. The genus *Nicotiana* is one of about ninety genera in the family and consists of about sixty-five species in the world, three-fourths of them native to North and South America, one-fourth native to Australia,



psychoactive a drug having an effect on the mind of the user.



alkaloid an alkaloid is an organic compound made out of carbon, hydrogen, nitrogen, and sometimes oxygen. Alkaloids have potent effects on the human body. The primary alkaloid in tobacco is nicotine.

and a single one, *N. africana*, discovered in the 1970s on a few mountain tops in the Namibian Desert of Namibia. In Africa, the continent where *Homo sapiens* evolved, the human interaction with this genus was nonexistent until the sixteenth century. Humankind became aware of these plants and their **psychoactive** properties about 50,000 years ago when Australia was populated, and approximately 10,000 to 15,000 years ago when the Americas south of the Arctic were being populated.

Perhaps a dozen species of *Nicotiana* have been actively used by humankind, but the remainder have evidently never been seriously used for smoking or chewing, because initial experimentation likely revealed the low nicotine content or the presence of other bitter or more immediately poisonous **alkaloids**.

The various species of *Nicotiana* range along a spectrum from strictly wild species to a completely domesticated one. *Nicotiana tomentosiformis*, which grows in the Andes, is a wild species that grows and propagates entirely on its own, without any deliberate intervention on the part of humans (although human modification of habitats in the last 10,000 years may affect its distribution). Conversely, *Nicotiana tabacum*, which is by far the most widespread and important of the tobaccos in an economic sense, depends entirely on humankind for its continuing existence, and cannot persist for more than a generation or two without being deliberately planted and protected from weeds.

Australia

In Australia, at least the following native species have been used for chewing tobaccos before the arrival of Europeans (and the New World tobaccos): *N. gossei*, *N. ingulba*, *N. simulans*, *N. benthamiana*, *N. cavicola*, *N. excelsior*, *N. velutina*, and *N. megalosiphon*. Agriculture never developed in Australia; but whether or not any of these were sometimes deliberately planted is not known, and none were truly domesticated. In addition, since the mid-1800s *N. glauca* has become widely naturalized and has been used for chewing. In the 2000s, *N. tabacum* is widely cultivated.

North and South America

In North America and Mexico, Amerindians used certain of the native *Nicotiana* species for their psychoactive effects. The range where these wild tobaccos can be found may involve some spread beyond their original native ranges due to human influence. In North America, one species, *N. quadrivalvis* (previously called *N. bigelovii*), was “semi-domesticated,” which means it evolved because of human selection for particular traits, but with only a few modifications, so that it could probably exist in the wild; after generations of cultivation by Amerindians, selection had taken place to produce plants with larger flower parts, the parts richest in nicotine. All wild species of *Nicotiana* have the fruit divided into two chambers, but in *N. quadrivalvis*, the number of cells had been increased to three or four. This intensive use also expanded its original range from California eastward to the Great Plains from Texas to the upper Missouri River, and it was the tobacco that the explorers Meriwether Lewis and William Clark encountered being cultivated by the Mandan Indians.

Only two species, *N. rustica* and *N. tabacum*, spread out from a single continent of origin in prehistoric times, and these are the only ones to spread around the world in general cultivation. The introduction of these two into Europe after Christopher Columbus' explorations can be dated quite precisely by both printed descriptions and illustration because they were grown and noted by botanists of the day. *N. tabacum*, for example, was first illustrated in 1571 by Pierre Pena and Mathias de l'Obel (1571), and this provides incontrovertible evidence of the species that had reached Europe by this time.

Investigating the spread of *N. rustica* and *N. tabacum* in America up to the time of Columbus presents serious difficulties because of the lack of a written record, and because these soft-bodied plants are mostly absent from the archeological record except under the most favorable circumstances for preservation. The presence of pipes or representations of smoking on pottery or murals can demonstrate the existence of tobacco (or other plants used for the same purposes) at a certain place or time, but usually not the species being used. Researchers are fairly certain that, in general, by the time of Columbus *N. tabacum* was present in eastern South America, Central America, Mexico, and the West Indies; while *N. rustica* was being cultivated in Mexico and the eastern United States as well as the Andes of South America.

Researchers have proposed a number of theories for the origin of these two species, placing their origin in various areas. The origin of both *N. rustica* and *N. tabacum* in Andean South America had been more or less firmly established by 1954 with the publication of the botanist Thomas Harper Goodspeed's careful treatment of the entire genus, "The Genus *Nicotiana*," based on his thorough knowledge of the morphology of the species, their genetic behavior, and the areas where they were found. An important consideration is that both *N. rustica* and *N. tabacum* have twenty-four pairs of chromosomes, and are termed tetraploids, because they have twice the number of chromosomes as their nearest relatives, termed diploids, which have twelve pairs. Scientists soon realized that these two species must have resulted from the **hybridization** of two other species with the subsequent doubling of the chromosome number in the hybrid.

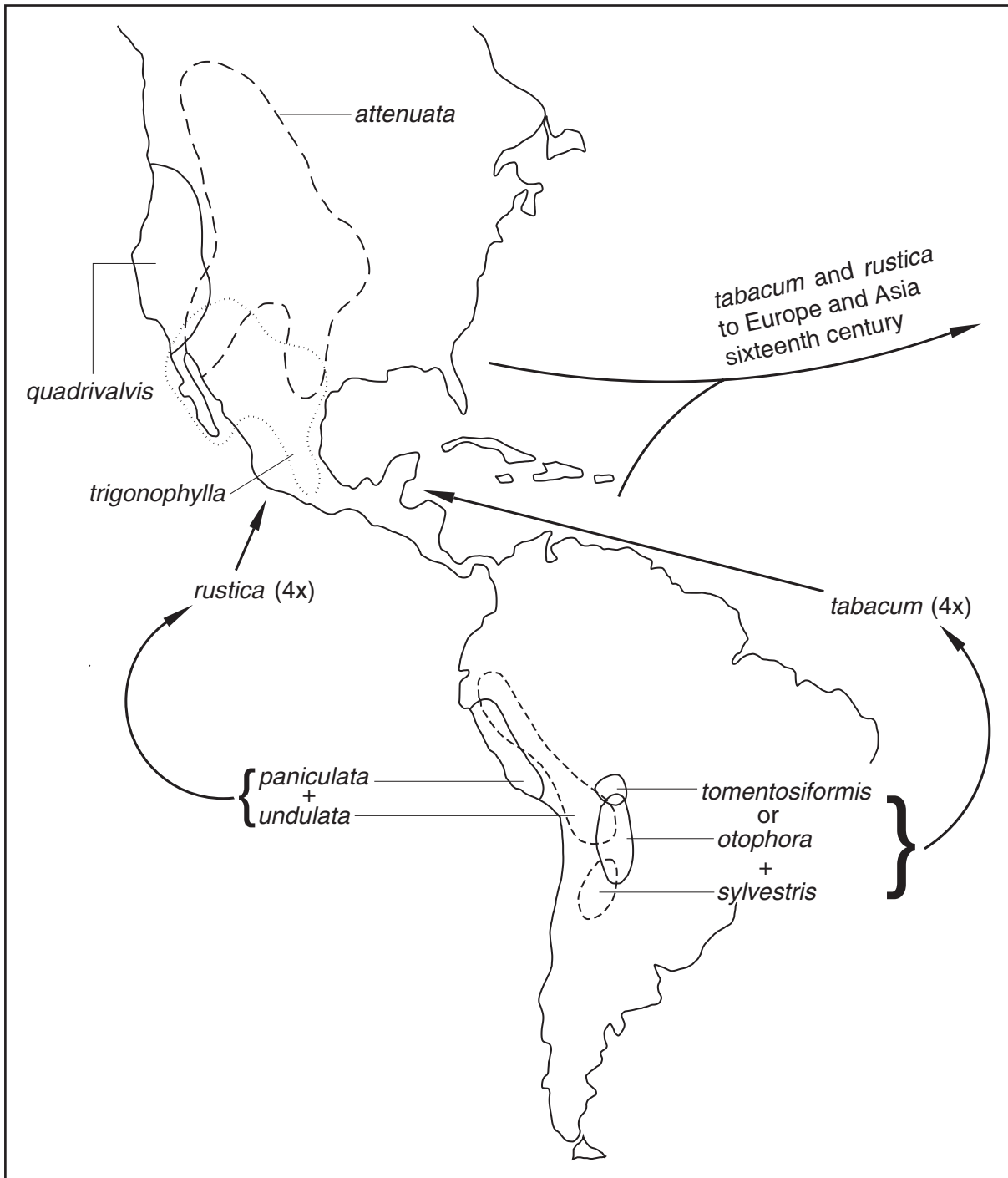


hybridization the practice of cross-breeding different varieties of plants or animals to produce offspring with desired characteristics.

Nicotiana rustica

With traditional breeding experiments and modern DNA sequence analysis, the origins of *N. rustica* can be more carefully elucidated. Before Columbus, *N. rustica* occurred in the United States and northern Mexico, as well as in the Andes from Ecuador to Bolivia. However, it has never been found as a truly wild-growing plant in Mexico or the United States as it is in the Andes around human habitations. Since it is a hybrid, with subsequent chromosome doubling between *N. paniculata* and *N. undulata*, its area of origin must be within the natural range of these two wild species in Peru, Bolivia, and Argentina (see Map).

N. paniculata is an annual herbaceous or slightly woody species up to 2 meters or more tall, found in a wide altitudinal range, from 300 to 3,000 meters, in western Peru. *N. undulata* is a fleshy, sticky annual herb up to 2 meters tall, from very dry, barren areas, from 2,700 to 4,200 meters altitude in Peru, Bolivia, and Argentina, and is especially common in weedy areas around settlements. The original



Evolutionary geography of North American tobacco species. RONALD STAUBER

hybridization almost certainly must have taken place in Peru, with subsequent spread due to humans. It is impossible to know whether the hybrid *N. rustica* developed before or after human arrival in the Andes. The fact of a human presence may have inadvertently led to the hybridization of *N. paniculata* with *N. undulata* to create *N. rustica*. Humans may have modified the range of the wild species (for example, by gathering certain specimens) and created exactly the sort of habitats in which *N. rustica* prospers: disturbed soil rich in nutrients

(especially nitrogen). Such habitats occur around human habitations and the pens of their animals, and in the 2000s *N. rustica* grows in such sites without deliberate planting.

The time and route of dispersal of *N. rustica* north to Mexico and the eastern United States is difficult, if not impossible, to reconstruct, but it was well established in many cultures by the time of Columbus. None of the higher altitude Andean domesticated tubers like the potato (*Solanum tuberosum*) or oca (*Ullucus tuberosus*), for example, ever made it to suitable habitats in the highlands of Central America or Mexico because of the impossibility of passing through the lowland tropical jungles of Panama if the plants were to be travel by the slow route of being traded from village to village. Some domesticated plants that could be grown in the humid tropical lowlands easily passed through this area, the prime example being corn (or maize, *Zea mays*), which spread easily from its area of origin in Mexico throughout the tropical and temperate parts of the Americas, including into South America. More direct dispersion via pre-Columbian Pacific trade routes by boats is the likely means that *N. rustica* arrived in Mexico from the northern Andes.

Although *N. rustica* was in use in eastern North America by Amerindians at the time of Europeans' arrival and was even the first commercial tobacco to form the economic basis of the Virginia colony, it would become overshadowed by *N. tabacum*, which is the overwhelmingly predominant cultivated tobacco throughout the world in the twenty-first century. The prehistory of *N. tabacum* was somewhat similar to that of *N. undulata* in that it is a hybrid with chromosome doubling, and had spread widely enough to be the tobacco which Columbus probably encountered in the West Indies on his first trip to the region.

Nicotiana tabacum

One of the parental species of *N. tabacum* is *N. sylvestris*, native to northwestern Argentina and southern Bolivia. It is an annual herb with long, narrowly tubular white flowers that open at night and are pollinated by hawk moths. The leaves are large, somewhat similar to those of tobacco, but its only use is as an ornamental in flower beds. The other parent must belong in the *Tomentosae*, a group of six Andean species from Peru to northwestern Argentina which are short-lived shrubs or small trees with short pinkish flowers open in the day and pollinated by bees and hummingbirds (the majority) or open mainly at night and pollinated by bats (*N. otophora*). The prime suspect for the second parent has been *N. otophora*, a shrub from central Bolivia to northwestern Argentina, which grows in seasonally dry forests or along washes in more arid areas of desert thorn-scrub. It is the only species of the group that also grows in the range of *N. sylvestris*. *Nicotiana otophora* has leaves that look very much like those of tobacco, and in Bolivia they are even used occasionally for smoking when tobacco from *N. tabacum* is not available. Based on the morphological characters, and on crossing experiments, Goodspeed concluded that *N. otophora* was the likely second parent of *N. tabacum*.

However, studies conducted in the 1990s of the DNA sequences have indicated that the second parental species is not *N. otophora* but rather *N. tomentosiformis*, a soft-woody shrub or small tree 1.5 to 5 meters tall, from the humid montane forests of northern Bolivia and



southern Peru on the slope facing the Amazon lowlands. *N. tomentosiformis* has large, tobaccolike leaves, and even smells like tobacco both when fresh and when dried. How and when *N. tomentosiformis* and *N. sylvestris* came in contact to hybridize is a mystery, and it is unclear how the hummingbird-pollinated *N. tomentosiformis* would have hybridized naturally with the hawk-moth-pollinated *N. sylvestris*. Even during the climatic changes during the Pleistocene Age, it is highly unlikely that the range of the two species could have allowed them to come into contact naturally.

Scientists have hypothesized that *N. tabacum* originated several million years ago, but this seems almost impossible because of the biology of the species: *N. tabacum* is not known to exist as a wild plant anywhere in the world, despite the fact that it is cultivated on a vast scale worldwide and has the opportunity to escape and become naturalized in innumerable possible habitats. A species formed millions of years ago and capable of persisting until humans could begin cultivating it would certainly continue to exist to this day as a wild plant in some area.

A much more likely possibility is that the second parent of *N. tabacum* is a currently unknown species of *Nicotiana* similar to *N. tomentosiformis*, but growing in southern Bolivia. Vast areas in southern Bolivia have not been explored botanically; there are series of parallel mountain ranges where the more humid forested ridges could easily harbor a species of *Tomentosae*, which would be in position to occasionally hybridize with *N. sylvestris*, known to grow in the intervening dry valleys.

In the 1990s, researchers discovered that two other cultivated plants have their origin in this region. The tree tomato, *Solanum betaceum* (also known as *Cyphomandra betacea*), was discovered in the 1990s to grow wild in this region, finally solving the question of the origin of a species which had long been cultivated in the Andes of Ecuador and Colombia. The origin of the peanut, *Arachis hypogaea*, presents a parallel situation to that of tobacco since it is a cultivated plant not known in the wild, and botanists have long known that it must be a tetraploid hybrid of two wild diploid species. It was only in the 1990s that researchers definitively established the origin of the peanut. The peanut is descended from *A. duranensis*, a widespread species from northwestern Argentina, southeastern Bolivia, and westernmost Paraguay, and from *A. ipaensis*, a species only known from two collections in southern Bolivia made in 1971 and 1977.

See Also Missionaries; Sailors.

■ MICHAEL NEE

BIBLIOGRAPHY

- Goodspeed, Thomas H. "The Genus *Nicotiana*." *Chronica Botanica* 16 (1954): 1–536.
- Krapovickas, Antonio, and William C. Gregory. "Taxonomía del Género *Arachis* (Leguminosae)" (Taxonomy of the genus *Arachis* [Leguminosae]). *Bonplandia* 8 (1994): 1–186.
- Peterson, Nicolas. "Aboriginal uses of Australian Solanaceae." In *The Biology and Taxonomy of the Solanaceae*. Edited by John G. Hawkes, Richard N. Lester, and A. D. Skelding. London: Academic Press, 1979.



Ostracism

Tobacco users have been ostracized at different times and in different contexts since 1492, when the explorer Christopher Columbus and his sailors became the first Europeans to encounter what quickly became known as “the devil’s weed.”

When Columbus and his crew landed in the New World, the indigenous Arawak Indians offered them gifts of “some dried leaves which are in high value among them” (Columbus 1990). To Columbus’s disgust, some of his sailors were soon emulating the Indians and “drinking smoke” themselves. One of them, Rodrigo de Jerez of Ayamonte, Spain, reportedly became the subject of the first legal action against a smoker. De Jerez took a supply of tobacco from present-day Cuba back to his home village. It is said that when he lit up for the first time in public, the townspeople—alarmed by the smoke issuing from his mouth and nose—assumed he had been possessed by the devil and turned him over to the authorities.

A broad fraternity of kings, emperors, popes, and potentates condemned tobacco as a **heathen** import in the sixteenth and seventeenth centuries. Ecclesiastic authorities, both Christian and Islamic, associated the plant with barbarism and idolatry. Smokers faced excommunication, imprisonment, and even death. An imperial edict issued in China in 1638 made the use or distribution of tobacco a crime punishable by decapitation. In Russia, smokers were flogged, the nostrils of repeat offenders were slit, and persistent violators were exiled to Siberia. Sultan Murad IV of Turkey had smokers executed as infidels.

Tobacco had defenders, of course. Among them was Sir Walter Raleigh (1554–1618), who popularized the habit among the upper classes in England. According to legend, when one of Sir Walter’s servants saw him smoking for the first time, he assumed he was burning up from within and doused him with a bucket of water. The story illustrates how strange, even alarming, the act of smoking must have seemed to Europeans of the sixteenth century.

By the eighteenth century tobacco was commonplace but it was still far from being universally accepted. Religious leaders denounced the plant as a “dry inebriant”—a substance that could induce drunkenness even through it was smoked rather than swallowed. The link between tobacco, alcohol, and sin became even more pronounced after the emergence of a temperance movement in England and the United States in the nineteenth century. Temperance advocates warned that “Smoking leads to drinking and drinking leads to the devil” (Lawrence 1885).

During the Victorian era (bracketed by the reign of Queen Victoria in England from 1837 to 1901), tobacco users began to provoke censure on the grounds of aesthetics as well as morality. Changing standards of hygiene led to complaints about the smell and detritus generated by pipes and cigars. Chewing tobacco, once the most popular form of tobacco in the United States, rapidly fell out of favor, its exit hastened by anti-spitting ordinances. Cigarettes gained social acceptance partly because they were viewed as less offensive in close quarters than other kinds of tobacco.



heathen any person or group not worshipping the God of the Old Testament, that is, anyone not a Jew, Christian, or Muslim. May also be applied to any profane, crude, or irreligious person regardless of ethnicity.

In the late twentieth century, people who did not smoke became increasingly less tolerant of those who did. Smoking came to be seen as antisocial behavior. AP/WIDE WORLD



Cigarettes penetrated into all social classes in southern and eastern Europe in the late nineteenth century, but they were disdained as “beggar’s smokes” in western Europe and the United States. Britain’s Prince of Wales (later King Edward VII) took up the habit in the 1880s, giving it an aura of glamour in England. In the United States, however, the cigarette was a lowly, disreputable product. Respectable men smoked pipes or cigars; respectable women did not smoke at all. Most Americans would have agreed with Rev. William “Billy” Sunday, the popular evangelist, who once said, “There is nothing manly about smoking cigarettes. For God’s sake, if you must smoke, get a pipe” (Sunday 1915).

After World War I, cigarette smoking expanded socially, across gender and class lines, and spatially, into public spaces. It began to seem as if nearly everyone smoked. In fact, cigarettes were still a habit of the minority in most countries. In the United States, for example, only 42 percent of adult Americans smoked cigarettes in 1965, at the height of the Cigarette Age (roughly 1930 to 1970). Although a sizable proportion, this was still a minority. Nonetheless, cigarettes were embedded in the cultural landscape, accepted as emblems of modernity and sophistication even by nonsmokers.

In the late twentieth century, people who did not smoke became increasingly less tolerant of those who did. A new generation of antitobacco activists used popular media to convey the message that smokers damaged not only their own health but also that of others. The act of smoking—once an expression of sociability—was redefined as antisocial behavior. Perhaps more tellingly it was also identified with yellow teeth and foul-smelling breath. “You can’t talk to a 15-year-old about getting lung cancer in his or her 50s, but they get it when you say kissing a smoker is like kissing an ashtray,” commented Joseph Califano, president of the national Center on Addiction and Substance Abuse at Columbia University (Bowman).

Smokers’ rights groups have attempted to counter these trends by associating the freedom to smoke with basic human liberties. They use

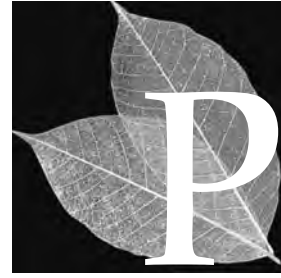
epithets such as “nanny staters” and “health Nazis” to depict anti-smoking activists as scolds and busybodies. In this view, tobacco is a marker that separates the tolerant from the puritanical.

See Also Antismoking Movement Before 1950; Antismoking Movement From 1950; Psychology and Smoking Behavior; Smoking Clubs and Rooms; Social and Cultural Uses.

■ CASSANDRA TATE

BIBLIOGRAPHY

- Bowman, Lee. “40 Years Ago, Government Linked Smoking to Cancer.” *Seattle Post-Intelligencer* (10 January 2004): A2.
- Columbus, Christopher. *Journal of the First Voyage of Christopher Columbus*. B. W. Ife, edited and translated by Westminster, England: Aris and Phillips, Ltd., 1990.
- Dickson, Sarah A. *Panacea or Precious Bane: Tobacco in Sixteenth Century Literature*. New York: The New York Public Library, 1954.
- Lander, Meta [Margaret Woods Lawrence]. *The Tobacco Problem*. Boston: Lee and Shepard, 1886.
- Sunday, William. *Omaha Sermons of Billy Sunday, September–October, 1915*. Omaha, Nebr.: Omaha Daily News, 1915.
- Tate, Cassandra. *Cigarette Wars: The Triumph of “the Little White Slaver.”* New York: Oxford University Press, 1999.



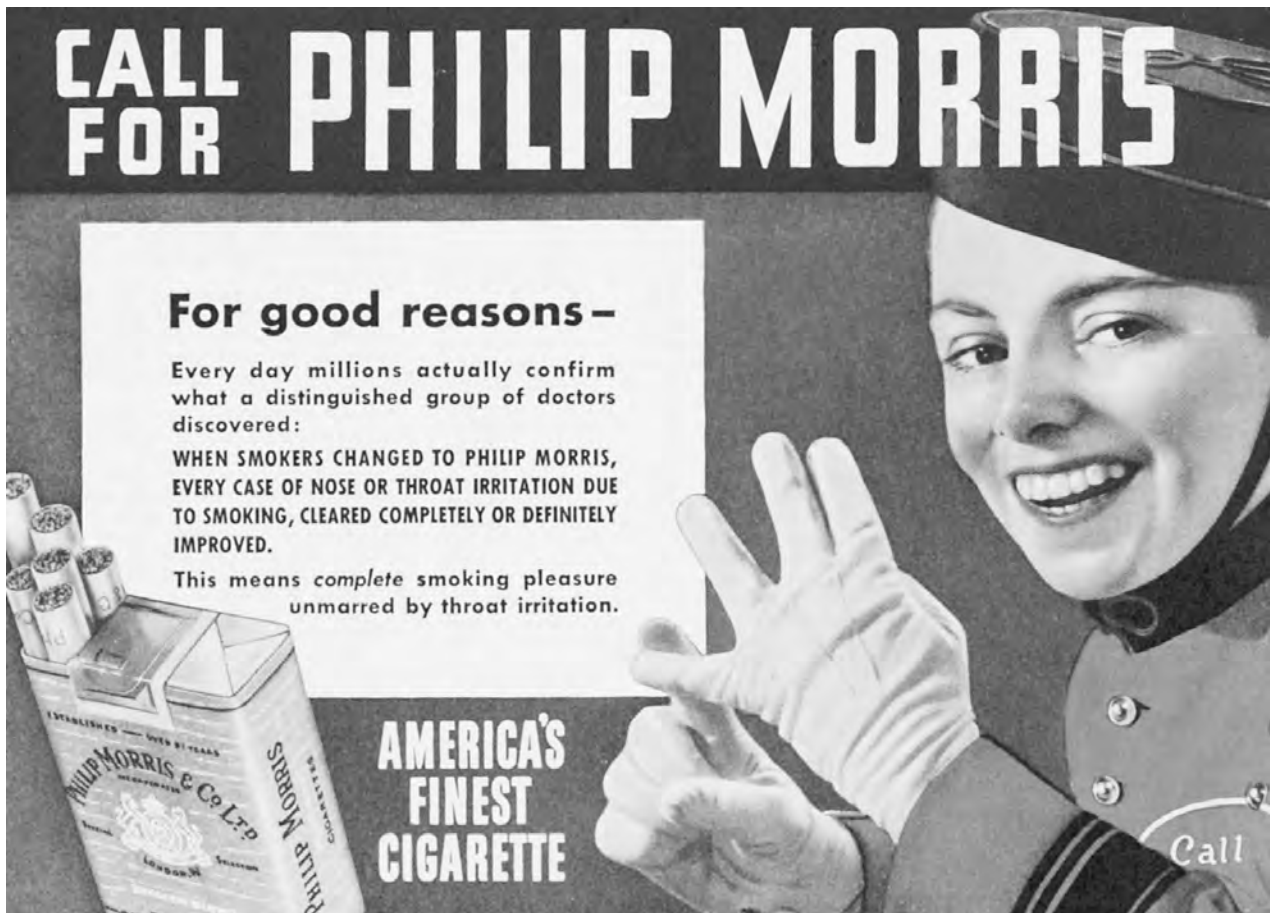
Peace Pipe See Calumets; Native Americans; Pipes.



Philip Morris

Philip Morris is the largest cigarette maker in the world. The company has historical roots dating to 1847, when a London tobacconist and entrepreneur, Philip Morris, Esq. recruited expert hand rollers of cigarettes from Russia, Turkey, and Egypt. Present cigarette manufacturing methods have little resemblance to those early days when an experienced roller would turn out 2,500 a day. Today, a single cigarette machine in the primary Philip Morris manufacturing plant in Richmond, Virginia, can produce more than 4,000 cigarettes a minute, or two billion a year. That plant alone, one of more than fifty Philip Morris cigarette manufacturing facilities in the world, produces more than 245 billion cigarettes a year.

In 1919, the company was taken over by its American shareholders, and its headquarters moved to the United States. In the 1930s company president Reuben Ellis hired the Milton Biow advertising agency, which created a popular radio advertising campaign featuring a bellhop, Johnny Roventini ("Little Johnny"), and the slogan "Call for Philip Morris." The success of Philip Morris during the twentieth century was brought about by the marketing of a single brand, Marlboro, which was introduced in the late 1920s as a woman's cigarette, with advertising slogans such as "Mild as May" and "Red tips for your pretty lips." In the 1950s, under the direction of marketing expert George Weissman, Marlboro achieved enormous appeal when the company emboldened the package design with a medallion-like chevron and revamped the advertising image to one of rugged cowboys and the wide open spaces, television commercials for which were accompanied by the theme song from the film, *The Magnificent Seven*.



Philip Morris' "Little Johnny" bellhop advertising campaign made "Little Johnny" a popular fixture of radio with the "Call for Philip Morris" ads. This advertisement, from 1939, touts the comparative health advantages of Philip Morris over other brands of cigarettes as cited by "a distinguished group of doctors."

© BETTMANN/CORBIS

At the same time, doubtless in response to the growing scientific evidence that cigarette smoking caused lung cancer and other serious health problems, Philip Morris added a filter to Marlboro (and its other brands). Today more than 98 percent of those who smoke buy filtered cigarettes, which confer no health protection over other brands. Joseph Cullman was president of Philip Morris from 1957 to 1978 when Marlboro's popularity skyrocketed. During his tenure the Marlboro box, filter, and leaf mix were developed, and by 1976 Marlboro was the largest-selling cigarette in the United States. Today, Marlboro is the top-selling cigarette in the world.

In the 1960s Philip Morris sponsored many of the most successful television programs including *Perry Mason*, *The Dobie Gillis Show*, *Rawhide*, *CBS News with Walter Cronkite*, and National Football League telecasts. When cigarette ads were banned from television in 1971, Philip Morris created and sponsored sporting events such as the Marlboro Grand Prix auto race, the Marlboro Cup thoroughbred race, and the Virginia Slims Women's Tennis Circuit, the televising of which successfully circumvented the broadcast ban on cigarette advertising. Weissman, who ascended to the chairmanship in 1978, stepped up Philip Morris' sponsorship of fine arts, and the company's logo began appearing in association with operas, ballets, and art exhibitions.

Philip Morris was the first cigarette manufacturer to recognize the need to shape its identity through diversification. In 1957 it purchased

a producer of flexible packaging. It acquired the Miller Brewing Company in 1969 and the 7-Up Bottling Company in 1976 (both since sold). Moving aggressively into consumer packaged goods, Philip Morris acquired General Foods in 1985 and Kraft Foods in 1988 by means of hostile takeovers. Such diversification enabled Philip Morris to regain clout with television networks, which were covetous of the enormous outlay of advertising dollars for the company's many food products. By 1990, in an effort to further downplay its identity as primarily a cigarette manufacturer, Philip Morris had dropped the word *tobacco* from its name. In 2002 the company renamed itself Altria, diminishing the profile, on paper at least, of the domestic and international Philip Morris cigarette manufacturing divisions. Despite diversification, the company continues to earn half its profits from cigarette sales. During the 1990s, profit from the Marlboro brand alone exceeded the combined profit of the 3,000 Kraft and General Foods products.

Today, Marlboro accounts for nearly 40 percent of all cigarettes sold in the United States, and Philip Morris' market share of total U.S. cigarette sales is nearly 50 percent. Marlboro is the largest-selling cigarette in the world. Perhaps the biggest threat the company faces is what it describes in its 2001 annual report as "management of our litigation challenges," namely, lawsuits brought by state attorneys general, the U.S. Department of Justice, and numerous personal injury attorneys representing persons claiming to have been made ill by smoking. Although the Master Settlement Agreement negotiated with the major tobacco companies by the state attorneys general in 1998, as well as other cash settlements, resulted in a major financial outlay, the good news for the company was that it resulted in a legitimizing financial relationship with the states and provided a measure of stability for shareholders well past the year 2020. Altria has also admitted to the harmfulness of smoking on its corporate website, while also increasing its contributions to charity. Lone among the cigarette companies, it has campaigned for regulation by the Food and Drug Administration, a strategy that could result in greater security for the company by inhibiting the marketing campaigns of competing cigarette manufacturers.

■ ALAN BLUM
■ LORI JACOBI

BIBLIOGRAPHY

- Altria Group, Inc. 2002 Annual Report*. New York: Altria Group Inc. 2003.
- Blum, Alan. "The Marlboro Grand Prix: Circumvention of the Television Ban on Tobacco Advertising." *New England Journal of Medicine* 324 (1991): 913-917.
- Kluger, R. *Ashes to Ashes: America's Hundred-Year Cigarette War, the Public Health, and the Unabashed Triumph of Philip Morris*. New York: Vintage Books, 1997.
- Philip Morris Companies Inc. Annual Report, 1985*. New York: Philip Morris Companies, Inc., 1986.
- "PM's Art Programs Tour the World." *Philip Morris News* 17, no. 7 (November 1976).
- White, Larry. *Merchants of Death: The American Tobacco Industry*. New York: Beech Tree Books, 1988.



Philippines



Named after King Philip II of Spain, the Philippines is a sprawling, irregular shaped archipelago, located some 500 miles off the southeast coast of Asia, that consists of approximately 7,100 islands, with a total land area of 114,830 square miles. Roughly two-thirds of the land mass is found on two large islands, Luzon (40,420 square miles, in the north) and Mindanao (36,537 square miles, in the south). Bounded on the west and north by the South China Sea, on the east by the Pacific Ocean, and on the south by the Celebes Seas and the coastal waters of Borneo, the Philippines is a mountainous country with narrow and interrupted coastal plains. Its physical geography was an important factor in shaping tobacco's role in the islands. In the lowlands, where tobacco is cultivated, there is an abundance of water and differences in temperature are slight, favoring the plant's growth. The soil is fertile and the tropical climate is suitable for the cultivation of tobacco and other agricultural products. While many local rainfall patterns exist, in general, there are two seasons—dry in winter and spring and rainy in summer and autumn—typical to Monsoon Asia.

In the twenty-first century, tobacco is cultivated, but it is a minor export item that pales in comparison with its past. The trends in the Philippine tobacco industry contrast starkly with historical evidence; for example, employment in the sector from 1975 to 1997 has fallen from 4 percent to 1 percent of the total employed population.

Tobacco's Introduction

The Spanish introduced a number of species of the genus *Nicotiana* in the Philippines from America in the last quarter of the sixteenth century. The islands were first encountered by a European expedition that recorded the first successful circumnavigation of the globe in the early sixteenth century. Led by Ferdinand Magellan, a Portuguese captain, this Spanish expedition inaugurated a long period of contact, exchange, and colonial relationship between Spain and the Philippines that would last from the early sixteenth century to the end of the Spanish-American War in 1898. This early contact was driven by Spain's political, economic, and religious objectives to compete with Portugal and claim territory, wealth, and Christians around the globe. These two European and Christian powers sought to monopolize and control the access to spices—the cloves, nutmeg, and mace—found to the south of the Philippines in the Indonesian Archipelago. In this context of European contest and, particularly for the Spanish in the southern islands of the Philippine Archipelago, the Christian Europeans encountered some indigenous societies that had fervently embraced Islam and would contest and resist the Christian presence.

The introduction of tobacco in the Philippines occurred, in all probability, after the Spanish established the city of Manila on the island of Luzon in 1571. Two primary species of tobacco were introduced at this time: *N. rustica* and *N. tabacum*. Based on the subsequent diffusion of tobacco from Luzon to China, it was *tabacum*, the typical species from America, that was more widely diffused and accepted on Luzon. Spanish imperial governmental officials and missionaries are the two agents



A barefoot worker sorts tobacco leaves to be sent to the rolling department in the la Flor de la Isabel factory in suburban Paranaque, south of Manila, July 1997. La Flor is one of the biggest of the Philippines cigar companies. AP/WIDE WORLD PHOTOS

that have been named as responsible for tobacco's introduction into the Philippines. While both hypotheses are plausible, the missionaries probably were more responsible because of their New World experience in organizing its cultivation on landed estates and incorporating its commercialization to support their activities.

Habits, Diffusion, and Consumption

The Philippine indigenous population practiced a number of social rituals and intergroup exchange relationships, which may have aided in the rapid acceptance and diffusion of the smoking habit and the use of tobacco in the islands. They possessed the habit of chewing betel and quickly incorporated the habit of smoking and the exchange of tobacco in receiving visitors, the passing of time, and the provision of pleasure. The name betel applies to two different plants—the fruit (or nut) of the areca palm and the leaf of the betel pepper or pan—that are combined with lime (chunam) and perhaps an aromatic spice such as cardamom. People throughout the

Philippines and many parts of Asia habitually chewed (and chew) betel. When masticated, it produces a flow of brick-red saliva that usually temporarily dyes the user's mouth, lips, and gums an orange-brown hue. It is likely that betel chewing paved the way for tobacco consumption.

Tobacco became highly esteemed. It was included as partial payment for indigenous auxiliaries, the Christian or non-Muslim troops and manpower levies from neighboring islands that provided military support to Spanish efforts to control Muslim areas of the southern Philippines. And, with the scarcity and rampant debasement of copper coin, cigars circulated in the hinterland as money as late as the early nineteenth century. Travelers' accounts and Spanish colonial administrators' reports suggest that the habit of smoking was embraced by both genders and by all age groups. Prior to the introduction of a monopoly on tobacco in the eighteenth century, one Spanish official estimated that tobacco consumption included as many as 1 million persons. Forty years later, the number of tobacco consumers was estimated at 3 million persons. Both figures are an extremely high percentage of the islands' population.



snuff a form of powdered tobacco, usually flavored, either sniffed into the nose or "dipped," packed between cheek and gum. Snuff was popular in the eighteenth century but had faded to obscurity by the twentieth century.

Production, Commercialization, and Trade

Early-sixteenth- and eighteenth-century Spanish accounts laud the excellent soil and climatic conditions for the cultivation of high quality leaf tobacco for the production of cigars, cigarettes, and **snuff** throughout the Philippines. There were, however, limits to Spain's control over the islands and the method of tobacco production. On Luzon, for example, where the Spanish were present in greater numbers, tobacco was produced on landed estates in the flat plains. Entrepreneurs and different religious orders owned these estates. In the mountainous regions, which were difficult for the Spanish to control, there were exchanges between smaller lowland indigenous producers and highland consumers. On some of the southern islands, Mindanao in particular, which had already embraced Islam prior to the arrival of the Spanish and resisted the Europeans, indigenous growers produced tobacco that compared favorably in quality with the Spanish Manila or Luzon product. Mindanao encountered limitations in the commercialization of tobacco because it did not operate a large maritime trading fleet and could not attract the same level of external interest as Manila with its availability of silver. In addition to supplying domestic markets, tobacco from the Philippines competed with production from China and Java in inter-Asian exchanges and markets, primarily in the South China Sea. In general, these differing regional tensions and methods of production and commercialization continued until the mid- to late eighteenth century, when the Spanish began to exert greater control.

Revenue and Colonial Governance

From its inception as a Spanish colony, the Philippines depended on financial support from Spain, delivered annually via the remission of New World silver on the Acapulco to Manila galleon. Accordingly, Spain's colonial administrators sought to control, diminish or eliminate this financial drain on the Crown's Treasury. They attempted to monopolize tobacco on Luzon in the early seventeenth century, but the scheme caused such discontent that it was revoked in less than seven months. By the mid-eighteenth century, numerous American colonies implemented

"It [the fire] originated from some tobacco; cursed be it, and the harm, that that infernal plant has brought, which must have come from hell. The wind was brisk, and blowing toward the convent. In short, everything was burned, though we saved the silver and whatever was possible."—Father Juan de Medina, O.S.A., on smoking tobacco and the fire that destroyed the Convent of San Nicolas in March 1628

■ BLAIR AND ROBERTSON,
VOL. 24, PP. 145–146

tobacco monopolies, and Spanish promoters of fiscal reform identified tobacco as the only commodity in sufficient demand to justify a monopoly. They hoped it would become a source of revenue that would offset the chronic drain on the Spanish Crown's Treasury caused by subsidizing the administration of the Philippines.

The monopoly on tobacco was established in 1781. It prohibited and reserved for the Spanish government the sale, traffic, and manufacture of tobacco. Proprietors or growers sold their entire crop at contract prices to the monopoly. Subsequent governors occupied themselves with defusing resistance to the tobacco monopoly, increasing the area planted and improving the tobacco **plantations**, and implementing administrative and accounting controls to diminish fraud. It became the most important source of revenue and, in general, it temporarily resolved the Spanish Crown's imperial financial problems. Its implementation impinged upon the local societies' freedom (which they had enjoyed until then) to cultivate without restriction a plant they had been accustomed to using since childhood. The monopoly also forced consumers to pay a higher price for a commodity, which until then had been inexpensive. The monopoly was in place, approximately, a century. An unpopular measure, in the short term, it produced the desired increase in fiscal income but its profitability decreased over time as the expenses of administration grew, as did contraband, corruption, and evasion. With other sources of fiscal income growing from a monopoly on **opium** and the expansion of the exportation of sugar, hemp and other commodities, the opponents of the tobacco monopoly succeeded in obtaining its repeal.

In the nineteenth and early twentieth centuries, cultivation grew and markets for Philippine cigars and leaf tobacco were expanded or developed in China, Japan, the East Indies, the United Kingdom, Spain, and Australia. After sugar and abaca (Manila hemp), tobacco was the third largest export earner during this period. Tobacco manufacturing was an early leader in providing industrial employment. Most of the workers were women, and in the mid-nineteenth century, approximately 30,000 people were employed making cigars and cigarettes in the province of Manila.

See Also China; Origin and Diffusion.

■ GEORGE BRYAN SOUZA

BIBLIOGRAPHY

- Blair, Emma Helen, and James Alexander Robertson, eds. and trans. *The Philippine Islands 1493–1803*. 55 vols. Cleveland, Ohio: Arthur H. Clark, 1903–1909. Reprint, Taipei: International Association of Historians of Asia, 1962.
- Corpuz, Onofre D. *An Economic History of the Philippines*. Quezon City: University of Philippines Press, 1997.
- Jesus, Edilberto. C. de. *The Tobacco Monopoly in the Philippines: Bureaucratic Enterprise and Social Change, 1766–1880*. Quezon City, Philippines: Ateneo de Manila University Press, 1980.
- Larkin, John A. *Sugar and the Origins of Modern Philippine Society*. Berkeley: University of California Press, 1993.
- Legarda, Benito Justo, Jr. *After the Galleons: Foreign Trade, Economic Change, and Entrepreneurship in the Nineteenth-Century Philippines*. Madison: Center for Southeast Asian Studies, University of Wisconsin–Madison, 1999.



plantation historically, a large agricultural estate dedicated to producing a cash crop worked by laborers living on the property. Before 1865, plantations in the American South were usually worked by slaves.



opium an addictive narcotic drug produced from poppies. Derivatives include heroin, morphine, and codeine



Pipes

Long before the coming of Europeans to North and South America, long before they discovered what would later be called tobacco, it was custom in primitive communities to breathe the smoke of burning roots, palm leaves, aromatic plants, and herbs for their narcotic or intoxicating effects. Later, humans chose to inhale this smoke in a device fashioned out of crude materials that would eventually bear the name “pipe.”

In the fifteenth century Native Americans introduced tobacco to Europeans, and soon the social custom of smoking tobacco gained acceptance and became a fashionable pastime. As tobacco’s popularity increased, and its use spread around the globe, smoking spawned an industry of artisans who created an assortment of utensils, accessories, and accoutrements for tobacco’s use, storage, preservation, and display. One of the most elegant, intriguing, and artful utensils for smoking tobacco is the pipe, a utensil whose use waxed and waned in the eighteenth and nineteenth centuries because **snuff** became a celebrated habit in the eighteenth century, and the cigar and cigarette were introduced in the nineteenth century. Today, cigars, cigarettes, and pipes peacefully coexist, whereas snuff-taking, at least in the United States, is largely a thing of the past.



snuff a form of powdered tobacco, usually flavored, either sniffed into the nose or “dipped,” packed between cheek and gum. Snuff was popular in the eighteenth century but had faded to obscurity by the twentieth century.

What Is a Smoking Pipe?

The pipe is a smoking device that consists of a tube with a mouthpiece on one end and a bowl on the other. Anyone who has studied the history of pipes in depth, however, would say that this definition is shallow and bland because this complicated smoker’s utensil, expressed in a variety of formats around the world, defies a simple generic definition. In 1965 Carl Weber, an American pipe maker, opined:

The pipe has survived its threatened eclipse by cigar and cigarette for a number of reasons, but the primary one is simple. It is the most attractive, most effective means yet devised by which the smoker can obtain full pleasure from tobacco.

For historians of tobacco culture, educators, archaeologists, craftsmen of smoking pipes, and, particularly, pipe collectors, the following quotation from E. R. Billings’s *Tobacco: Its History, Varieties, Culture, Manufacture and Commerce* (1875) describes the pipe’s historical importance and its positive cultural impact on our world:

Of all the various branches of the subject of tobacco, that of the history of pipes is one of the most interesting and one that deserves every attention that can possibly be given. Whether considered ethnographically, historically, geographically or archaeologically, pipes present food for speculation and research of at least equal importance to any other set of objects that can be brought forward.

Tobacco pipes have been made from just about every natural and man-made material. During the expansion of tobacco culture around the world, the pipe evolved as a national expression, appealing to each country’s culture, employing available indigenous materials, and taking



A nineteenth-century German wood *gesteckpfeife* (a pipe in parts) is shown here on display at a New York import house. This outsized pipe was manufactured as a trade sign or for shop display. © UNDERWOOD & UNDERWOOD/CORBIS

shape and form within the region or locality in which it was made. To describe them all would require a lengthy itinerary traveling nearly the entire globe, because as the habit of smoking encircled the earth, nearly every race has adopted the pipe in some form.

Native Americans produced pipes using such materials as steatite, **argillite**, limestone, pipestone, and catlinite (a soft red siltstone named after George Catlin), and most of these pipes were used principally for spiritual ceremonies, given as gifts, or for barter with European explorers. However impractical (because ivory cannot withstand dramatic changes in temperature), the walrus tusk, native to many parts of Alaska, Greenland, and Siberia, has been used as the principal medium for the pipe. Another early example was the trade pipe, a simple utensil made of tin or iron. European voyagers to the New World offered these trade pipes to the Native Americans in exchange for local goods. Although far-fetched, at an early time in Europe after tobacco was introduced, some even assembled a do-it-yourself smoking pipe made of half of a walnut shell and a chicken bone.

For about 400 years, skilled craftsmen in the Western Hemisphere produced pipes that were both beautiful in design and exhibited excellent smoking qualities. Artisans experimented with a wide range of materials, such as pottery, stoneware, amber, antler horn, bone, **gutta-percha**, gold, and silver, but these mediums were not ideally suited as smoking pipes because either they did not withstand heat or they produced an offensive odor or taste when smoked. Many of these pipes were regarded as eccentric or offbeat folk art, but those that have survived are often



argillite A smooth, black sedimentary rock. American Indians sometimes carved tobacco pipes from argillite.



gutta-percha a form of hard rubber made from the sap of a Malaysian tree. Widely used in the nineteenth century, gutta-percha was largely replaced by plastics in the twentieth century.

remarkable examples of inspired imagination, individual innovation, and creativity.

The most eye-appealing and pleasant-smoking pipes were made from four mediums: clay, wood, porcelain, and meerschaum. Between 1600 and 1925, millions of pipes were manufactured of these four materials, a considerable percentage of which depicted classical and dramatic subject matter, as well as whimsical, fanciful, bizarre, and, to the delight of some collectors, erotic and scatological motifs. Thus, the earliest tobacco pipes, once utilitarian and commonplace utensils, mere conveyances for holding tobacco, eventually evolved over several hundred years into an art form. These four mediums predominated in the Western World. Of these four, two—wood and meerschaum—have survived the test of time, and are still being produced today in large quantities for smokers and collectors alike. Each of these is explicated in the following sections. (The corncob pipe, an unattractive, extremely inexpensive, yet distinctively American form, invented after the American Civil War, and still being manufactured today, has never had much of a following.)

Pipes of the Western World

CLAY. The clay pipe was the first practical smoking pipe, introduced at the end of the sixteenth century in England, and its usage soon spread to the European continent, where factories were later established in Belgium, France, Germany, and Holland. Fragile, yet cheap to produce, the cost of a clay pipe was markedly less expensive than the price of the earliest commercially sold tobacco, so, accordingly, the makers produced small pipe bowls. As tobacco became more readily available, the size of the pipe's bowl was commensurately enlarged. The very earliest clay pipes were plain and utilitarian in appearance, but by 1750, when clay pipe manufacture for domestic use became a thriving industry in Europe, a status it enjoyed for the next two centuries, some factories began producing pipes embossed with various decorative designs on the bowl and stem to distinguish one maker from another and, of course, as marketing one-upmanship.

In the nineteenth century, as some pipe craftsmen experimented with other materials, clay pipes began to feature ornate designs of people, animals, plants, and symbolic motifs in a variety of styles, shapes, sizes, and finishes. The French were undoubtedly that century's nonpareil clay pipe artisans; three French clay pipe manufacturers—Duméril-Leurs, Fiolet, and Gambier—collectively designed and manufactured more than 5,000 different clay pipe motifs while their factories were in operation. A majority of these pipes exhibited fanciful raised decor and were fire-glazed in brilliant colors, each pipe bearing the raised letters of the company name and an identifiable model number on the shank.

Because Colonial America did not have a noteworthy clay pipe industry of its own, it imported almost all of its clay pipes from Europe. After the American Revolution, potters in the United States began molding pipe bowls in both earthenware and stoneware, producing typically less ornate, more functional clay pipes, but occasionally making some featuring faces, animals, or simple decorative designs. In the latter part of the nineteenth century, clay pipes imported from Europe stimulated American makers to copy foreign styles and to create original designs.

Shown left to right is an assortment of six English and Dutch clay pipes with graduated-size bowls and stems dating from about 1600 to about 1890. In the center is an early nineteenth-century Dutch “knotted stem” clay pipe. On the right are three decorated wood clay pipe cases from Holland from the early nineteenth century. PRIVATE COLLECTION. PHOTOGRAPHY COURTESY OF THE BRANDYWINE RIVER MUSEUM

One memorable clay maker in the late 1800s was A. Peyrau, a French immigrant living in New York City, who made a series of terracotta pipe bowls featuring bizarre, yet comedic, caricature heads of contemporary celebrities, among them P. T. Barnum, Joseph Pulitzer, and William March “Boss” Tweed. Today, Peyrau’s pipes are considered some of the finest clay pipes ever produced in the United States.

Although a few clay pipe producers continue in operation today in North America and Europe, their collective output is not significant because the clay pipe is no longer popular. It has neither the cachet nor the smoking appeal that the meerschaum pipe and the **briar** pipe have today.

PORCELAIN. Porcelain pipes, unpleasant to smoke because of the non-porous material’s inability to breathe, are nonetheless remarkable examples of sculptors’ and molders’ dexterity. In the mid-1700s a few European factories such as Meissen, Mennecy, Nymphenburg, and Sèvres created polychrome pipe bowls in baroque, neoclassical, and Romanesque styles.

Later examples, illustrating mythological, entomological, and floral subjects, were produced at many European porcelain factories. Between 1850 and 1870, of the approximately 18.7 million pipes produced in one pipe-making center in Ruhla, Germany, 9.6 million were porcelain. The bowls frequently exhibited hand-painted portraits, landscapes, hunting scenes, or commemorative events, and were fitted with three- and four-foot stems of hardwood, ivory, or horn. After the Franco-Prussian War and until World War I, a pipe format known as



briar a hardwood tree native to southern Europe. The bowls of fine pipes are carved from the burl, or roots, of briar trees.



This unusual porcelain pipe bowl is a full figural of a pasha or emir dressed in the *haute couture* of a caftan. The bowl is accented with appliquéd gilt buttons. It was made in the late nineteenth century, and probably is French. FROM THE COLLECTION OF DR. SARUNAS PECKUS

the Regimental was produced in large quantities, particularly in Germany, Austria–Hungary, and Denmark, and presented to soldiers to honor their military service. The Regimental was a unique and vibrantly colorful style of pipe, with its porcelain bowl depicting martial scenes and accompanied by an exceptionally long cherry wood stem. Today, a few German potteries produce porcelain pipes for domestic use, but many are bought by tourists as mementos of their visit.

POTTERY. Another variety of pipe closely aligned with the evolution of clay and porcelain pipes was the pottery pipe, the most notable of which were produced at potteries in Staffordshire and Whieldon, England. These elaborate showpieces, known as puzzle pipes, were amusing whimsies, not functional pipes, a product of excess clay and spare time. They are distinguishable by their unusual design: long, polychrome-painted, soft-paste coils fashioned into twisted and looped designs.

European-designed porcelain and pottery pipes were exported to America, but the annals of the U.S. tobacco industry indicate that no American company produced either porcelain or pottery pipes, probably because Americans, in general, never were able to acquire a taste for smoking tobacco in such pipes.

WOOD. In their search for a durable, non-breakable, and pleasant-tasting material, wood turners during the eighteenth and nineteenth centuries experimented with more than twenty-five different domestic and exotic woods as possible substances for producing pipes, as shown in the following list.

The Early Woods

Acacia	Alder	Ash	Beech	Birch
Blackberry	Boxwood	Buckthorn	Cedar	Cherry
Chestnut	Dogwood	Elder	Elm	Hazel
Heather	Hornbeam	Lava	Linden	Maple
Morello	Mulberry	Oak	Olive	Peat
Poplar	Rosewood	Sycamore	Walnut	

By the mid-nineteenth century, one variety of the heath shrub, *erica arborea*, native to the Mediterranean coast and commonly known as briar, a porous and lightweight wood, proved to have exceptional qualities for smoking tobacco, and its superior grain inspired handcrafted pipes executed in ornate and delicate shapes. History recounts that the briar pipe industry began in the French village of St. Claude where, by 1892, more than sixty different briar pipe factories thrived.

Today, briar pipes are made in almost every European country, Japan, and the United States, from mass-produced pipes at the low end of the price spectrum to exquisite, limited-production, one-of-a-kind, handcrafted specimens costing thousands of dollars. The briar rivals the meerschaum as the better of the two readily available and popular smoking pipes.

MEERSCHAUM. The aristocrat of smoking pipes, known by such appellations as “Venus of the Sea,” “Queen of Pipes,” and “White Goddess,” is



Cherry was one of more than twenty-five woods popular with pipemakers during the eighteenth and nineteenth centuries. This unusually shaped cherry wood pipe bowl, carved in bas-relief and high-relief rococo style, is from France (c. 1860). FROM THE COLLECTION OF DR. SARUNAS PECKUS

made of meerschaum, the German term for “sea foam.” Known to geologists as sepiolite, this claylike mineral’s composition is hydrated silicate of magnesium. In addition to the ease with which this substance can be intricately carved, pipe enthusiasts prize meerschaum’s ability to mellow, mutate, and metamorphose over time through a range of colors from its original white to hues of brown as it absorbs the byproducts of tobacco.

The discovery of meerschaum’s qualities as an excellent pipe material is shrouded in mystery and myth. But since the mid-eighteenth century, tons of this substance—mostly from mines in Anatolia, Turkey—have been converted into exquisite smoking implements. Early meerschaum pipe manufacturing centered principally in Berlin, London, Paris, Prague, Venice, and Vienna. These cities contained warrens of **ateliers** bustling with skilled artisans working alongside craftsmen of related guilds—such as jewelers, metal smiths, and wood turners—who made the pipe stems, mouthpieces, wind covers, and other pipe fittings.

Soft and pliant, meerschaum became the medium of choice for the more dexterous craftsmen who executed precise facsimiles of works by contemporary sculptors, muralists, illustrators, etchers, and engravers. Some carvers, however, used their own imagination for the images they sculpted. In its golden age, from 1850 to 1925, meerschaum was used not only for pipes but also for cigar and cigarette holders.

Information about the evolution and growth of the American meerschaum pipe industry is sparse. As one early-twentieth-century writer reported, the American meerschaum trade began approximately in 1855 when a New Yorker, Frederick W. Kaldenberg, met an Armenian named Bedrossian, who brought two cases of raw meerschaum from Asia Minor to the United States (Morris 1908).

*It was not long before these two cases of meerschaum were turned into pipes of special shape and design, which brought the literati, the artistic and the mercantile **nabobs** of the great City of New York, to the workshops of the artisan who had wrought the first meerschaum into pipes in the United States.*



atelier a small workshop or studio.



nabob a very wealthy person, often having political and social influence.

Meerschaum pipe, standing nude, bas-relief—carved ram's head on front of bowl, inset coloring bowl, amber mouthpiece, 8.5-inch length, 5-inch height, probably American, c. 1875. PHOTO BY GARY KIEFFER



Smoking Pipes in Other Regions

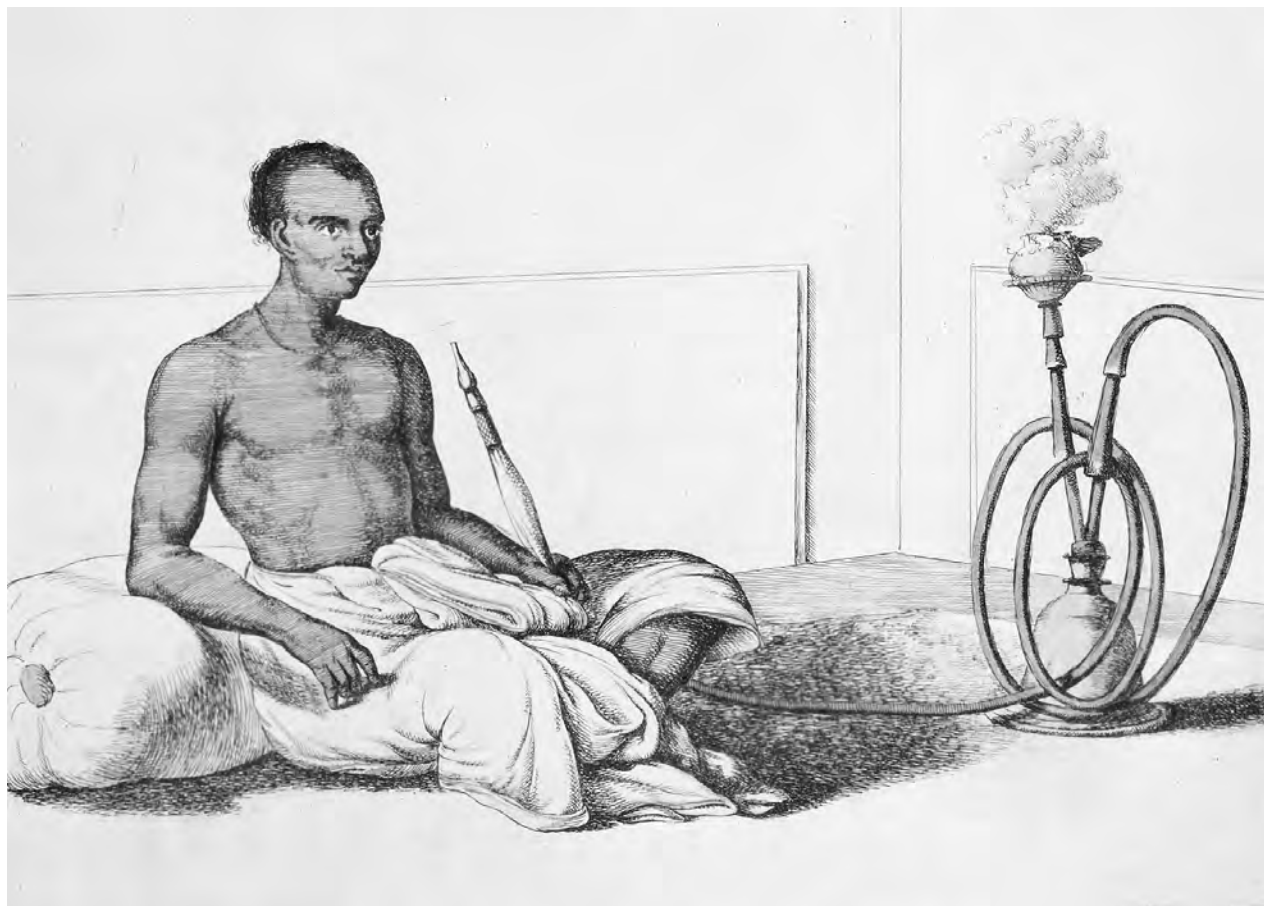
THE NEAR EAST. As mentioned previously, the pipe in many quarters of the world is a national expression, and this is especially true in the Near or Middle East, where two customary pipe formats are found—the chibouque (or chibouk) and the water pipe. The chibouque is peculiar to countries bordering the Mediterranean Sea, such as Turkey, Egypt, and Syria, and is best described as a long pipe comprised of a baked terracotta clay bowl shaped like a cup or bowl and, most often, a long pipe stem made of a jasmine branch or other fragrant wood, some as long as five feet.

Known in the west as the hubble-bubble, the hookah (called nargileh, shisha, or kalian in different countries) is a class of pipes from the Islamic world that originated in India as a tradition, fashioning a water pipe from an empty coconut husk. The style evolved into a device found in two configurations, one for personal use at home and one for travel. The typical hookah consists of a base, a “chillum” that holds the leaf tobacco, a stem, and a flexible tube. The base is the component on which the craftsman expends his artistic energy, and the bases of the better hookahs fabricated of glass, ceramic, or silver can be exceptionally ornate and elaborate.

The hookah uses a small charcoal tablet to gently heat tobacco that rarely burns, but is filtered as it is drawn through the water-filled base and inhaled through the tube. The tobacco might be mixed with a special blend of fruit shavings or flavored molasses to produce a deliciously fruity aroma, or it might be cultivated tobacco that yields a strong aroma.

Smoking a hookah is a ceremonial experience shared in the company of friends. Both the chibouque and the hookah have transcended national boundaries and are now found in the West, where they are for rent at many bars, coffeehouses, and hotels, and where anyone can partake in this social endeavor.

THE FAR EAST. For several centuries, the Orient has had at least two distinctive styles of tobacco pipe: the Japanese *kiseru* and its lengthier counterparts, known by different names in Korea and China; and a different type of water pipe, used in China, Cochin China, and Annam (now Vietnam).



The common *kiseru* is a three-part pipe, consisting of a metal bowl, a metal mouthpiece, and a bamboo or wood stem that connects the two metal components. Some, made especially for the Imperial family, shoguns, and local lords, were ornate masterpieces worthy of being characterized as art. The classic Chinese water pipe is a boxy metal contraption that is functionally similar to the hookah in that the tobacco is filtered through water.

Nowadays, the cigarette has all but replaced traditional pipes except for the occasional tea ceremony and private use in the home. Countries such as Borneo, Indonesia, and Brunei have their own national pipe expressions but, collectively, theirs have never had an impact on or influence in pipe design beyond their own borders.

AFRICA. Because Africa is a continent of many countries, diverse peoples, and myriad tribes, each with its own customs and culture, one must ascribe to Africa myriad assorted pipes made of different materials, each attributable to a different place in this land mass. It is difficult to generalize about the form or functions of African pipes other than to state that the calabash gourd (botanically *Lagenaria vulgaris* or *Lagenaria siceraria*), assorted woods, terracotta and other earthenware, bronze, brass, tin, iron, bone, ivory, and assorted other materials have been fabricated into pipes for not only smoking tobacco, but also kief, hemp, dagga, and various herbs and roots. So few serious studies have been

The hookah, also known as the hubble-bubble and by other names, remains popular today in most countries of the Near East, Middle East, and South Asia. The long, flexible tube of the hookah allows freedom of movement for the smoker. Modern-day hookahs, like their older counterparts, are often made to be more portable and convenient, that is, with smaller bodies and shorter hoses.

© STAPLETON COLLECTION/CORBIS

Who Smokes a Pipe?

Pipe smoking is a common practice among both genders, the young, the middle-aged, the old, people from every walk of life. In the past, surveys have attempted to determine the mean age, gender, economic stratum, and epicenters of pipe smokers. Depending on when the survey was conducted, the results and conclusions always vary, because the number of pipe smokers ebbs and flows with each generation. The price range of pipes, attitudes about smoking, and health issues all play a part in this ebb and flow.

Most agree that there are millions of pipe smokers around the world, and the burgeoning number of local, regional,

and national pipe clubs in the last twenty-five years evidence this. Pipe smokers are a brotherhood, bound by a common love of this ubiquitous utensil, and as affiliates or associates in this elite club, nationality notwithstanding, they come together frequently at various trade shows, exhibits, and pipe-smoking competitions around the world to share their experiences with their pipe-smoking brethren, ogle new products for the smoker, taste new tobacco blends, and trade anecdotes about this or that pipe. Despite differences in language, nationality, income bracket, and education, they are bound by a simple device made of wood, or meerschaum, or clay, a universal symbol of camaraderie.

conducted about the pipes of Africa that, even on careful inspection of its construct or composition, it is hard to determine whether a particular pipe was specifically designed for tobacco, or another intended use. What is certain is that the peoples of Africa continue to produce an endless assortment and variety of pipes in a broad array of mediums, each with the character and personality of its maker and its locale.

The Gentle Art

What can be said of all this? It is a fact that smoking is a worldwide cultural phenomenon, and pipe smokers are a rather unique group who attribute a special aura to the pipe, claiming that it denotes the “gentle art.” Art is an apt description because not only can the pipe be an art form, it is also represented in works of art, stories, and songs that document, celebrate, and, occasionally, condemn it.

The tobacco pipe occupies center stage in the engravings of the seventeenth-century Dutch artists Jan Steen, David Teniers, and Adriaen van Ostade; in the eighteenth-century illustrations of British painter and printmaker William Hogarth; and in the caricatures of George Cruikshank, James Gillray, and Thomas Rowlandson, also of England. ♦ The pipe plays a significant role in the nineteenth century’s *trompe l’oeil* works of America’s William Harnett and John Frederick Peto, and in the twentieth century’s canvasses of Russia’s Marc Chagall and the Spanish cubist Pablo Picasso.

Although criticized in some art and literature, the pipe has been praised in hundreds of published poems, couplets, rhymes, and paeans penned by the well known and the anonymous and in many languages during the last three centuries. Nonfiction literature abounds on the history and manufacture of the pipe, but one of the most famous fictional works about man’s love for the pipe is *My Lady Nicotine: A Study in Smoke*, written in 1890 by Sir James M. Barrie, the author of *Peter Pan*, *The Admirable Crichton*, and *Margaret Ogilvy*. Even the occasional musical score has been written as a tribute to the pipe, such as “Put On Your Slippers and Fill up Your Pipe” (c. 1916).

♦ See “Visual Arts” for a Jan Steen illustration that portrays tobacco in an unfavorable light.

To conclude, pipe smokers around the world uniformly agree that the pipe, whatever its shape, style, format, or medium—for no single pipe is the perfect pipe for all—is the most perfect way to smoke tobacco. And pipe collectors, a complementary group who may or may not be pipe smokers, derive equivalent pleasure for yet a different reason: owning antique, vintage, or new pipes, elegant miniature masterpieces in wood, meerschaum, clay or porcelain, each spawned from imagination, each crafted with skill and dedication, each executed by some master artisan in his time.

See Also Africa; Archaeology; Calumets; China; Connoisseurship; Consumption (Demographics); Islam; Japan; Literature; Middle East; Music, Classical; Music, Popular; Native Americans; South Asia; South East Asia.

■ BEN RAPAPORT

BIBLIOGRAPHY

- Armero, Carlos. *Antique Pipes: A Journey Around the World*. Madrid: Tabapress, 1989.
- Billings, E. R. *Tobacco: Its History, Varieties, Culture, Manufacture and Commerce*. Hartford, Conn.: American Publishing Company, 1875.
- Crole, Robin. *The Pipe: The Art and Lore of a Great Tradition*. Rocklin, Calif.: Prima Publishing, 1999.
- Dunhill, Alfred H. *The Pipe Book*. London, England: A. & C. Black, 1924. Reprint, London, England: Arthur Barker Limited, 1969.
- Ehwa, Carl, Jr. *The Book of Pipes and Tobacco*. New York: Random House, 1974.
- Fresco-Corbu, Roger. *European Pipes*. Guildford, England: Lutterworth Press, 1982.
- Goes, Benedict. *The Intriguing Design of Tobacco Pipes*. Leiden, The Netherlands: Pijpenkabinet, 1993.
- Liebaert, Alexis, and Alain Maya. *The Illustrated History of the Pipe*. (Translated and adapted from the French, *La Grande Histoire de la Pipe* (1993) by Jacques P. Cole.) Suffolk, England: Harold Starke Publishers, Ltd., 1994.
- Morris, Fritz. "The Making of Meerschaums." *Technical World*, April 1908, pp. 191–196.
- Rapaport, Benjamin. *A Complete Guide to Collecting Antique Pipes*. Exton, Pa.: Schiffer Publishing, Ltd., 1979; Reprint, Atglen, Pa.: Schiffer Publishing, Ltd., 1998.
- . *Collecting Meerschaums: Miniature to Majestic Sculpture, 1850–1925*. Atglen, Pa.: Schiffer Publishing, Ltd., 1999.
- Weber, Carl. *The Pleasures of Pipe Smoking*. New York: Bantam Books, 1965.
- Wright, David. *The Pipe Companion: A Connoisseur's Guide*. Philadelphia, Pa.: Running Press, 2000.



Plantations

Tobacco has been one of the major plantation crops of the Americas. It has been especially important in North America and at different times in other parts of the Americas, including Cuba and Venezuela. In contrast to other plantation crops, especially sugar, tobacco plantations

tended to be relatively small; tobacco was also grown on smaller holdings as well. While enslaved Africans and Amerindians were used as workers on tobacco plantations and farms, they often worked alongside their masters, indentured workers, and others. The crop required careful tending of the tobacco leaves and thus close supervision.

Europeans had acquired their knowledge of tobacco cultivation from Amerindians. This apprenticeship was rapid and short, and in places like Trinidad and Venezuela it seems that both groups worked side by side. Tobacco was often raised in fields that were separate from other crops. In some fishing and hunting communities, tobacco was the only crop actually cultivated. Very quickly, however, tobacco was transformed into a European commodity. In the region of the Chesapeake, for example, Amerindian ties with tobacco were undermined, and even the memory of an association was erased from the traditions. At the same time, European settlers transformed production as they began to supply European tobacco and smoking devices, such as clay pipes, to the native population.

Expansion of output essentially required knowledge of the crop, suitable land, and sufficient labor, which did not necessarily mean that the crop would be grown on plantations. Unlike sugar and some other crops, the differences in productivity on relatively large holdings were not dramatically different from production on small holdings, but there were nonetheless some economies of scale. In fact, during the seventeenth and the eighteenth centuries, tobacco was grown in Europe, with production almost exclusively confined to peasants and small farmers. Similarly, in the seventeenth century, the Dutch tried unsuccessfully to introduce this style of peasant production in their South American colonies.

Despite these isolated examples, the plantation model for production, as adopted in the Tidewater region of the Chesapeake, became the model for the Americas, with little variation among European colonies. There, as in many other places where the combination of open land and the lack of free labor defined the possibilities of expansion, bonded labor, whether under indenture or as slaves, became the basis of labor supply. In North America, for example, the Virginia Company sponsored the migration of indentured workers, both men and women, who were expected to work off the price of their passage across the Atlantic and other debts that had been accumulated through a system of quasi-coerced labor. Normally, such indentures lasted from four to seven years, after which the workers were free to establish themselves as independent farmers or otherwise work on their own account. Hence indentured labor eased the early stages of production during the clearing of land and the expansion in production, but such labor was inadequate as a long-term source of labor. Once the indenture was finished, there was little reason for individuals to continue to work for their masters; with the wide availability of land, it was more usual for people to become independent producers themselves or find other employment. The use of slave labor, particularly enslaved Africans, was a response to this labor shortage.

Culture and Methods of Cultivation

The cultivation and care of tobacco involved a well-defined sequence of steps from seed to market. Successful production depended on the management of the interaction between human activity and the natural



After 1680, African slaves replaced European indentured servants as the primary form of labor on tobacco farms. The black population rose dramatically and tobacco farms were transformed into plantations such as the one shown in this photo. Wealth became measured by the number of slaves on the plantation.
© MEDFORD HISTORICAL SOCIETY COLLECTION/CORBIS

conditions. Tobacco cultivation required a constant input of different skills through each stage, each one requiring a great deal of care.

In the first stage, the seed was planted in a seedbed. This method was common practice, the persistence of which to the present shows its superiority over planting in the open field. The seedbed increased the survival opportunities for the young plants, allowing for more careful use of fertilizers. Careful scientific study has determined that the act of transplanting has the beneficial side effect of enhancing growth. Apparently, Chesapeake planters had come to understand this effect, although the extent of experimentation needed to reach these results is unknown. However, the use of seedbeds marked an important difference between the way tobacco had been cultivated by Amerindians and on plantations.

The seedbed stage was not onerous in work, but the transplanting to the open fields was labor-intensive. Furthermore, determining when transplanting should take place was a crucial decision of management. The shift had to be done in favorable conditions, usually after a heavy rain. The complete operation of transplanting usually took many weeks. This stage demanded a lot of people at the precise time, because the field needed to be prepared and the transplanting performed quickly in order to prevent the plants from drying out; each plant had to be transplanted individually. It is likely that some of the biggest Virginian planters cultivated more than 100,000 plants, with several thousand per acre.

In the next stage, weeding, the fields were cleaned of any growth that menaced the development the tobacco plants. Weeding required a

great deal of time and energy. As the plants grew, they had to be topped, which prevented the plant from producing flowers and thus permitted the growth of the leaves. Secondary branches were trimmed in order to allow the plant to concentrate all growth in the principal leaves. This selective action was called suckering and was done plant by plant. Suckering and topping were crucial for the final quality of the leaves and hence to the yield. However, when the plants became mature, the most difficult decision of the planters was to choose the exact time to cut. In the end, the attention shifted from the plant itself to the individual leaves, which could be easily damaged.

The cutting of the leaves was the point at which the tobacco was transformed from a botanical item into a salable commodity. After cutting, the leaves had to be cured, which entailed allowing the tobacco stalks with their leaves to dry out naturally in barns specially built for this purpose. After the tobacco was cured, the leaves were stripped from the stalks, and the main stem of each leaf was removed. Depending on the number of plants, staking and stemming could be done in twenty-four hours. Once finished, the leaves were packed into barrels in a process called prizing. By the time prizing was completed, the seedbeds for the next calendar year needed to be underway and the production cycle begun anew.

However, time was not the only aspect of the Chesapeake culture that was influenced by the rhythms of the tobacco plant. The human and material geography of the region were also shaped by the demands of the plantations. In North America, the combination of open land and short labor force necessary to supply the necessities of the farming developed a decentralized spatial organization. From the settlements on the James River, the English colonies extended to the north, where rivers like the York, the Rappahannock, and the Potomac created rich wetlands could be brought into production at low cost. The spread of tobacco cultivation was also favored by the fact that the Chesapeake Bay region is a myriad of rivers, inlets, and tributaries penetrating the maritime plain. And this water system was deep enough to allow the entrance of the largest vessels of the colonial trade.

In fact, the river system was the usual means of transportation within this region. The river system enabled planters to move tobacco to market and ultimately to England without major expense or risk. Moreover, because of the geography of the region, people lived in rural areas, scattered along the rivers. Until the first quarter of the eighteenth century, despite legislation passed by the Virginia and Maryland Assemblies to encourage settlement in towns and villages, there were fewer than ten small villages containing between fifty and a hundred residents in the region.

In the seventeenth century, the Chesapeake colonies remained essentially European, and the number of Africans remained small. Despite changes in the organization of labor, tobacco defined the particular expressions of Chesapeake culture. Until the second half of the seventeenth century, most of the tobacco farms were small properties and often had no more than one bound worker. On the larger estates, five workers were able to take care of ninety or a hundred acres planted in tobacco. Nevertheless, this age of the small planter lasted only until the end of the seventeenth century.

After 1680, Chesapeake society was completely transformed. The labor regime changed from indentured servitude to slavery and from a European to an African base. The social hierarchy, which had been characterized by relatively minor class differences, became an elitist system based on wealth, race, and power.

The population of the Chesapeake colonies increased dramatically in the eighteenth century. Although the black population at the end of the seventeenth century was small in comparison to the white population, the number of blacks increased rapidly, both absolutely and relatively. Whereas blacks accounted for only 13 per cent of the population in 1700, by the end of the century the figure reached 40 per cent in a total population of almost 800,000 people. Tobacco farms were transformed into tobacco plantations. Planters turned to slave labor instead of servant labor, and wealth became measured by the number of slaves on the plantation. Among several alterations introduced in the organization of tobacco cultivation, the most important were the increasing size of the unit and the growing complexity of administration on the plantations. This process led to the formation of a gentry, a new class of planters. For them, the combination of slavery and tobacco cemented a social system of dominance that came to shape their material welfare and the symbols of power.

At the same time that the plantations grew in size, the slave labor force expanded, and the demand for supervision increased, the gentry became the repository of the almost mystical understanding of the tobacco business. If the possession of slaves became the measure of wealth, the quality of the tobacco was a measure of self-esteem. The techniques of harvesting became a well-kept secret passed from father to son. Some of these rich men were obsessed by tobacco. It was the basis of their culture of debt, which linked them with the English merchants in a consignment system that allowed them to accumulate manufactured goods and European foodstuffs.

Plantations in the Caribbean and Brazil

With the exception of Jamaica, tobacco was the first or one of the first crops grown in the British and French Caribbean. As was the case in the Chesapeake, the islands initially relied on indentured European labor rather than enslaved Africans. During the seventeenth century approximately 60 per cent of the British emigration was bound for the Caribbean.

The mortality rate was huge among the European population in all of the British-controlled islands. The initial rise in the white population and the subsequent, equally dramatic decline occurred in tandem with the growth and collapse of tobacco cultivation. In many aspects, what happened on the English Caribbean islands also happened in the French Antilles. The decline in the white population was in both cases related to the abandonment of tobacco as a major crop, by the shift to cheaper African slave labor, and by the consolidation of landholdings.

In Brazil, tobacco cultivation was concentrated in Bahia, in the northeast of the country. The production cycle in Brazil was shorter than it was in the Chesapeake. In addition, the Bahia fields did not entail a long-fallow system, since following there was combined with



a routine application of animal manure. In both regions, however, the economies of scale in tobacco cultivation were limited. The expansion of production depended primarily upon a proportionate increase in inputs. In Brazil, by the seventeenth century, most of the labor force was made up African slaves, in part because Brazil was not settled with indentured servants and in part because the Bahian region developed an important sugar industry supported by a slave system in the late sixteenth century. Furthermore, much of the Bahian tobacco was used to buy slaves on the West African shores rather than to satisfy a European market.

See Also Labor.

■ CARLOS FRANCO LIBERATO

BIBLIOGRAPHY

- Fairholt, F. W. *Tobacco: Its History and Associations*. London: Chapman and Hall, 1859. Reprint, Detroit: Singing Tree Press, 1968.
- Goodman, Jordan. *Tobacco in History: The Cultures of Dependence*. London: Routledge, 1994.
- Narid, Jean Baptiste. *O fumo brasileiro no periodo colonial*. São Paulo: Brasiliense, 1996.
- Ortiz, Fernando. *Cuban Counterpoint: Tobacco and Sugar*. New York: Alfred A. Knopf, 1947.
- Robert, Joseph C. *The Story of Tobacco in America*. Chapel Hill: University of North Carolina Press, 1967.



Politics

Because the tobacco industry makes a product that is deadly and generates substantial controversy and opposition, its survival depends on being an active and effective political player at all levels of government. The industry fares better when there are low taxes on its products; little or no regulation on tobacco products and advertising; and few restrictions on its legal liability for the death and disease it causes, or where smoking is permitted. Conversely, enactment of public health policies to reduce the burden of disease and death that the tobacco industry causes involves political action on the part of public health advocates, which the industry works to block.

Since the tobacco industry is held in low esteem nearly everywhere in the world, it often exercises its political influence in the background, working through third parties (from the liberal American Civil Liberties Union to the conservative Cato Institute) and through front groups that it creates and secretly funds (such as “hospitality associations” that oppose clean indoor air laws) to press its agenda. It also exerts more direct influence on individual politicians and political parties through large and strategically placed campaign contributions.

Public health advocates have been most effective in countering the tobacco industry's influence when they can move the field of play from the national or state to the local level. There, the resources that public health advocates can muster are adequate to the task and the tobacco industry's superior resources and national political connections are less effective. The tobacco industry works to neutralize local political action with "preemption," whereby national or state government restricts the right of subordinate political bodies, which are closer to the public and more willing to implement the popular will for tobacco control, than units higher in the political system.

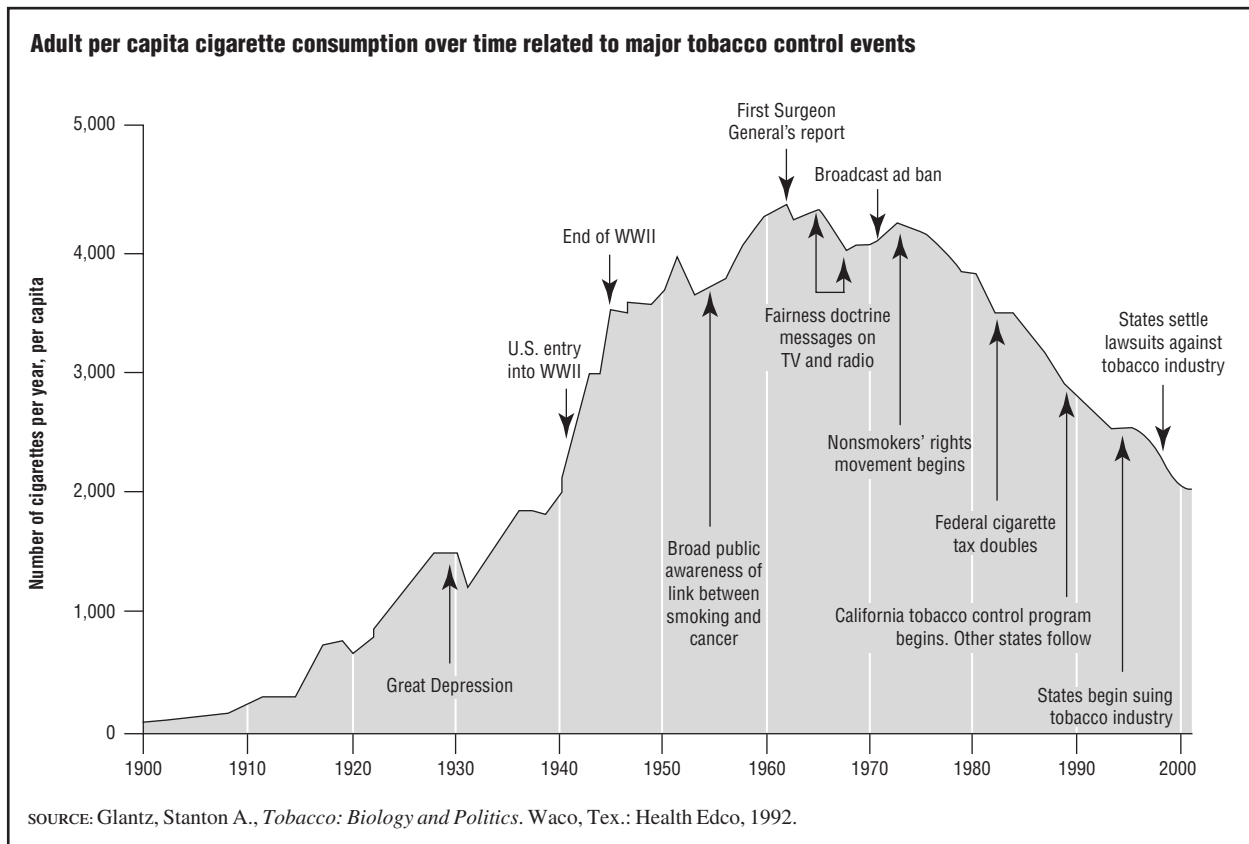
Early Battles on Smoking and Health

The tobacco industry's heavy involvement in politics began in the mid-1950s after the *Reader's Digest* published an article titled "Cancer by the Carton." As a result, the public began to embrace scientific research linking smoking to lung cancer. A wave of public concern led to debates by political units at all levels on restrictions on the sale of cigarettes and on cigarette advertising and promotion. The tobacco industry responded by creating the Tobacco Industry Research Committee (TICR, later renamed the Council for Tobacco Research), a nominally independent scientific body, to get to the bottom of the "smoking and health controversy," and the Tobacco Institute, a lobbying organization, based in Washington, D.C., that was created to allow the cigarette manufacturers to present a unified front to Congress and other political decision makers at all levels. Both organizations were tightly controlled by industry executives and lawyers.

Public awareness of the evidence that smoking was dangerous increased in 1964, when the U.S. Surgeon General, acting on behalf of the United States government, released a report concluding that tobacco use was linked to lung cancer, chronic bronchitis and emphysema, cardiovascular diseases, and other forms of cancer. Public interest in the report—and concerns by the industry that it would adversely affect them—was so strong that release was delayed until after business for that week when the New York Stock Exchange was closed. The industry also feared that public health groups, most notably the American Cancer Society, would use the publication of the report to severely restrict the industry.

The resulting wave of public concern led to several legislative proposals and in 1965 Congress passed the Cigarette Labeling and Advertising Act. While health forces were pleased that the act added warning labels to cigarettes, the combined political and economic power of the tobacco industry and the strength of the constituency of tobacco farmers kept the warning label small and weak. More important, the act prevented states (and localities) from taking any further action on cigarette labeling or advertising. While the labeling law marked a small step forward at the time, preemption prevented strong local and regional action against cigarettes permanently. Indeed, half a century later, in 2001 in the case of *Lorillard Tobacco et al. v. Reilly, Attorney General of Massachusetts et. al.*, the Supreme Court cited the 1965 act in striking down strong advertising and labeling legislation enacted by Massachusetts that would have prohibited tobacco advertising within 1,000 feet of schools, including both outdoor advertising and advertising

FIGURE 1



within retail stores that could be viewed from outside the store. The industry would use the strategy of giving a little, such as agreeing to a modest warning label, to get preemption and arrest future progress on tobacco control at both the national and state levels in the coming decades.

Most political battles during the late 1960s and early 1970s over tobacco control continued at the national level. Tobacco control forces won a substantial victory in 1967 when, in response to a lawsuit brought by a law professor at Georgetown University, the Federal Communications Commission (FCC) ruled that cigarette advertising was “controversial,” requiring radio and television stations to give free time to broadcast antismoking advertisements. These advertisements, produced by health groups, ran at the rate of approximately one anti-smoking advertisement for every three protobacco advertisements. As shown in Figure 1, this counter-advertising campaign led to a 5 percent decline in cigarette consumption per person in the United States, in 1975, the first sustained drop in cigarette consumption.

The tobacco industry responded by going back to Congress and supporting legislation to eliminate cigarette advertising on radio and television. While ending broadcast cigarette advertising was viewed as a public health positive, the fact that the cigarette advertisements were off the air meant that the antismoking advertisements also disappeared as of 2 January 1970. Unlike the health groups, however, the tobacco industry had the resources to continue to expand its advertising efforts in magazines, billboards, and other media.

The Rise of Nonsmokers' Rights

The focus of tobacco politics shifted away from the national level to the states in the mid-1970s. The tobacco industry had effectively contained legislation on cigarette advertising at the national level, but there was growing awareness that secondhand smoke was dangerous to nonsmokers. In 1975, after some limited legislation in Arizona restricting smoking in most public places such as government buildings and health facilities, freshman Minnesota Representative Phyllis Kahn introduced the first comprehensive state clean indoor air law. This legislation, which passed with relatively little opposition, prohibited smoking in public places except in smoking-designated areas, and required barriers and ventilation for smoking areas. While modest by twenty-first-century standards, the Minnesota Clean Indoor Air Act represented a real step forward and stimulated efforts to enact similar legislation elsewhere, particularly in California and Florida.

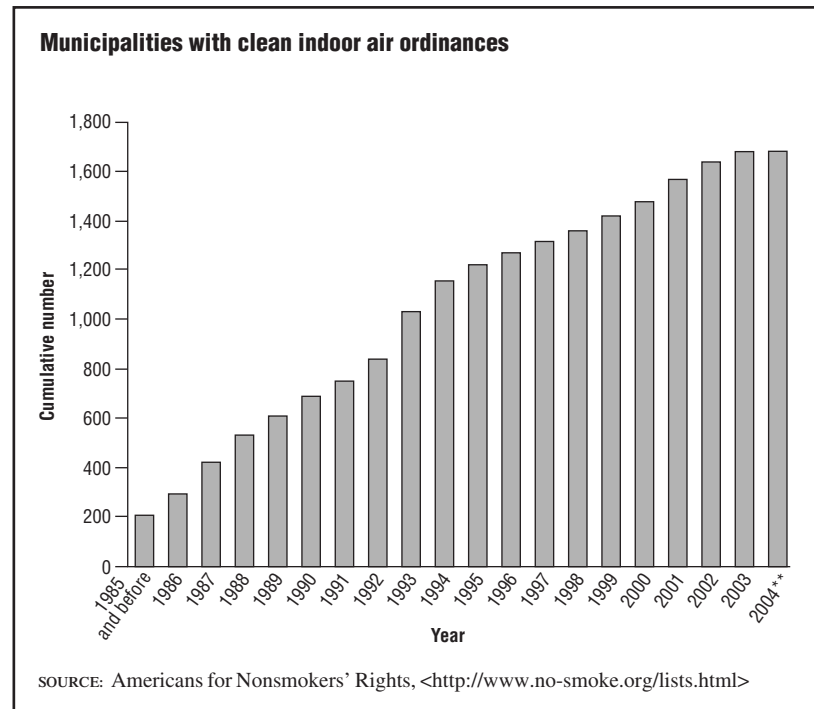
In California, a small group of local activists worked to pass local legislation modeled after the Minnesota Clean Indoor Air Act, and passed the first such law in April 1977 in Berkeley. Following this success, they worked for several years to enact a state law through both the legislature and the initiative process, through a law is enacted by a direct vote of the people. Between 1977 and 1980 the tobacco industry spent more than \$10 million opposing these efforts. Recognizing that they could not win in the state legislature or in an expensive state initiative campaign, which, in a large state like California, is essentially an advertising contest, Californians shifted their efforts to enacting local ordinances. The organization they created, which later became known as Americans for Nonsmokers' Rights (ANR), took the lead in grass roots organizing against the tobacco industry.

Across the country in Florida, local advocates were also passing local clean indoor air ordinances. In 1985 in Florida, in contrast to California, the tobacco industry, with the naive support of some health advocates, was able to pass a weak statewide law. This law appeared to address the problem of secondhand smoke but included preemption, which overturned the then-existing local tobacco control laws, effectively stopping local restrictions in Florida until 2002, when health advocates overturned the 1985 law with a voter-enacted initiative after a major state political campaign.

In the mid-1980s, as the local clean indoor air movement was gaining momentum, the tobacco industry responded with a national effort to pass weak state laws that preempted local tobacco control activity. The industry was successful in passing some form of preemption in 22 states. At the same time, however, local tobacco control advocates prevented preemption in the remaining 28 states. Despite increasingly sophisticated and aggressive use of third parties and front groups, initially in the hospitality industry, then expanding to gambling interests to fight local tobacco control laws, the tobacco industry often lost efforts to enact these laws. Between the early 1980s and 2004, the nonsmokers' rights movement has helped to pass clean indoor air ordinances in 1,675 municipalities across the United States (see Figure 2).

However, the tobacco industry did not limit its pursuit of preemption to clean indoor air ordinances. The tobacco industry co-opted a federal effort designed to make it more difficult for children to purchase tobacco, so-called youth access, as another vehicle to preempt local



FIGURE 2

tobacco control efforts. In 1992, Congress passed the Synar Amendment requiring states to reduce the illegal sale rate of tobacco to minors to less than 20 percent of attempted sales or risk losing federal substance abuse block grants. In 1996, when the implementing regulations were issued, the tobacco industry pushed “compliance bills” that included preemption of more aggressive local youth access laws in many states. In some cases, the industry managed to use the debate over youth access to pass broad preemption that also preempted local clean indoor air ordinances.

National Politics

While most of the successes in tobacco control during the 1980s and 1990s were at the local or state level, there were still several important debates at the national level, where the tobacco industry continued to dominate the process through a combination of campaign contributions and well-connected lobbyists and allies. As of 2004, tobacco remained the only substance ingested by humans that was exempt from any federal regulation as a food, drug, or consumer product.

Contributions from tobacco interests (including contributions to federal candidates, political parties and noncandidate committees) increased from \$7.8 million in 1997–1998 to \$8.7 million in 1999–2000 to \$9.4 million in 2001–2002, the most recent complete election cycle for which data are available. Tobacco companies spent an additional \$91.1 million on lobbying between 1999 and 2003.

These expenditures have been effective investments for the tobacco industry because the industry has continued to prevent any meaningful action at the federal level. Bills were introduced in 2001 and debated during the 107th Congress to give the U.S. Food and Drug Administration the

authority to regulate tobacco products. A weak proposal supported by Philip Morris was sponsored by Senate Majority Leader Bill Frist (R-Tenn.) and Representative Tom Davis (R-Va.). Frist accepted more than \$2.2 million from the tobacco industry between 1999 and 2002 in his capacity as chair of the National Republican Senatorial Committee, and Davis accepted more than \$2.5 million between 1999 and 2002 in his capacity as chair of the National Republican Congressional Committee, in addition to \$14,000 in contributions for his personal reelection campaign. At the same time, Representatives Greg Ganske (R-Iowa), John Dingell (D-Mich.), and Henry Waxman (D-Calif.) supported a stronger bill that granted substantial authority to the FDA to regulate tobacco. The 127 supporters of this bill accepted an average of \$613 in tobacco industry campaign contributions compared with an average of \$12,707 in tobacco industry contributions among the 17 supporters of the Frist/Davis bill. Neither bill passed.

In June 2000, tobacco industry dollars once again secured political allies during debate on funding for a U.S. Department of Justice lawsuit against the tobacco companies. The intent of the lawsuit was to recover tobacco-related health care costs paid for by the federal government, similar to the successful state lawsuits that recovered tobacco-related healthcare costs incurred by state **Medicaid** programs. On 19 June 2000 during the first vote to provide funding for the lawsuit, 207 members of the House of Representatives who voted against the funding had accepted an average of \$9,712 in tobacco industry contributions. In contrast, the 197 representatives who voted to approve funding for the lawsuit accepted an average of \$1,750 in contributions since January 1997. This proposal also did not move forward, but the lawsuit continued.

State Politics

The states, sandwiched between the federal level where the tobacco industry dominated the political process and the local level where health advocates often prevailed, were battlegrounds in three areas: preemption, taxation, and, beginning in the mid-1980s, large scale tobacco control programs.

In 2002, Delaware became the first state to overturn preemption of local tobacco control laws after a long campaign by public health advocates. Voters in Florida enacted a state clean indoor air law through direct voter initiative that made all workplaces and public places (except bars) smoke-free, and other states began enacting state clean indoor air laws. As is true at the national level, the tobacco industry fought back using well-connected lobbyists and campaign contributions. Occasionally the tobacco industry's largesse backfired on them. For example, in 2003 in Connecticut, public health advocates successfully brought public attention to financial ties between the tobacco industry and the Speaker of the House who was blocking a bill to repeal preemption in that state. The result of the controversy was that the Speaker of the House introduced and championed a statewide clean indoor air law, thereby skirting the issue of preemption, which passed and went into effect in the fall of 2003 for restaurants and April 2004 for bars and cafes.

Similar to preemption, tobacco taxation is another area where the tobacco industry works at multiple levels. Federal tax increases on cigarettes, although beneficial in financial and health terms, rarely occur;



Medicaid a public health program in the United States through which certain medical expenses of low-income persons are paid from state and federal funds.

the last increase in the federal cigarette tax was in 2001 when it only increased from 34 cents per pack to 39 cents per pack. However, after many years of relatively small tobacco tax increases, the fiscal difficulties that engulfed much of the United States in the early twenty-first century forced states to substantially increase the cigarette tax. Between 2001 and 2003, 33 states increased their cigarette tax; five states made two increases during that time period. One such state, New Jersey, had the highest tax rate at \$2.05 per pack. The tobacco industry was unable to stop these taxes, but, despite the proven effectiveness of large-scale tobacco control programs, little of the money the taxes raised was devoted to helping smokers to quit or to prevent young people from starting. While the industry fights these tax increases, it also often uses them to mask price increases that exceed the tax, ensuring continued revenue growth for the companies.

Large-Scale State Tobacco Control Programs

Perhaps the most important innovation in tobacco control at the state level has been the emergence of large-scale tobacco control programs. Such programs represent the first real challenge to the tobacco industry's monopoly of the advertising medium since 1970 when the industry effectively removed antismoking advertising from television and radio when it had Congress enact the broadcast advertising ban that went in to effect. Minnesota developed the first state-funded antismoking campaign in the United States in 1983 and implemented the program in 1985. The tobacco industry worked from the early stages of conception of the program to defeat it through campaign contributions and lobbying efforts and portraying the program as ineffective. It even developed its own "youth smoking prevention program," "Helping Youth Decide," that carefully avoided talking about the health dangers of smoking or the fact that nicotine was an addictive drug. In Minnesota, as elsewhere in the world, the industry presented its own ineffective programs as an alternative to meaningful tobacco control measures run by public health professionals. In addition, third party allies, such as the Teamsters Union, were recruited to defeat the tobacco control campaign. The tobacco industry also created a lobbying team made up of former state legislators and state employees with access to the legislative decision-making process, which allowed the industry to stay a step ahead of all plans for implementation of the program. While the industry did not prevent the program from beginning in 1985, its efforts to chip away at the program began to succeed in 1990 when the state legislature cut the program's budget from \$1.5 million to \$1 million. The election of Republican Governor Arne Carlson, whose ties with the tobacco industry included campaign contributions from industry lobbyists, and a 1996 outing in Australia financed by Philip Morris during Minnesota's case against the tobacco industry, led to the fall of the program in 1993. Carlson used inflated claims of a fiscal crisis, saying that the state was running out of money even as he was cutting taxes on the grounds that the state had more money than it needed; then he used the money "saved" by eliminating the tobacco control program for tax rebates.

The largest and longest surviving state program was created in California in 1988. After a hard-fought election campaign between health advocates and the tobacco industry, voters enacted an initiative

known as Proposition 99, that increased the state tobacco tax by 25 cents per pack and allocated some of the revenues to fund tobacco education and prevention programs. The state Department of Health mounted an aggressive campaign that combined tough antismoking ads, many of which confronted the tobacco industry's decades of manipulation of the public and built a statewide infrastructure to support local tobacco control activities, particularly clean indoor air and encouraging organizations to refuse tobacco industry money. The program reduced cigarette consumption so rapidly that it produced a corresponding drop in smoking-induced heart attacks.

Encouraged by California's success, public health activists used the initiative process in several other states—Massachusetts, Arizona, and Oregon—to enact programs modeled on California.

The tobacco industry, however, did not accept these developments. In addition to fighting these initiatives at the polls, the industry used its considerable political muscle in state legislatures to hobble these programs by forbidding them from attacking the industry or working on policy change. In California the industry increased its campaign contributions dramatically and, working through allies in the California Medical Association (the political deal was that the tobacco industry would help the Medical Association enact favorable legislation on malpractice in exchange for its help in shutting down the tobacco control program), nearly destroyed the program. Only an aggressive attack on the California Medical Association and the governor led by the American Heart Association and Americans for Nonsmokers' Rights, combined with several lawsuits defending the program, saved it. Other states did not fare so well; despite the fact that the tobacco control programs were enacted by the voters and had demonstrated effectiveness, the tobacco industry lobbying efforts led to state budget cuts that virtually shut down the Massachusetts program in 2002 and the Oregon and Florida programs in 2003.

The federal government recognized that public policy interventions at the state and local level were the most promising way to lower the burden of disease and death caused by the tobacco industry. Between 1991 and 1999, the National Cancer Institute carried out a large-scale trial of this proposition through the American Stop Smoking Intervention Study (ASSIST) program. ASSIST provided funding to 17 states, awarded after a national competition, to build a local infrastructure to enact policy changes, including increased tobacco taxes and local clean indoor air laws. ASSIST represented the first large scale (although at a state level not as large as the large-scale tobacco control programs the states mounted themselves later), and represented a serious threat to the tobacco industry. Secret tobacco industry documents acknowledged that "ASSIST will hit us in our most vulnerable areas—in the localities and in the private workplace. It has the potential to peel away from the industry many of its historic allies" (<<http://www.gaspforair.org/> 2000>) and "the antitobacco forces have developed a more sophisticated and well-funded structure to address local government affairs. . . . [ASSIST] guarantees that local matters will take increasing portions of our time and effort. . . . Thus our local plan is crucial" (<<http://www.tobaccodocuments.org/> 1998>).

The industry mobilized aggressively against ASSIST by organizing tobacco vendors, company sales people, restaurateurs, grocers, convenience



store owners, and other business organizations. These organizations were used to create accusations and divert attention from reducing tobacco use in the population to claims of “illegal lobbying” and used massive and targeted requests made under the Freedom of Information Act (FOIA) to burden tobacco control advocates with the task of copying documents rather than pursuing tobacco control. The results were also used in attempts to smear the work of ASSIST and other tobacco control organizations by claiming that these parties were using funds for “illegal lobbying.” The industry also used its allies in Congress to put restrictions into law that restricted ASSIST’s activities designed to promote public policy change to promote the public health.

Despite these attacks—and the corresponding reduction in effectiveness of ASSIST because it reduced its policy-related activities—ASSIST was successful in reducing tobacco use. ASSIST was associated with a decline in prevalence that could have resulted in 278,700 fewer smokers between 1991 and 1999 across the United States if ASSIST had been implemented nationwide.

Lawsuits Against the Tobacco Industry

A new front opened in the political battles between public officials and the tobacco industry in 1994 when the Attorneys General of Mississippi, Minnesota, and other states sued the tobacco industry to recover the costs of smoking paid by taxpayers and to stop other industry practices, particular predatory marketing against children. (These lawsuits were separate from private suits that had been in litigation with little success for years.) The industry opposed these suits not only in court, but also through the political process. In many states, the industry succeeded in preventing the attorneys general from spending state funds on the litigation (that led to the cases being pursued in cooperation with and financed by private lawyers). In Mississippi, the pro-tobacco governor even sued the attorney general in an unsuccessful effort to stop the suit, claiming that the suit was illegal since he never consulted with the governor.

None of these cases went all the way to a court verdict. Instead, all the cases were settled out of court, the first four states (Mississippi, Florida, Texas, and Minnesota) individually, and the remaining 46 states in the jointly negotiated Master Settlement Agreement (MSA) in 1998. These settlements imposed some restrictions on cigarette advertising (most notably, ending large billboards), established state antismoking programs in the states that settled individually, required the release of about 40 million pages of previously secret internal tobacco industry documents, and, most important, provided hundreds of billions of dollars to states into the indefinite future to partially reimburse the states for the costs of smoking through a complex formula based on cigarette sales.

The MSA and other settlements created the opportunity for every state to build a successful large-scale tobacco control program based on the successes of California, Massachusetts, ASSIST, and others. It remained up to the state legislatures—where the tobacco industry still wielded substantial political clout—to allocate some of the MSA money for tobacco control programs. In the early years after the settlements, some states did use the settlement dollars for tobacco control, but as of

2002, states were using less than 25 percent of the MSA payments for tobacco prevention and an even smaller portion of the state's total tobacco-related revenues. Most of the money went to anything but tobacco control, including capital projects, public works, and health services. By 2004, however, the threat of even these modest programs to the tobacco industry had greatly diminished. Programs in Florida and Minnesota established by their individual state settlements were eliminated (in large part because of the failure of health advocates in those states to mount the kind of aggressive defense that had rescued the California program a decade before), and funding in many other states had been cut.

Even worse from a public health perspective, the MSA created an unexpected alliance between the tobacco industry and some of the states that were more interested in protecting the cash flow of the MSA than reducing tobacco use. In the spring of 2003, 37 attorneys general (many of whom had been directly involved in negotiating the MSA) filed a brief of *amici curiae* in support of Philip Morris, which was attempting to avoid posting a \$12 billion appeal bond after losing a private class action lawsuit in Illinois, claiming that its marketing of "light" and "mild" cigarettes defrauded the public. The attorneys general accepted the claim that posting a bond of this magnitude would jeopardize Philip Morris' ability to make its annual MSA payments to the states.

Beyond general support from the attorneys general due to financial interests, the tobacco industry built a solid alliance with members of the Republican Attorneys General Association (RAGA). RAGA was conceived by Alabama Attorney General Bill Pryor in 1999 (Pryor was named a federal judge by President George W. Bush in 2004), as a means of defending against the alliances that some attorneys general had formed with private lawyers to sue the tobacco industry, providing an unfair advantage against the tobacco industry and threatening the entire business community. The links between the tobacco industry and RAGA were well hidden because RAGA was not required to report campaign contributions.

In many ways, the politics of the post-MSA era have marked a return to those of the late 1980s and early 1990s, with a resurgence of local tobacco control activities concentrated on clean indoor air. Probably the most important legacy of the litigation against the tobacco industry is the fact that more than 40 million pages of previously secret tobacco industry documents are now available to the public on the Internet. During its lawsuit against the industry, Minnesota Attorney General Hubert Humphrey III doggedly pursued release of the tobacco industry's secret internal correspondence. He forced this material to be made public as part of the Minnesota settlement. Later, the MSA required that this material be placed on the Internet (<<http://legacy.library.ucsf.edu>>). These documents give an unprecedented view into the inner workings of the tobacco industry and its involvement in politics at the local, state, national, and international levels. While the practices of the tobacco industry have not drastically changed over time, access to the tobacco industry's internal documents has allowed the public to see how the tobacco industry does business and allowed health advocates to do a better job of countering the industry's activities.

International Politics

Three multinational corporations operating worldwide—Altria (Philip Morris), British American, and Japan Tobacco—dominate the tobacco industry. The combined opportunities created for these multinational corporations through globalization and through the reduction of smoking in the United States and other developed countries by tobacco control advocates have led the tobacco industry to increasingly focus its efforts on the developing world. As in the United States, these tobacco companies, and their smaller cousins, aggressively use politics to protect and promote their interests, using the same techniques as in the United States: well-connected lobbyists, political money, and third party front groups and allies.

For example, in the mid-1980s, the tobacco industry faced a significant challenge in the European community, which was proposing legislation to end tobacco advertising and promotions. The tobacco industry recognized the economic consequences of such an action and began to forge alliances with third parties, including the International Chamber of Commerce, the Union of Industrial and Employers' Confederations of Europe, and several members of the communications and business communities, as well as friendly governments, most notably Germany, against the legislation. While these strategies were not successful in preventing the passage of the ban on advertising and promotion, a case brought by Germany led the European Court of Justice to strike the legislation in 2000.

Similar to the tactics of the tobacco industry in the United States, Philip Morris and Brown & Williamson developed an international network of scientists secretly funded by the tobacco industry and managed by Covington and Burling, the law firm that handles much of the tobacco industry's political work in the United States, to conduct research to refute the dangers of secondhand smoke in the mid-1990s. This network successfully delayed the spread of clean indoor legislation to Latin America and other parts of the world.

The industry faced its strongest international challenge in the late 1990s, when the World Health Organization began using its treaty-making powers for the first time to create the first international public health treaty, the Framework Convention on Tobacco Control (FCTC). The goal of the FCTC is to create a framework to be implemented at all levels of government to reduce the prevalence of tobacco use and exposure to secondhand smoke, thereby decreasing the health, social, environmental, and economic consequences. To accomplish this goal the FCTC envisions bans on tobacco advertising, promotion, and sponsorship, including requiring the placement of prominent and strong health warnings on all tobacco packages, banning the use of deceptive terms such as "light" and "mild," protecting the public from exposure to secondhand smoke in all public places, increasing tobacco taxes, and working to prevent cigarette smuggling, which is often organized with the active participation of the multinational cigarette companies as a way to penetrate new markets and bypass national tobacco control laws.

The tobacco industry actively monitored the treaty development and worked through national governments in sympathetic countries, most notably the United States (particularly after the pro-tobacco George W. Bush administration took power), Germany, and Japan. The industry also applied standard tactics such as working through third parties and front groups to lobby for weakening the treaty by eliminating key



provisions. In the end, a concerted effort led by countries in the developing world and nongovernmental organizations in the United States, Europe, and elsewhere forced the United States, Germany, and Japan to back down, and the treaty was approved by the World Health Assembly in 2003. However, the treaty must be ratified by the participating countries for it to go into effect, and this process will take substantial time and will face opposition in many countries orchestrated by the tobacco industry (often acting through other third parties), including the United States.

European Union Commissioner for Health and Consumer Protection David Byrne signs the World Health Organization (WHO) Framework Convention on Tobacco Control (FCTC) during a signing ceremony at the WHO headquarters in Geneva, Switzerland, Monday 16 June 2003. AP/WIDE WORLD PHOTOS

Conclusion

The politics surrounding tobacco are often characterized as a tug-of-war between the tobacco industry and the public health community. The tobacco industry works to pull the issue up the hierarchy of the political system, knowing that its greatest chance for victory is at the federal level since it is the most concentrated area of government, furthest from the people, and most susceptible to tobacco industry lobbyists and campaign contributions. Working down the political system to state and local governments, health advocates increase their chances of making progress in tobacco control as the tobacco industry cannot be in all places at all times and because, in a highly visible public political fight, local politicians are more sensitive to the public's desire to be protected from the tobacco industry than to tobacco industry money. The industry has responded by increasing its efforts to stay in the background and work through other organizations such as "hospitality associations." Local tobacco control

advocates tend to be successful when they can expose these connections and frame the issue as local citizens against Big Tobacco.

See Also Doctors; Insurance; Toxins.

■ JENNIFER K. IBRAHIM
■ STANTON A. GLANTZ

BIBLIOGRAPHY

- Aguinaga-Bialous, Stella, and Stanton A. Glantz. *Tobacco Control in Arizona, 1973–1997*. Tobacco Control Policy Making: U.S. Paper AZ1997. San Francisco, Calif: Center for Tobacco Control and Research at University of California, 1997.
- Americans for Nonsmokers' Rights. Available: <<http://www.no-smoke.org>>.
- Campaign For Tobacco-Free Kids. Available: <<http://www.tobaccofreekids.org>>.
- Committee of Experts on Tobacco Industry Documents, World Health Organization, "Tobacco Company Strategies to Undermine Tobacco Control Activities at the World Health Organization" (July 1, 2000). *Tobacco Control*. WHO Tobacco Control Papers. Paper WHO7. <<http://repositories.cdlib.org/tc/whotcp/WHO7>>.
- Dearlove, J. V., Stella Aguinaga-Bialous, and Stanton A. Glantz. "Tobacco Industry Manipulation of the Hospital Industry to Maintain Smoking in Public Places." *Tobacco Control* 11 (June 2002): 94–104.
- Gasp for Air. Available: <<http://www.gaspforair.org/gasp/gedc/artcl-new.php?ID=74>>.
- Givel, M. S., and Stanton A. Glantz. "Tobacco Lobby Political Influence on United States State Legislatures in the 1990s." *Tobacco Control* 10 (June 2001): 124–34.
- Glantz, Stanton A., et al. *The Cigarette Papers*. Berkeley, Calif.: University of California Press, 1996.
- Glantz, Stanton A., and Edith Balbach. *Tobacco War: Inside the California Battles*. Berkeley, Calif.: University of California Press, 2000.
- Minnesota Smoke-Free Coalition. Available: <<http://www.smokefreecoalition.org/utills/printArticle.asp?id=358>>.
- Pringle, Peter. *Cornered: Big Tobacco at the Bar of Justice*. New York: Henry Holt & Company, 1998.
- Siegel, M., et al. "Preemption in Tobacco Control. Review of an Emerging Public Health Problem." *Journal of the American Medical Association* 278 (10 September 1997): 858–863.
- Tobacco Scam. Available: <<http://www.tobaccoscam.ucsf.edu>>.
- UCSF Legacy Library. Available: <<http://legacy.library.ucsf.edu>>.



Portuguese Empire

Tobacco from Brazil became an important trade product in the Portuguese Empire during the 1620s, and held a leading role in trade throughout the seventeenth and eighteenth centuries in Portugal, West Africa, and the Portuguese colonies in Asia. In fact, the revenues from

state tobacco monopolies became a crucial element in the finances of the *Estado da Índia* (Portuguese colonies in East Africa and Asia) during the second half of the seventeenth century. Meanwhile, tobacco played a major role in building the Brazilian economy, as it was exchanged for slaves on the western coast of Africa. Thus, tobacco helped establish the connection between the Indian Ocean and the South Atlantic regions in the seventeenth and eighteenth centuries, breaking up the compartmentalized vision of the Portuguese Empire. To some extent, Portugal's finances depended on tobacco revenues until the end of the monarchy in 1910, and the debate over liberalization of the tobacco state monopoly played a decisive role in the military coup d'état of 1926, which established a forty-eight-year dictatorship in Portugal.

Consumption

In 1555, Pedro Fernandes Sardinha, the first bishop of Brazil, launched a campaign against the addiction to smoking in the Portuguese colony on the grounds that it was a **heathen** habit that was improper to Christians. His campaign, which involved the excommunication of several colonizers—including Vasco Fernandes Coutinho, who held the captaincy of the Espírito Santo region—caused a major commotion in the colony, forcing the governor to intervene, appease the outraged captain, and calm the Portuguese community. The outcome was that the bishop was forced to return to Portugal. During the voyage, however, his ship was wrecked on the Brazilian coast, and, although the bishop was initially rescued by the natives, they ultimately ate him. There are no records of any other attempts to punish or restrict the consumption of tobacco, in either Brazil, Portugal, or other parts of the Portuguese Empire. Instead, the Portuguese authorities very quickly discovered the importance of this addictive new stimulant and tried to maximize the fiscal and financial benefit that they gained from it.

The story of the intolerant bishop demonstrates the extent of European tobacco consumption in Brazil during the middle of the sixteenth century. Within Europe itself, the plant had been introduced into Portugal around 1542, and was cultivated in the royal gardens, more specifically in the nurseries of a princess, the Infanta D. Maria. Jean Nicot, the French ambassador in Lisbon, later sent tobacco seeds on to Queen Catherine of Medici and to Cardinal Lorrène, specifically in 1569–1570. The first authors to mention Brazilian tobacco were the French Franciscan André Thevet, the Huguenot Jean de Léry, the Jesuit missionaries Manuel da Nóbrega, José de Anchieta, and Fernão Cardim, and historians Damião de Góis and Jerónimo Osório. They all emphasized the medicinal properties of the plant in healing wounds and skin diseases, its capacity as a painkiller (for such ailments as headaches), and its use as a drug to help bear the effects of hunger and thirst. In addition, they also described the social and ritual uses of the plant among the American natives in honoring guests and foreigners, treating the sick, reinforcing collective ties in village or tribal assemblies, and stimulating the **shamanistic** practices in divining and healing rituals. In contrast, the transformation of tobacco for smoking, drinking, chewing, and inhaling was mainly targeted at the pleasure of Europeans.

Portuguese medical and pharmaceutical treatises from the late sixteenth and seventeenth centuries—by Leonel de Sousa, Zacuto Lusitano, António da Cruz, Francisco Soares Feio, Manuel de Azevedo, Gabriel



heathen any person or group not worshipping the God of the Old Testament, that is, anyone not a Jew, Christian, or Muslim. May also be applied to any profane, crude, or irreligious person regardless of ethnicity.



shamanism an ancient religion based on commune with animal spirits and characterized by magic, healing, and out-of-body experiences.

Grisley, João Curvo Semedo, and Duarte Madeira Arrais—all noted that tobacco possessed healing properties. It was considered under the traditional theory of humors, because the smoke was supposed to prevent excess humidity in the body. There was also a widespread belief that tobacco could heal skin diseases, and that it had properties as an antiseptic, sternutatory (stimulator of sneezing), and emetic. When transformed into a beverage, powder, or plaster, tobacco could also be used to treat insomnia, asthma, worms, stomach pains, flux, bleeding, colic, and coughs. Although this reputation could have helped the use of tobacco to spread, attributing to it some distinctive qualities and avoiding any connection with the native rituals, its widespread consumption was not due to its healing properties. At the beginning of the eighteenth century, André João Antonil (a pseudonym of the Jesuit Giovanni Antonio Andreoni) published the book *Cultura e opulência do Brasil* (Culture and Opulence of Brazil), which evaluated the importance of tobacco production in Brazil and its consumption by all social groups. During this period, it is known that the annual quantity of tobacco consumed in Portugal and the Portuguese-controlled Atlantic islands (Madeira and the Azores) was about 294 tons. Within Portugal, by far the heaviest consumption was in Lisbon, followed by the southern regions.



snuff a form of powdered tobacco, usually flavored, either sniffed into the nose or “dipped,” packed between cheek and gum. Snuff was popular in the eighteenth century but had faded to obscurity by the twentieth century.

The consumption of tobacco in Portugal began with people smoking pipes or rolls of dried leaves, the predecessors of cigars. During the eighteenth century, the habit of inhaling tobacco powder—which required the development of **snuff**-producing factories—became the preferred means of tobacco consumption, a position it held until the beginning of the nineteenth century. Cigarette production, which started in Portugal in the first decades of the nineteenth century, then gave the tobacco industry a new boost. However, it was the combination of cigarette and match production, introduced into Portugal at the beginning of the nineteenth century, that transformed the market.

Production

The production of tobacco in Brazil increased throughout the seventeenth and eighteenth centuries. The quantity of tobacco shipped to Portugal between 1676 and 1700 can be used as an indicator of this production, even accepting that smuggling reached significant levels. During this period, the quantity of tobacco that arrived from Brazil increased from 720 tons per year to 1,542 tons, while in the following decades these imports more than doubled, reaching 3,520 tons by 1710 and 1720. The tobacco was normally grown on small and medium-sized properties, using little slave labor and providing sustenance for a diverse group of landowners and workers, mainly in the captaincy of Bahia. As the production and trade in Brazilian tobacco was not under a royal monopoly—the *estanco do tabaco* only covered its trade in Portugal and India—production and the Atlantic trade developed enormously. However, the king of Portugal decided to intervene in one delicate matter: the direct trade between Brazil and the West Coast of Africa. This extremely important bilateral trade was responsible for the development of the Brazilian economy, since slaves were exchanged mainly for tobacco, but also for brandy made from sugar cane. The king was worried that the tobacco traded in Africa might be re-exported to Europe, as

Portugal had lost control of the Guinea coast in 1637 when the Dutch conquered the fort of Mina. Consequently, in 1698, King Pedro II established a limit of 60.8 tons of tobacco that could be exported every year from Brazil to the Guinea coast, to be carried in twenty-four ships. Moreover, he only authorized the export of the lowest quality tobacco, mixed with sugar syrup.

The colonial pact explains why, after the royal monopoly of transformation and distribution of tobacco was established on the mainland and in the Atlantic islands, the production was prohibited in Portugal. The prevailing idea until the Pombal administration (1750–1777) was that the main products from the colonies—pepper from India, cinnamon from Sri Lanka, sugar from Madeira and Brazil, tobacco from Brazil—should not be planted in other regions, so as to protect the established monopoly leases and the customs duties. Planting tobacco in Portugal and the Azores was excluded for fiscal reasons: It was easier to control imports from Brazil. Nonetheless, smuggling was estimated to make up half the total volume by the end of the seventeenth century. The logic of the colonial pact also meant that factories had to be concentrated on the Portuguese mainland, while tobacco processing was prohibited in India, for instance. In 1674, the creation of the *Junta da Administração do Tabaco* (Council for the Administration of Tobacco) by the crown was followed by a huge campaign to eradicate tobacco planting in Portugal.

Despite these measures to control the production, transformation, and trade in tobacco, the plant was introduced into the Azores during the eighteenth century, leading to the creation of several small factories in the 1740s. The colonial pact, whose logic had been shaken by the new policies introduced by Pombal, was disrupted by the independence of Brazil in 1822. Nevertheless, tobacco imports from Brazil did not go into immediate decline. The production of tobacco—never completely suppressed in the northwestern Minho region—was immediately stimulated in the Azores by the government and also introduced into the Douro region when a crisis struck the area's vineyards in the middle of the nineteenth century. In 1888, the tobacco crop in Portugal reached 90 tons, while the production in the Azores increased tremendously throughout the second half of the nineteenth century, giving rise to the creation of new factories. The climatic conditions and soil explain why the region continues to be conducive to the production of cigarettes and cigars.

Tobacco was also introduced into Angola, a Portuguese colony until 1975, in the eighteenth century, mainly in the southern Moçamedes region. In the 1830s, the Portuguese government did try to stimulate production, but it only really started to acquire any significant scale in the 1870s. In 1929, the export of tobacco from Angola to Portugal reached 642 tons, and in the following decades, the average exports to Portugal stabilized at around 300 tons. This contrasted with the situation in the Cape Verde islands, where despite government efforts to encourage production, the people continued to grow the small quantities of tobacco they had produced since the eighteenth century. Curiously, the islands also maintained a tradition of women smoking pipes. The situation in Mozambique, another Portuguese colony, was different again. Tobacco growing there became significant in the early twentieth century, and by the 1940s, exports to Portugal varied between 33 and 88 tons.



Finances

In 1639, the Crown established a royal tobacco monopoly that controlled the transformation and distribution of Brazilian tobacco in Portugal and the Atlantic islands. The monopoly was leased in return for an annual rent, payable to the king, of 8 million *réis*. (*Real*, *réis* in the plural, was a coin and account unity: roughly 400 *réis* were equivalent to one cruzado.) The contract did not cover customs duties, which meant that imported Brazilian tobacco still had to pay 15 percent on the fixed value of 100 *réis* per pound, plus an additional 3 percent when re-exported. However, war broke out in 1640 when Portugal sought to regain its political independence from Spain. This led to new leases in 1641, with an annual rent of 12.8 million *réis*, and again in 1644, with an annual rent of 25.6 million *réis*. This system of leases meant that the state fixed a price for the producers in Brazil, the export duties to be paid to Brazilian customs, import and re-export duties paid to Portuguese customs, and sales prices, although these were often left up to the holder of the lease. In addition, they established measures to prohibit tobacco growing in Portugal and other parts of the empire except Brazil, to ban distribution outside the lease, and to allow subcontracts between the central lessee and small companies operating at the level of *comarcas* (judicial districts).

This contracted-out royal monopoly saw a significant increase in annual rents between 1651 (28.4 million *réis*) and 1674 (34.8 millions *réis*). However, this growth was not linear and, as with other leases, companies went bankrupt or renegotiated the value during the period when Portugal was in war with Spain (1641–1668). Once the war was over, the *Junta da Administração do Tabaco* was created, expropriating the existing factories and centralizing the entire industrial capacity in a single large factory located in Lisbon. This new institution directly controlled the purchase, transformation, and distribution of tobacco in Portugal, and ushered in a period of increased revenues, despite ongoing smuggling. By the end of the seventeenth century, the debate regarding tobacco revolved around the best way to rationalize this major source of income: through royal monopoly (either under subcontract or directly managed by a central institution) or through free trade and the payment of duties. The debate would continue on into the early twentieth century.

While the debate continued, in 1700 the king decided to return to the system of leases, which was cheaper in administrative terms. The annual rent agreed on was 614.4 million *réis*, which reveals both the expansion of tobacco consumption and the increase in Brazilian production. The annual rent paid for the tobacco contract rose successively—despite several short-term falls and disruptions due to bankruptcies—to 720 million *réis* in 1722, 764 million in 1741, 884 million in 1759, 960 in 1783 (including Macao), and 1.06 billion in 1800 (again including Macao). This was followed by a period of political turmoil brought by the Napoleonic invasions (1807–1812), the liberal revolution in 1820 and the civil war of 1832–1834. Nonetheless, a new contract was established at 1.44 billion *réis* in 1816, and despite falls in revenue in the 1820s and 1830s, the value of the tobacco contract had reached 1.521 billion *réis* by the beginning of 1860s.

During these years, the customs revenue from tobacco reached 234 million *réis*. In fact, calculations show that customs represented between 10 percent and 30 percent of the state's total revenues from tobacco, only in Portugal.

In 1865, the Portuguese parliament decided to liberalize the system, leading to the creation of new factories and trading companies. The new system certainly proved profitable, as the state increased its revenues from 2.3 billion *réis* in the first years to 3.9 billion *réis* by the late 1880s. The creation of a state monopoly was decided on in 1887, which maintained the profit levels but forced the government to pay huge amounts of money as compensation for expropriating factories. However, in 1890, the state's serious financial crisis forced a return to the system of leases, negotiated with a progressive value that started at 4,250 million *réis*. A similar contract was renegotiated in 1906 for a twenty-year period, this time starting at 6,000 million *réis*.

It was the parliamentary debate in 1926 on renewing the tobacco lease that triggered the military coup d'état of 28 May, which in turn established a fascist-style dictatorship that lasted for forty-eight years in Portugal. The *Companhia do Tabaco*, a joint Portuguese and French venture that had held the tobacco contract since the 1890s, managed to maintain the system. However, there was greater intervention from the state, which forced the company to share the market with another company, *Tabaqueira*, created by Alfredo da Silva's new industrial group (CUF). This new company set up modern factories in the protected market, and by the 1960s had reached a dominant position, surviving the liberalization that followed the establishment of democracy in Portugal after the 1974 revolution.

The importance of tobacco for public finances was not restricted to Portugal. In the *Estado da Índia*, the royal monopoly had been established in 1623 with a first set of leases that governed the tobacco trade in the territories of Goa, Bardez, and Salcete. Those contracts, arranged almost exclusively with Indian merchants, initially stipulated an annual rent of 2 million *réis*, increasing to 12.9 million *réis* in 1634. The latter year also brought contracts covering the northern territories of Bassein (8.3 million *réis* per year) and Chaul (3.5 million *réis*). In total, all these leases reached 24.7 million *réis* in 1634, or 8 percent of the total revenue of the *Estado da Índia*. In 1687, over fifty years later, the total income from the tobacco contracts had increased to 46.5 million *réis*, more than the total income from the customs, and 19 percent of the *Estado da Índia*'s total revenues. This means that tobacco played a significant role in the finances of the Portuguese Empire in India, even after the loss of the main trading posts and territories (such as Hormuz, Malacca, Sri Lanka, and Cochin) between the 1630s and the 1660s. Indeed, tobacco was of such importance that in 1680, the king decided to replicate the *Junta da Administração do Tabaco* in India to control the contracts and prohibit the production of powdered tobacco, thus protecting the mainland's industry. Despite the absence of complete data, the value of the tobacco leases in India evidently rose throughout the eighteenth century. For example, in the Goa region, the contract for 1709–1712 stipulated an annual rent of 32.4 million *réis* rising in 1756 to 57.3 million.

Commerce

The circulation of tobacco established the connection between the two main axes of the Portuguese Empire: the Indian Ocean and the South Atlantic. There are no reliable data for the global trade between these regions, because tobacco had to pass via Lisbon before being re-exported

to Goa and direct trade between Bahia and Goa was only officially carried on after 1770s. Nor are there precise data on the importance of local production, which was quite widespread in southern India throughout the seventeenth century. Certainly, when the *Junta da Administração do Tabaco* was established in Lisbon in the late 1600s, the first reports recognized the importance of tobacco exports to India, and proposed isolating this region from the rest of the empire and establishing specific trade contracts. It was against this background that Manuel Lopes de Lavre proposed a contract worth 160 million réis per annum to distribute tobacco in Asia, a sum that corresponded to three-quarters of the *Estado da Índia's* total revenues. Several other reports indicate that the average volume of tobacco exported from Portugal to India was around 240 tons per year.

In addition, there is no series of figures on the quantities of tobacco shipped from Brazil to Portugal, but only data for specific periods, such as from 1676 to 1700, when the total volume increased from 720 to 1,542 tons. Of this, only an average of 294 tons was consumed in Portugal, Madeira, and the Azores, while the rest was re-exported to Spain, which generally consumed 442 tons, Italy (Genoa), the Netherlands, and France.

In social terms, the main holders of the tobacco leases in Portugal and India belonged to the upper elite of bankers and top financiers who were intimately involved in the Crown's main operations in Europe and Asia. However, the two groups did not connect with one another. The contractors in Portugal were almost all Portuguese, with some Castilians, particularly in the early eighteenth century. The increasing need for a solid financial backing to pay for the huge contracts in the late nineteenth century explains why French capital joined the company led by the Portuguese banker Burnay. In contrast, the lease holders in India were almost all Hindu bankers and merchants, who controlled most of the *Estado da Índia's* financial operations throughout the seventeenth and eighteenth centuries.

While tobacco helped create this financial elite, which was boosted under the Pombal administration, the constant increase in the tobacco trade also supported a large group of ship owners, merchants, and vendors. The tobacco subcontractors in Portuguese districts played an important role at the regional level, and the agents of the small shops (mainly women in Lisbon) formed an important network. In fact, there were hundreds throughout the entire mainland, with around sixty in Lisbon alone during the late seventeenth century. The tobacco factories, which became the most profitable industrial units between 1850 and 1925, employed thousands of workers (between 2,000 and 4,000), who launched the strongest strikes during the Constitutional Monarchy and the First Republic.

See Also Brazil; British Empire; Dutch Empire; French Empire; Smuggling and Contraband; Spanish Empire; Trade.

■ FRANCISCO BETHENCOURT

BIBLIOGRAPHY

Ames, Glenn Joseph. *Renasant Empire? The House of Braganza and the Quest for Stability in Portuguese Monsoon Asia, c. 1640–1683*. Amsterdam: Amsterdam University Press, 2000.

- Bethencourt, Francisco. "O Estado da Índia." In *História da Expansão Portuguesa*, Vol. 2. Edited by Francisco Bethencourt and Kirti Chaudhuri. Lisbon: Círculo de Leitores, 1998.
- Cheis, Maria da Conceição Franco. *O tabaco do Brasil nos quadros da economia portuguesa do século XVII* [Tobacco from Brazil in the framework of the Portuguese economy in the 17th century]. M.A. thesis, Lisbon, Faculdade de Letras, 1967.
- Gonçalves, Paula Alexandra Grazina. *Usos e costumes do tabaco em Portugal nos séculos XVI e XVII* [Uses and habits of tobacco in Portugal, 17th–18th centuries]. M.A. thesis, Lisbon, Universidade Nova de Lisboa, 2003.
- Hanson, Carl A. "Monopoly and Contraband in the Portuguese Tobacco Trade, 1624–1702." *Luzo-Brazilian Review* vol. XIX, no. 2 (1982): 149–168.
- Lapa, José Roberto do Amaral. "O tabaco brasileiro no século XVIII: anotações aos estudos sobre o tabaco de Joaquim Amorim de Castro." [Brazilian tobacco in the 18th century: Comments on the studies on tobacco by Joaquim Amorim de Castro]. *Studia* 29 (1970): 57–145.
- Lugar, Catherine. "The Portuguese Tobacco Trade and Tobacco Growers of Bahia in the Late Colonial Period." In *Essays Concerning the Socio-Economic History of Brazil and Portuguese India*. Edited by Dauril Alden and Warren Dean. Gainesville: University Press of Florida, 1977.
- Nardi, Jean Batiste. "Retrato de uma indústria no Antigo Regime: o estanco real do tabaco em Portugal (1570–1830)." [Portrait of an industry in the ancien régime: the monopoly of tobacco in Portugal, 1570–1830]. *Arquivos do Centro Cultural Português* XXVIII (1990): 321–339.
- . *Le tabac brésilien et ses fonctions dans l'ancien système colonial portugais (1570–1830)* [Tobacco and its functions in the old Portuguese colonial system (1570–1830)]. 5 vols. Thèse de doctorat, Aix en Provence, Université de Provence, 1991.
- Santos, Raúl Esteves dos. *Os tabacos: sua influência na vida da nação* [Tobacco and its influence in the life of the nation]. 2 vols. Lisbon: Seara Nova, 1974.

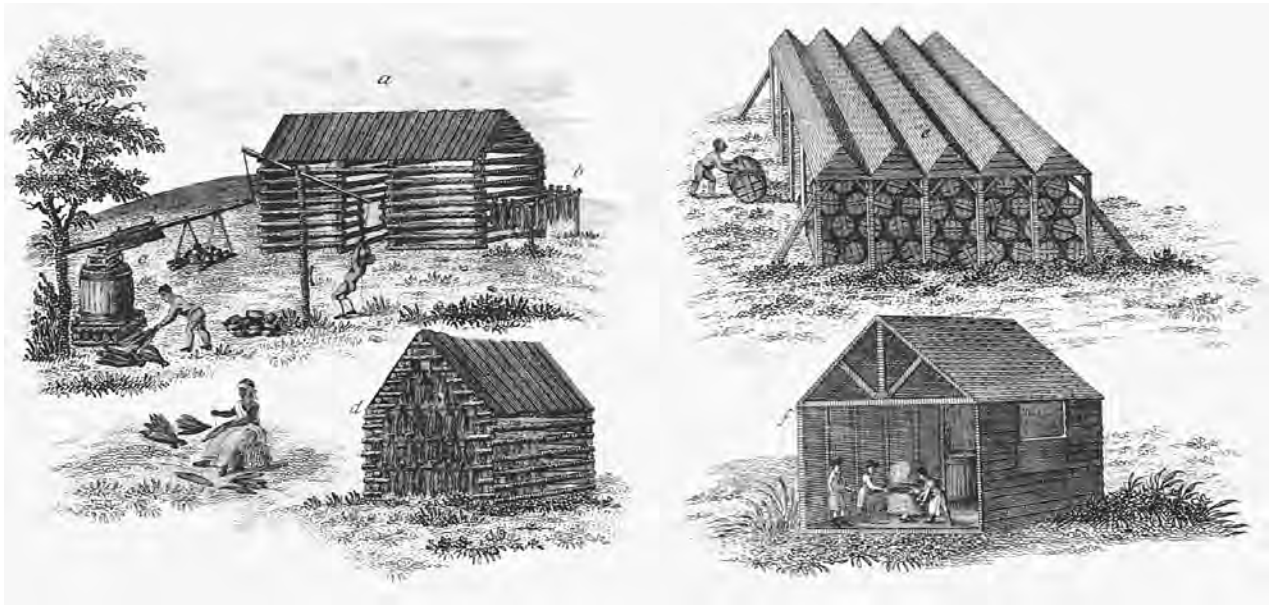


Processing

Processing is what farmers do to a crop after harvest. Nurturing the living plants is part of the agrarian cycle. But after harvesting, the agrarian cycle is complete, and further handling is properly called processing. Some crops require little processing. Indeed, many fruits and vegetables can go from field to table with a simple washing. For example, after picking and packing, the apple growers' work is done. Not so with tobacco growers.

Forms of Processing

Raw tobacco contains moisture that must be removed before manufacturing can begin. As the leaves are the only plant part that is sold, tobacco processing focuses on drying or curing the leaves. As much as 90 percent of the weight of raw tobacco is lost in curing. Proper curing is important. An average field crop can be greatly improved by careful curing. Conversely, a fine field crop can be ruined in the curing barn. Thus, tobacco growers must be as skilled in curing as they are in cultivating.



This eighteenth-century illustration called “Curing, Airing, and Storing Tobacco” depicts tobacco processing in early America. Moisture from the raw tobacco must be removed before manufacturing can begin. © CORBIS



air-curing the process of drying leaf tobacco without artificial heat. Harvested plants are hung in well-ventilated barns allowing the free circulation of air throughout the leaves. Air-curing can take several weeks. Burley tobacco is air-cured.

air-cured tobacco leaf tobacco that has been dried naturally without artificial heat.

There are three curing methods in common use in the United States: **air-curing**, fire-curing, and flue-curing.

AIR-CURING. Air-curing is the oldest form of tobacco processing. Burley, Maryland, and Connecticut Valley tobaccos are **air-cured**. Maturity of the living plant is judged by color, and plants are ripe when the leaves change from dark green to light green to yellow. In air-curing cultures, growers harvest the entire plant. Stalks are cut at the bottom, laid on the ground, and allowed to wilt. The stalks are then spiked—or pierced near the bottom with a metal tool—and sticks are inserted through the stalks. Typically, five or six plants are hung on a stick. Some Burley growers hang the tobacco sticks on outdoor racks to hasten curing, but most Burley is barn-cured. After spiking, growers carry the plants to the curing barn and hang them in tiers, leaving air spaces in between.

Historically, air-curing barns have been designed to provide protection from rain and wind but afford ample air exchange and circulation. The plants cure naturally without artificial heat, but fans are sometimes used to improve air movement. Curing times vary with environmental factors like humidity and temperature, but plants usually remain in the curing barn for four to six weeks. As they cure, the leaves continue to change from light green to light brown, mahogany, or gold.

When the leaves have thoroughly dried and coloring is complete, leaves are stripped from the stalks. Growers then bulk the leaves, forming them in piles and covering them with fabric for protection. Many growers scatter the stripped stalks in the fields and thus return their substance to the earth. When preparing the leaves for market, growers sort or grade the cured leaves by color and tie them in small bundles. More recently, some tobaccos are pressed into bales. The tobacco is stored carefully to remain in order—that is, moist enough to be pliable yet dry enough not to mold or mildew. At marketing time, growers

carry their tobacco to a warehouse for auction or, more recently, directly to a purchaser by prearrangement.

Air-curing produces flavorful tobaccos highly valued by the trade. Most Burley is consumed in cigarettes, but some Burley is blended into pipe tobaccos and other smoking products. Connecticut Valley leaf, the most valuable tobacco in the world, is used in premium cigars. Approximately 40 percent of the total U.S. tobacco crop is air-cured.

FIRE-CURING. Fire-curing is practiced along the Tennessee–Kentucky border and in some parts of Virginia. Fire-curing is a variation of air-curing in which small fires are built on the floors of the curing barns to aid drying. Great care is taken to maintain the correct temperature and humidity and thus affect a proper cure. Sometimes, very little firing is needed, and dry weather can delay firing for several days. In damp weather, however, growers light a series of low fires. Hickory and oak are the fuels of choice, and fires are sometimes fed with sawdust so they smolder rather than flame. Several firings may be needed to completely cure and smoke the leaves. Purchasers value the rich, smoky flavor of dark-fired tobacco, and a high smoke volume is maintained during the final curing stage. When the tobacco is finished, roof ventilators purge the heat and smoke.

As in air-curing cultures, fire-cured tobacco is stripped and bulked. When ready, the leaves are graded and tied. Leaves are assorted by color or stalk position, four or five grades being typical. The rustic flavor of fire-cured leaf is popular in chewing tobacco, **snuff**, pipe tobacco, and in certain European cigars. Less than 10 percent of the American crop is fire-cured.

FLUE-CURING. Also called Bright leaf, **flue-cured** varieties account for about half of American tobacco production. Areas of Virginia, North Carolina, South Carolina, Georgia, and Florida flue cure tobacco. Most flue-cured tobacco is consumed in cigarettes. A major cultural difference from other types is how Bright leaf is harvested. Tobacco leaves do not all ripen at once. The bottom leaves ripen first, then those next to the bottom and so on to the uppermost leaves. Waiting for the upper leaves to ripen ensures that the bottom leaves are overripe and nearly worthless. Therefore, Bright leaf growers harvest the leaves as they ripen, breaking off a few leaves every week until all leaves have been harvested. Unlike Burley and dark-fired tobacco, the stalk is not harvested. This method assures all leaves are harvested at the proper time.

Historically, flue-curing evolved from fire-curing. Fire-cured leaves are strongly flavored and coated by smoke and soot. By the 1880s, however, demand for milder, more aromatic cigarette tobaccos drove the development of flue-curing. Artificial heat flows from an outside furnace through a network of stovepipes, or flues, running parallel to and a few inches above the floor of the curing barn. An exhaust pipe vents smoke and soot outside. Thus, the leaves are cured rapidly by artificial heat free of ashes, soot, and smoke. Moreover, even temperatures are easier to maintain with flues, resulting in a more uniform cure. Temperatures as high as 71 degrees Celsius (or 160 degrees Fahrenheit) are applied, and the tobacco is fully cured in a few days rather than several



snuff a form of powdered tobacco, usually flavored, either sniffed into the nose or “dipped,” packed between cheek and gum. Snuff was popular in the eighteenth century but had faded to obscurity by the twentieth century.

flue-cured tobacco also called Bright Leaf, a variety of leaf tobacco dried (or cured) in air-tight barns using artificial heat. Heat is distributed through a network of pipes, or flues, near the barn floor.

weeks. After curing, leaves are bulked—there are no stalks to strip—and stored until marketing time.

See Also Architecture; Chewing Tobacco; Cigarettes; Cigars; Pipes.

■ ELDRED E. PRINCE JR.

BIBLIOGRAPHY

- Gately, Iain. *Tobacco: The Story of How Tobacco Seduced the World*. New York: Grove Press, 2001.
- Goodman, Jordan. *Tobacco in History: The Cultures of Dependence*. London: Routledge, 1993.
- Hirschfelder, Arlene B. *The Encyclopedia of Smoking and Tobacco*. Phoenix, Ariz.: Oryx Press, 1999.
- Kluger, Richard. *Ashes to Ashes: America's Hundred-Year Cigarette War, the Public Health, and the Unabashed Triumph of Philip Morris*. New York: Vintage Books, 1997.
- Tilley, Nannie M. *The Bright-Tobacco Industry, 1860–1929*. Chapel Hill: University of North Carolina Press, 1948. Reprint, New York: Arno Press, 1972.



Product Design

The cigarette is a uniquely successful drug delivery device. It provides an effective vehicle (inhaled smoke) for nicotine to travel deep into the lungs, resulting in the most rapid and efficient possible route to the brain (approximately eight seconds). It enables the smoker to manipulate smoke delivery—and therefore nicotine dose—easily with each successive puff, constantly adjusting delivery to individual needs and circumstances. And it facilitates a host of secondary behaviors and cues tied psychologically to smoking “satisfaction,” including physical and oral manipulation of the cigarette, smoke aroma and taste, and sensory impact (bite) at the back of the throat and mouth preceding the delivery of nicotine to the brain.

The design of the cigarette appears uncomplicated at first glance: Tobacco is rolled in paper, then burned at one end and inhaled at the other. However, research by tobacco manufacturers, particularly since the mid-twentieth century, has resulted in a highly engineered product drawing on an increasingly sophisticated understanding of product design factors (such as filter, paper, ventilation, and additives) and their effects. Manufacturers have developed technologies to alter smoke delivery including the form and availability of nicotine, to adjust smoke sensory cues such as impact, and to facilitate smoker manipulation of delivery. Design factors can also alter delivery of specific smoke constituents, including nicotine analogues and other components affecting addiction, and may increase or reduce smoke toxicity and subsequent health risk.



This photo, taken in 1928, shows a woman displaying a selection of tobacco products the United States was sending to the International Exposition at Seville. Products included fragrant perfectos and rose-scented snuff. © UNDERWOOD & UNDERWOOD/CORBIS

The Early Cigarette

Today's cigarette may be a highly engineered product, but its roots are more humble. Records from the sixteenth century indicate that Mexicans smoked tubes of reed or cane packed with the aromatic balsam of liquidambar (a deciduous tree growing in Central America) incense and tobacco. Spanish colonists introduced the product to Europe when they brought back small cylinders of tobacco wrapped in covers of vegetable matter or leaves. By the seventeenth century, the vegetable wrapping had been replaced by fine paper, creating so-called "papalettes." In Spain and other countries of southern and eastern Europe, a market developed among the affluent classes for these paper cigarettes, hand-rolled by girls or women with expensive tobaccos from Turkey or Egypt, known as Oriental leaf. The habit spread further during the Crimean War (1853–1856) when British soldiers were introduced to cigarettes by their Turkish allies and Russian enemies. The first known British cigarette manufacturer dates from this period, when Robert Gloag manufactured cigarettes in London, using Russian tobacco, yellow tissue paper, and a

cane mouthpiece. The handmade cigarettes of the time came in different shapes and sizes; in Austria, so-called double cigarettes were three times as long as modern cigarettes and came with a mouthpiece at each end. They were designed to be cut in two before smoking.

Cigarette manufacturers also began to cater to the emerging female market in the late nineteenth century by producing small, dainty cigarettes for upper-class society women. These were often scented and flavored and some had gold or colored tips. Although there are many social and financial reasons why more women began to smoke from the late nineteenth century onward, the fact that cigarettes were milder, easier to smoke, and smelled less offensive than pipes and cigars undoubtedly contributed to the trend.

However, there was a good deal of prejudice extended to the cigarette among male smokers as the quality of cigarettes was perceived as inferior to that of cigars and pipe tobaccos, while their size and name—the diminutive “ette” on the end—led to charges of effeminacy. In London, cigarettes were commonly associated with the immigrant population and evidence suggests that the workers making cigarettes were predominantly foreign.

In the United States, cigarettes were practically unknown until the mid- to late nineteenth century, and were again predominantly associated with immigrants. Antismoking literature warned of “cigar-butt grubbers” in New York, boys and girls who scoured the streets for stumps of discarded cigars, which they dried and sold to be used for making cigarettes (Lander 1886). However, most cigarettes were produced legitimately by the immigrant population and were taxed by the government from 1864 onward. As in Europe, these were hand-rolled with expensive Oriental tobaccos and sold to affluent city dwellers.

There was also a market for hand-rolling tobacco, which the smoker rolled into cigarettes, a cheaper option. The tobacco used for this in the United States was predominantly the domestically produced Bright tobacco, a Virginian leaf dried by indirect heat from flues run through storage barns. This process resulted in a golden-colored tobacco that produced a mellower smoke and was easier to inhale. The nicotine was therefore absorbed more readily into the body than with traditional pipe or cigar tobacco and was more likely to lead to addiction.

Mechanization

The standard product one associates with cigarette smoking in the 2000s came about with the introduction of mechanized production. While several people developed machines to make cigarettes in the late nineteenth century, the most well known and successful was the Bonsack machine. This was designed and patented by James Bonsack in the early 1880s and exhibited at the Paris exhibition of 1883. This machine could produce cigarettes at the rate of 300 per minute, reducing the costs of production and making it possible to supply an emerging mass market with a standardized product. The rights to the machine were bought by an English firm, W.D. & H.O. Wills, in 1883 and by James Buchanan Duke of the American Tobacco Company in 1884. Despite some initial mechanical problems, it proved a worthwhile investment for both firms as it brought cigarettes within the price range of the lower classes and vastly expanded the potential market for cigarettes.



U.S. firms further changed cigarette production by introducing Virginia tobacco into ready-made cigarettes, creating an affordable and convenient factory-made cigarette. This tobacco could be blended or used alone, and its porous nature meant that it was particularly suitable for additives and flavorings.

As cigarettes gained in popularity, the number of brands proliferated and manufacturers looked for new ways to distinguish their brands from the rest. Key selling points by the interwar period included the mildness and purity of the smoke, achieved through quality blends. Mildness was an important quality because of concerns about “smoker’s throat” and the irritation caused by inhaling tobacco smoke. The effects of nicotine were also a consideration; in the 1920s, “denicotinized” tobacco and cigarettes were available in Britain and the United States, but historians do not know how popular they were. Innovations in product design included cork-tips, longer cigarettes, and the addition of **menthol**. Cork-tips, unlike the later introduction of filters, served an aesthetic rather than a health purpose, keeping loose strands of tobacco off the lips. They also maintained cigarette length while avoiding the waste of tobacco leaf in the unsmoked cigarette end. Some manufacturers, for example, De Reske in England, made cigarettes with colored tips for women to conceal lipstick stains. Advertising sometimes made a virtue out of a process common to all manufactured cigarettes—Lucky Strike cigarettes were sold with the slogan “It’s toasted.” Applying heat during the drying and sterilizing process was common to all leaf tobacco production, but the idea of toasting suggested a warm and appetizing, as well as flavorsome, product.

Economic factors can affect product design. In Denmark these cigarette-sized cigars, made by the Nobel Cigar Company, can be made more cheaply than conventional cigarettes due to Danish tax laws. © LEIF SKOOGFORS/CORBIS



menthol a form of alcohol imparting a minty flavor to some cigarettes.



tar a residue of tobacco smoke, composed of many chemical substances that are collectively known by this term.

By the 1940s and 1950s, manufacturers were concerned to salvage the tobacco stem and dust that went to waste during the production of cigarettes. They developed reconstituted tobacco sheet (RTS) by grinding the tobacco waste to a pulp and then pressing it. The RTS was then shredded and blended with tobacco leaf, allowing financial savings, and additives were used to improve the taste. The blending process and the addition of additives also allowed tobacco companies to control how fast cigarettes burned, how easy smoke was to inhale, and nicotine and **tar** levels. This is controversial as some additives, particularly ammonia, may increase the speed with which the cigarette delivers nicotine to the brain.

From the 1960s onward, following publication of major reports on smoking and health in Britain and the United States, health concerns became a key factor in cigarette production. In the decades that followed, concerns about health led to the increasing popularity of filtered, low-tar, low-nicotine cigarettes and to the development of the highly engineered products called cigarettes in the twenty-first century.

The Modern Cigarette

The modern cigarette can be broken into four major components: the tobacco column, filter, paper, and ventilation. Each of these components may be modified with direct effects on smoke delivery. Likewise, they may be used to control sensory perception, to reduce the degree of effort required by the smoker to obtain a given amount of smoke, or to control other important product factors such as feel, taste, and aroma. The manufacturer utilizes computer-based design models as well as chemical and physical analyses to control all aspects of the finished product.

The primary component of a cigarette is tobacco. Burning tobacco generates nicotine and other smoke constituents, which are then inhaled by the smoker and absorbed into the body. Different tobaccos have unique physical and chemical characteristics, such as burn rate, tar, and nicotine delivery, flavor, and aroma. Thus, the choice and blending of tobaccos is critical to the final product. Tobacco used to manufacture cigarettes traditionally differs by region. **Flue-cured tobaccos** predominate in the United Kingdom, Finland, Canada, Japan, China, and Australia; **air-cured tobaccos** are preferred in France, parts of Germany and Italy, and South America; and sun-cured (Oriental) tobaccos are used in Turkey and Greece. In the United States and parts of Western Europe, a blend of these different tobaccos in combination with reconstituted and expanded tobaccos is typical, incorporating the different characteristics of each. Since the 1980s the U.S. blended cigarette has become widespread internationally.

Processed tobaccos (that is, reconstituted and expanded tobaccos) may constitute as much as one-third of the total tobacco used in a modern cigarette. This is due in part to their reduced cost, as well as their ability to impart unique qualities to the finished product. For example, reconstituted tobaccos are generally processed with additives, often at high temperatures that induce further chemical changes. This process may increase the amount of nicotine available in freebase form, and alter smoke impact and sensory perception. Expanded tobaccos, developed in the late 1980s to reduce nicotine levels, have a high filling power (less tobacco is needed to fill the cigarette) and increase the speed at which the cigarette burns between puffs. Additives may be used to introduce new



flue-cured tobacco also called Bright Leaf, a variety of leaf tobacco dried (or cured) in air-tight barns using artificial heat. Heat is distributed through a network of pipes, or flues, near the barn floor.

air-cured tobacco leaf tobacco that has been dried naturally without artificial heat.

smoke constituents such as nicotine analogs, smoke soothing agents, or bronchodilators (agents which facilitate inhalation).

The majority of cigarettes today, including 98 percent of cigarettes sold in the United States, use filters that may reduce delivery of some smoke constituents to the smoker. Different filters are common in different cigarette markets. The cellulose acetate filter typical of U.S. style cigarettes are most effective at reducing smoke particles (“tar”), while charcoal filters common elsewhere (Japan) are intended to filter out gases present in cigarette smoke. The effects of filter differences on overall health risk are not easily measurable, but in all cases the “filtered” smoke remains toxic.

Ventilation holes (small holes in the paper cigarette wrapping around the filter) are commonly introduced in filtered cigarettes, diluting smoke with air by as much as 95 percent. Filter ventilation is the most critical design component in the development of lower delivery cigarettes (“lights” and “ultralights”). However, it is commonly accepted that a smoker will simply inhale more deeply in order to compensate for this reduction in delivery. In addition, since ventilation holes are often invisible, they may be unconsciously blocked by a smoker’s lips or fingers, reducing dilution and leading to increased smoke delivery. At higher ventilation levels, it becomes extremely difficult for the smoker to draw smoke from the cigarette, leading to consumer unacceptability.

Cigarette paper porosity is likewise an important factor in overall smoke delivery. A more porous paper allows air to be drawn into the tobacco column with each puff, reducing the amount of smoke generated. The porosity may be increased by adding tiny holes to the paper either electrostatically or mechanically. Cigarette paper is also generally coated with additives that are used to control the rate at which the tobacco burns. Most cigarette papers contain between 20 percent and 30 percent chalk, in order to cause the formation of an attractive white ash.

In combination with these major design components, physical parameters such as length, circumference, density, and the coarseness (cut) of the tobacco are used to fine-tune smoke delivery. The manufacturer adjusts the character of the smoke (including smoothness, body, impact, irritation, and flavor), reducing undesirable components and increasing those (such as nicotine) with “desirable” effects. The number of puffs per cigarette, the burn rate, and the delivery per puff are all carefully monitored.

The modern cigarette has reduced irritation to allow deeper inhalation; provides enough sensation in the throat to “cue” the smoker regarding delivery; and facilitates the absorption of nicotine through increased freebasing of nicotine and other chemical changes. Particular care is given by manufacturers to how the product affects puffing behaviors, in order to allow the smoker increased control over the cigarette dose, and maximizing the delivery produced from a minimum of effort.

See Also Additives; Cigarettes; Fire Safety; Genetic Modification; “Light” and Filtered Cigarettes; Marketing; Menthol Cigarettes; “Safer” Cigarettes; United States Agriculture.

■ ROSEMARY ELLIOT
■ GEOFFREY FERRIS WAYNE



BIBLIOGRAPHY

- Alford, B.W.E. *W.D. & H.O. Wills and the Development of the UK Tobacco Industry 1786–1965*. London: Methuen, 1973.
- Arents, George. *Tobacco: Its History Illustrated by the Books, Manuscripts and Engravings in the Library of George Arents, Jr. Together with an Introductory Essay and Bibliographic Notes by Jerome E. Brooks*. New York: The Rosenbach Company, 1937.
- British American Tobacco. "Cigarette Design." Bates: 400132742–400132776. Available: <http://tobaccodocuments.org/product_design/3194.html>.
- Browne, C. L. *The Design of Cigarettes*, 3d ed. Charlotte, N.C.: Filter Products Division, Hoechst Celanese Corporation, 1990.
- Lander, Meta. *The Tobacco Problem*. Boston: Cupples, Upham & Co., 1886.
- National Cancer Institute. *Risks Associated with Smoking Cigarettes with Low Tar Machine-Measured Yields of Tar and Nicotine*. NIH Publication No. 02–5074. Bethesda, Md.: U.S. Department of Health and Human Services, National Institutes of Health, 2001. Available: <<http://cancercontrol.cancer.gov/tcrb/monographs/13/index.html>>.

Sumptuary Regulations

Great philosophers like Baruch Spinoza (1632–1677) recognized the ineffectiveness of government prohibition more than three centuries ago: "All laws which can be broken without injustice to another person are regarded with derision and intensify the desires and lusts of men instead of restraining them; since we always strive for what is forbidden, and desire what is denied. . . . He who tries to determine everything by law will foment crime rather than lessen it." Many economists of the twenty-first century, most notably the Nobel Laureate Gary Becker, still make the same argument.



Prohibitions

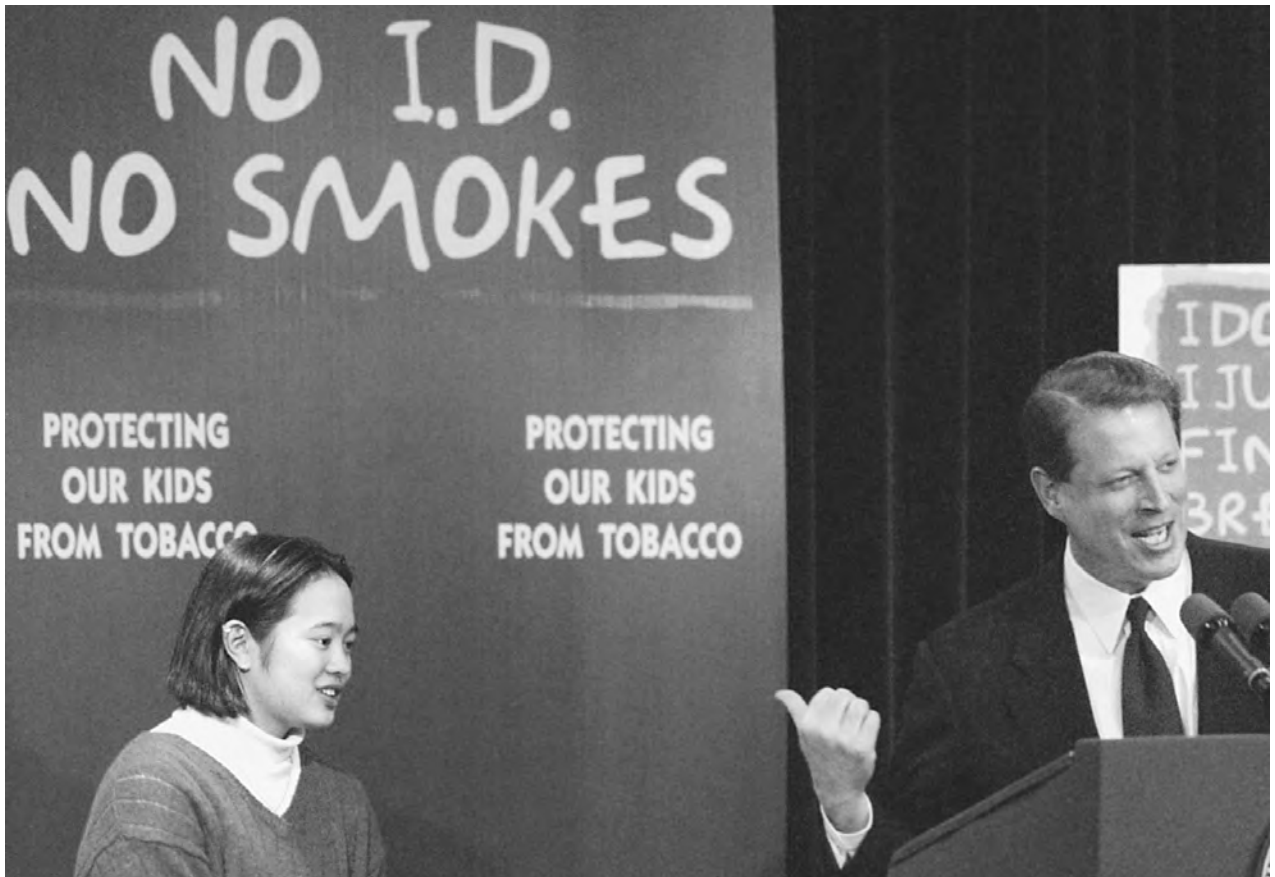
In all societies at all times, prohibitions exist without provoking controversy. In fact, many are essential for humankind to live together: Most would agree that the prohibition "Thou shall not kill" is a worthy one. It is when prohibitions fall on products or behavior desired by but harmful to their users that they become problematical and often contentious. An extreme form of government intervention, prohibition is often alluring because it seems a more straightforward way to deal with social ills than persuasion or education. Governments act all-powerfully when they legislate out of existence activities of which they disapprove.

Prohibition: A Most Peculiar Policy

History shows that this type of government intervention is not effective. In presence of a popular demand, enforcement proves very difficult if not impossible. Prohibition does not eradicate the banned product; it just drives it underground, giving rise to smuggling and illegal black markets. A gap is created between the legislations in the books and the reality of daily life. On top of these effects, the credibility and legitimacy of the state may be undermined as these laws are largely disrespected.

At the heart of the debate on prohibition lies the crucial moral issue of personal liberty. Should the state protect individuals from harming themselves or should individuals be left to decide for themselves?

The liberal (some would say the libertarian) view of prohibition was perhaps best expressed in 1859 by the famous British philosopher and economist John Stuart Mill (1806–1873): "The only purpose for which power can be rightfully exercised over any member of a civilized community, against his will, is to prevent harm to others. His own good, either physical or moral, is not a sufficient warrant. He cannot



rightfully be compelled to do or forbear because it will be better for him . . . because it would be wise, or even right. These are good reasons for . . . reasoning with him, or persuading him . . . but not for compelling him. . . . Over himself, over his own body and mind, the individual is sovereign” (Mill 1956).

To this position, supporters of prohibition reply that in the presence of addictive substances, the individual is not truly “sovereign” and that freedom is an illusion. On the contrary, they believe that abstinence would liberate users (smokers or drinkers or drug users) from their addictions, allowing them to have better and freer lives. Reaching this outcome voluntarily is of course preferable but human nature might be too weak and consequently has to be strengthened by the law.

Prohibiting Tobacco Use: Three Big Waves

In the 2000s, especially in North America, smoking is so strongly stigmatized that prohibition seems close. Many believe the phenomenon is relatively new. Without denying the radical shift since the 1970s, the fact is that the users of tobacco have been ostracized almost right from its introduction in Europe in the sixteenth century.

In the four centuries since tobacco’s introduction, the world witnessed three big waves of tobacco prohibition, each in symbiosis with its time. The first one almost covered the globe in the seventeenth century following the Great Explorations with its cortege of exciting but

Vice President Al Gore gestures toward Jessica Goh, of Jacksonville, Florida, during a news conference on Friday 27 February 1998 in the Old Executive Office Building in Washington, D.C., where he announced the federal government campaign aimed at cutting underage smoking. The campaign was designed to target retailers that sell tobacco and to warn those retailers that selling tobacco to underage teens would now be a federal crime. AP/WIDE WORLD PHOTOS

A Philosophical Warning

Ludwig Von Mises (1881–1973) said in 1949:

But once the principle is admitted that it is the duty of the government to protect the individual against his own foolishness, no serious objections can be advanced against further encroachments. . . . Why limit the government's benevolent providence to the protection of the individual's body only? Is not the harm a man can inflict on his mind and soul even more

disastrous than any bodily evils? Why not prevent him from reading bad books and seeing bad plays, from looking at bad paintings and statues and from hearing bad music. . . .

If one abolishes man's freedom to determine his own consumption, one takes all freedoms away. The naïve advocates of government interference with consumption delude themselves when they neglect what they disdainfully call the philosophical aspect of the problem (Von Mises 1949).

intrusive novelties such as tobacco. The second wave at the turn of the twentieth century was geographically much more limited. Cigarette bans were enacted only in the United States and belonged to the temperance movement of the Progressive era. Humankind is living in the heart of the third wave, which began in the 1970s and continues to the present. Originating in North America, the antismoking movement is largely a phenomenon of the Western world. Clean air and healthiness are preoccupations of wealthy societies. Antismoking proponents argue that eliminating tobacco smoke is one of the easiest steps to improve a heavily polluted environment.

THE FIRST WAVE: THE SEVENTEENTH CENTURY. Tobacco was introduced in Europe following Christopher Columbus's "discovery" of America and rapidly spread around the world through trade. It was immediately controversial; its supporters saw it as a panacea and its enemies as a pure evil. In the first half of the seventeenth century, many states and cities enacted prohibitions, some with quite spectacular penalties if historians are to believe European travelers' accounts, the only sources of information for that period.

There were two different types of prohibition. The first, proscribing tobacco smoking or snuffing in public, was based on moral, religious, and cultural grounds. The other, banning domestic cultivation or manufacturing of tobacco or sometimes importation, was based on financial grounds. Governments always eager for money wished to maximize revenues from the tobacco habit. In order to do so, they needed some control over production, manufacturing, and sale.

What appears to be the earliest interdiction took place in Mexico in 1575 when the Catholic Church issued an order forbidding the use of tobacco in churches throughout Spanish America. This first edict was mostly aimed at the converted Indians who were used to smoking in their ceremonies, but later orders concerned priests as well. The Church also banned smoking or snuffing during or before Mass in Europe. A series of papal bulls under Urban VIII and Innocent X from 1624 to 1650 threatened excommunication to tobacco users in churches.

In the first half of the seventeenth century, governments around the globe multiplied edicts and proclamations banning the use of tobacco, especially in public. Western and Central European measures were much milder than Eastern and Asiatic rules. In the latter, penalties were spectacular and terrifying, reflecting the autocratic nature of the political regimes. In all cases, they were unable to stop the spread of the habit in the various populations across cultures and religions.

Probably the most extreme case of punishment for tobacco use can be found in the Sultan Murad IV (1623–1640) of the Ottoman Turkish Empire who decreed death penalty for smoking tobacco in 1633. There might have been as many as fifteen to twenty daily executions. As Count Corti wrote, “Even on the battlefield the Sultan was fond of surprising men in the act of smoking, when he would punish them by beheading, hanging, quartering. . . .” (Corti 1931). In Persia as well under the reign of the Shah Abbas I (1587–1625) there were eyewitness accounts of torture or death inflicted upon tobacco smokers or sellers. Russia was not less fierce. When the patriarch of the Russian Church placed tobacco use in the category of deadly sins, Michael Feodorovitch, the first of the Romanoff czars, prohibited smoking in 1634 under penalties for first offense like slitting of the nostrils or whipping and the death penalty for persistent offenders.

In India, the Mogul emperor Jahangir outlawed tobacco in 1617 with slightly more restrained penalties as smokers were merely to have their lips slit. The Chinese authorities perceived the use of tobacco as subversive of the national interest. A succession of imperial edicts forbade the planting, importation, and use of tobacco in 1612, 1638, 1641 (this time under threat of decapitation) until as late as 1776. Their frequency and repetitive character show how ineffective they were. In Japan, the repeated attempts by the shogun to prohibit the growing and use of tobacco lasted only two decades and were all lifted in 1625. By 1640, tobacco accompanied the tea ceremony and was part of daily life.

In Europe, the most serious attacks against tobacco were in the Holy Roman Empire after the Thirty Year War (1618–1648): Cologne prohibited tobacco use in 1649, Bavaria in 1652, Saxony in 1653, Zurich in 1667, and Berne in 1675. The same type of bans on smoking in public was imposed in some North American colonies (Massachusetts in 1632, Connecticut in 1647, New Amsterdam in 1639).

Tobacco was a foreign novelty and smoking an outsiders’ habit. In Europe, the outsiders were the American Aborigines, seen as “Savages.” In the Middle East and in Asia, the outsiders were the Infidels and the Westerners. In both cases, those outsiders were highly suspicious, if not threatening. Unsurprisingly, this foreign intrusion provoked strong reactions.

Looming also very large was the morality issue. Not only did outsiders with very different cultures introduce tobacco, but also tobacco provided gratification and pleasure to its consumers. The habit was quickly labeled a vice and a sin. Both Catholic and Protestant churches, the loudest being the Calvinists and the Puritans, condemned indulgent pleasure as immoral and contrary to a good life and a good society. The same was true for Muslims. Even though the Koran did not expressly mention tobacco, it condemned intoxication, and tobacco was considered an intoxicant.

A Royal Enemy

James I was King of England from 1604 to 1625. In the first year of his reign, he wrote the most famous work in English on the subject of tobacco. His *A Counterblaste to Tobacco* (published anonymously) concluded that smoking was: “a custome lothsome to the eye, hateful to the Nose, harmefull to the braine, dangerous to the Lungs, and the blacke stinking fume thereof, neerest resembling the horrible Stigian smoke of the pit that is bottomeless” (James I, p. 36).

Finally, there were some more practical considerations behind the interdictions. Smoking increased the risk of fires, which, in those days of wooden towns, were highly destructive. Tobacco cultivation used land that could have been used for growing foodstuffs—a high opportunity cost for these societies.

A number of states never prohibited tobacco smoking. Instead, they adopted mercantilist measures to regulate, control, and tax tobacco production and trade. A good example is England. In spite of the ferocity of King James I's antitobacco position, tobacco consumption was always legal. Tobacco domestic cultivation was prohibited for a long period but this was done to protect the government income from the **tariffs** on imports of tobacco, which were set up from the beginning at very high rates.

France used a different and very lucrative strategy for more than three centuries: monopoly control of tobacco at every stage (cultivation, fabrication, and sale). From 1674 until 1791, the king sold the monopoly rights to private authorities; since 1810, this has been a state monopoly. Similar regimes were set up in Portugal, Spain, and Italy.

Once they realized how ineffective were their bans, the prohibitionist states joined the mercantilist club by turning to taxation and regulations. Except in China, all prohibitory legislations were abolished before the end of the seventeenth century, as is shown in the following portrait of Western government regulation of the tobacco industry from the mid-seventeenth through the nineteenth centuries (Rogozinski 1990). In this portrait, *state* means public administration of a monopoly; *farmed* indicates that the government granted its monopoly power to a private concessionaire; *private* means no particular regulations, only general laws regulating trade.



tariff a tax on imported goods imposed by the importing country to protect native industry from foreign competition, protect jobs and profits, and raise revenue. Tariffs typically raise consumer prices of affected products.

Country	Cultivation	Imports	Manufacture	Sale
Britain	prohibited	high duties	private	private
France	controlled	farmed to 1791; state from 1810	farmed to 1791; state from 1810	farmed to 1791; state from 1810
Italy	prohibited	farmed; state since 1882	farmed; state since 1882	farmed; state since 1882
Spain	prohibited	farmed	farmed	farmed
Portugal	farmed	farmed	farmed	
Austria	prohibited	farmed to 1784; then state	farmed to 1784; then state	farmed to 1784; then state
Sweden	encouraged (18th century)	prohibited (18th century)	mixed	private
Alsace	private	private	private	private
Bavaria	private since 1717	private since 1717	private since 1717	private since 1717
Prussia	regulated	state 1765–1787, then private	state 1765–1787, then private	state 1765–1787, then private
Switzerland	private	private	private	private

Country	Cultivation	Imports	Manufacture	Sale
Netherlands	private	private	private	private
United States	private after 1776	private after 1776	private after 1776	private after 1776

THE SECOND WAVE: THE TURN OF THE TWENTIETH CENTURY. By the nineteenth century, the use of tobacco was generalized among men. A few antitobacco voices could be heard occasionally: for instance, Dr. Benjamin Rush, signer of the Declaration of Independence, who wrote a tract in 1798 titled *Observations upon the influence of the Habitual use of tobacco upon health, morals, and property*, or Horace Greely, publisher of the *New York Tribune*, who once described the cigar as “a fire at one end and a fool at the other” (Tate 1999). But their warnings went unheeded until the cigarette made its apparition in the 1880s.

In contrast to the first wave of prohibition, the second wave was largely confined to the United States. There was some organized opposition to cigarette smoking in Britain (where Queen Victoria considered the habit an “abomination” and an offense against good manners) and in Canada (where a national ban was seriously contemplated and regularly debated until World War I) but they did not succeed in passing legislation.

Beginning in the late 1890s, cities and states in the United States passed acts to prohibit the sale, manufacturing, and use of cigarettes (but not pipes or cigars). The statute in Illinois was the shortest lived, being declared unconstitutional by the Illinois Supreme Court the same year it was adopted. The following table (Tate 1999) summarizes the various forms the laws concerning adults took in 15 states (key: S = sale; M = manufacture; G = giving away; P = possession; A = advertising of cigarettes). Such laws were on the political agenda of 22 other states, in some cases several times. More widespread were the cigarette laws prohibiting sales to minors. By 1890, 26 states prohibited sales to minors, and in 1940 all states except Texas had such laws.

State	Adopted	Repealed	Ban Content
Washington	1893	1895	S, M
Washington	1907, 1909	1911	S, M, P
North Dakota	1895	1925	S
Iowa	1896	1921	S, M
Tennessee	1897	1919	S, G
Oklahoma	1901	1915	S, G
Indiana	1905	1909	S, M, P
Wisconsin	1905	1915	S, M, G
Arkansas	1907	1921	S, M
Illinois	1907	1907	S, M
Nebraska	1909	1919	S, M, G
Kansas	1909	1927	S
Kansas	1917	1927	+ A, P
Minnesota	1909	1913	S, M
South Dakota	1909	1917	S, M, G
Idaho	1921	1921	S
Utah	1921	1923	S, A



University of Southern Maine students smoke outside their dorm at the Gorham, Maine, campus on Friday 6 December 2002. The University of Southern Maine in September 2002 banned smoking in its dorms, forcing smokers to walk at least 50 feet away from the buildings to light up. AP/WIDE WORLD PHOTOS

Enforcement was lax. “Tobacco manufacturers sent cigarette papers through the mails; retail dealers sold matches for twenty cents or so and gave cigarettes away” (Warfield 1930). The prohibitions certainly did not stop the rise in cigarettes consumption, as can be seen from the following table (from Doron 1979), which shows average annual cigarette consumption:

Years	Average Consumption (Billion Units)
1900–1909	4.2
1910–1919	24.3
1920–1929	80.0

Even if concerns with health were not totally absent (cigarettes were called “coffin nails”), the main driving force was morality. For the reform and religious groups who pressured the state to eliminate it, cigarette smoking was an evil, destructive to the moral and physical fiber.

Cigarette prohibition was an element of the broader social reform movement of the Progressive era. The catalysts behind regulation were temperance organizations such as the Woman’s Christian Temperance Union. In order to achieve a social order based on Christian and family values, they condemned and fought frivolous activities such as dancing, drinking, smoking, and gambling.

During the war, billions of cigarettes were distributed by organizations such as the Young Men’s Christian Association, the Salvation Army, the Red Cross, and the federal government to soldiers fighting in Europe. Patriotic organizations in Kansas sent cartons of cigarettes to the front lines, even though their sale was illegal in that state. Anyone who

questioned these shipments was deemed unpatriotic. Soldiers returning from World War I made cigarette smoking common and more respectable. By 1927, all prohibitory laws, except those regarding minors, had been repealed.

This second prohibitionist wave was no more successful than the first one. Cigarette smoking became generalized among men after World War I and among women after World War II. As Cassandra Tate noted, “Back then, the world was one big smoking section” (Tate 1999). Even though smokers were actually never the majority (42% of adults in 1965), smoking was embedded in the cultural landscape.

THE THIRD WAVE: 1970 TO THE PRESENT. From the end of the 1960s, following the two landmark reports linking smoking to cancer by the Royal College of Physicians in the United Kingdom (1962) and U.S. Surgeon General (1964), the wind turned for smokers. From being a social norm, smoking became an antisocial behavior and smokers became outcasts. Since then, the habit has been denounced, discouraged, banned, and taxed. North America led the crusade, followed by Europe. In the 1990s, the antismoking movement spread to some extent to the rest of the world. With the exception of Africa, all countries have some restrictions on smoking in public places. However, their severity and coverage vary widely, tending to be much milder and much less respected outside North America.

The prohibition battle was fought on three fronts: advertising, smoking in public places, and among the youth. The progression in the United States has been as follows: In 1971, 8 percent of the American population lived in states with some restrictions; fifteen years later, 80 percent of the American population lived in states with some restrictions; in the 2000s, the figure is 100 percent.

The earliest prohibitions around tobacco focused on advertising. Cigarette advertisements were banned on radio and television in 1971 in the United States and Canada (in the latter by voluntary agreement rather than legislation). Some European countries had already done so several years earlier (Italy, 1962; the United Kingdom, 1965). In the 1990s, advertising bans were extended to print media and to sports-events promotions in many countries, raising much controversy. Probably the most heated example centers on the Grand Prix Formula 1 because of the international character of the competition.

There have also been successful efforts to prohibit smoking in public places. The first regulations in the 1970s established separate smoking and nonsmoking sections in various public places: airplanes, trains, buses, restaurants, halls, and workplaces. Over time, the anti-smoking movement continued to press for more drastic action, arguing that the segregation did not eliminate the health risk for nonsmokers. Clean Indoor Air acts and regulations have moved to ban indoor smoking by steps: first in flights less than two hours, then all domestic flights, then all flights; in governmental buildings then private enterprise workplaces; in restaurants and finally in bars. Since the 1990s, comprehensive smoking bans in all workplaces, including bars and restaurants, have been enacted in California, New York, Boston, Toronto, and other cities and states.

C. Everett Koop

Dr. C. Everett Koop was appointed surgeon general by President Ronald Reagan in 1981 and he immediately became an outspoken foe of tobacco by advocating “a smoke-free environment by the year 2000.” His efforts went beyond medical advisory reports and cigarette package labeling; he became the first surgeon general to use his position to speak out resolutely to the public about the dangers of tobacco use. His 1986 Surgeon General’s Report on the dangers of passive smoke became an important tool in the fight to eliminate smoking in public buildings, transportation, and eventually the workplace—including workplaces commonly associated with smoking such as bars and nightclubs. In appreciation of his tireless antismoking efforts and his work on many other public health issues, President Bill Clinton presented Koop with the Presidential Medal of Freedom, the nation’s highest civilian award.

■ DONALD LOWE



Former U.S. Surgeon General Dr. C. Everett Koop testifies in Concord, N.H., Tuesday 12 February 2002 that cigarette smoking is more addicting than heroin or cocaine. Koop was speaking to a bill that uses a new distribution formula for millions of dollars in tobacco settlement funds. AP/WIDE WORLD PHOTOS

A crucial target for both the tobacco companies and the antismoking movement are children and young adults, since most smokers start smoking in their teens. In the mid-twentieth century, youngsters viewed smoking as a ritual to adulthood; in the 2000s they consider smoking a rebellious gesture against adults. Legislations banning cigarette sale to minors were thus adopted or reactivated everywhere in the 1990s. Public health officials note that they are the most difficult of the antismoking measures to enforce. Legislation was also adopted to restrict automatic machine cigarette selling that make it possible for children to purchase cigarettes. At the federal and state levels, so-called “Pro-Children” acts are banning smoking in and around state funded facilities providing children’s services (for instance, school grounds in New York State).

Previous prohibition movements against alcohol or illicit drugs were generally driven by moral factors. However, the current efforts against tobacco focus on health as the primary concern. However, opponents charge that antitobacco activists often seem to be trying to impose their values on smokers “for their own good.” Indeed, in the 1960s and 1970s, the focus of antitobacco efforts was on the harm to smokers from their own smoking. But over time the focus has shifted to address the harm inflicted to nonsmokers by environmental tobacco smoke.

As public health researchers Ronald Bayer and James Colgrove argue, the strong emphasis on nonsmokers’ welfare was an astute strategy in the American cultural context of hostility to overtly **paternalistic** public policies. The prohibition path was not inevitable: Critics argue that private arrangements between smokers and nonsmokers could



paternalistic fatherly. Although paternalism presumes an obligation for the stronger to provide for the weaker, it implies superiority and dominance over them as well. For example, masters often had paternalistic feelings for their slaves, whom they considered child-like.



have been devised. However, advocates of restrictions on public smoking argue that the rights of employees, even those who work in bars, to a safe workplace free of hazardous exposures is fundamental.

The Future: A Smoke-Free World?

Prohibition is not a dead issue. Advocacy organizations like the Foundation for a Smokefree America work toward a goal of preventing young people from starting to smoke and helping adults to quit. They can point to the sharp decline in the proportion of smokers in the U.S. population: from 42 percent in 1965 to 25 percent in 1990, and 28 percent in 2000. Other countries with similar policies like Canada, Australia, Britain, and Sweden are in the same range of below 30 percent. The fact that smokers tend to be concentrated among people of lower socioeconomic status may have facilitated their stigmatization.

However, the rest of the world is still far behind North America. Smoking rates of the male population are still above 60 percent in countries like China, Russia, and Japan, and approximately 40 percent in India, Brazil, Mexico, and European countries like France and Spain. The World Health Organization predicts that the tobacco “epidemic” will get worse, shifting from developed to developing nations and touching an increasing number of women.

Moreover, the fact that one of out four people continues to smoke in the United States despite an incredibly hostile environment suggests that smoking will not vanish. Social reprobation may even have the unintended effect of making it more attractive to young people as symbols of rebellion. While the addictive properties of nicotine and the financial strength of the tobacco industry are major contributors to the continuing

Beverly Mathis-Swanson smokes a cigar at the door of her bar, the One Double Oh Seven Club and Smoking Parlor, in Santa Cruz, California, 21 August 1997, after state health authorities announced that they would be enforcing California’s Smoke-Free Workplace Act. The act, which prohibited smoking in all “enclosed spaces at a place of employment,” came into force 1 January 1995 but gave a two-year exemption to bars and casinos. Mathis-Swanson was spokesperson for a group called Tavern Owners United for Fairness. AP/WIDE WORLD PHOTOS

use of tobacco, cigarettes are also deeply entrenched in American history and culture, so much so that their prohibition remains uncertain.

See Also Advertising Restrictions; Antismoking Movement Before 1950; Antismoking Movement From 1950; Regulation of Tobacco Products in the United States; Smoking Clubs and Rooms; Smuggling and Contraband.

■ RUTH DUPRÉ

BIBLIOGRAPHY

- Alston, Lee, Ruth Dupré, and Tom Nonnenmacher. "Social Reformers and Regulation: The Prohibition of Cigarettes in the United States and Canada." *Explorations in Economic History* 39 (2002): 425–445.
- Bayer, Ronald, and James Colgrove. "Science, Politics, and Ideology in the Campaign Against Environmental Tobacco Smoke." *American Journal of Public Health* 92, no. 6 (2002): 949–963.
- Borio, Gene. The Tobacco History Timeline. Online. Available: <<http://www.tobacco.org/resources/history>>.
- Brooks, Jerome. *The Mighty Leaf: Tobacco through the Centuries*. Boston: Little, Brown, 1952.
- Corti, Egon Caesar, Conte. *A History of Smoking*. London: George G. Harrap, 1931.
- Doron, Gideon. *The Smoking Paradox: Public Regulation in the Cigarette Industry*. Cambridge, Mass.: Abt Books, 1979.
- Gabb, Sean. *Smoking and Its Enemies: A Short History of 500 Years of the Use and Prohibition of Tobacco*. London: FOREST, 1990. Available: <<http://www.seangabb.co.uk/pamphlet/faghist.htm>>.
- Gottsegen, Jack. *Tobacco: A Study of Its Consumption in the United States*. New York: Pitman, 1940.
- James I. *A Counterblaste to Tobacco*. 1604. Reprint, London: Rodale Press, 1954.
- Kiernan, Victor Gordon. *Tobacco: A History*. London: Hutchinson Radius, 1991.
- Mackay, Judith, and Michael. Eriksen. *The Tobacco Atlas*. Geneva: World Health Organization, 2002.
- Mill, John Stuart. *On Liberty*. 1859. Reprint, New York: The Liberal Arts Press, 1956.
- Mises, Ludwig Von. *Human Action: A Treatise on Economics*. New Haven, Conn.: Yale University Press, 1949.
- Parker-Pope, Tara. *Cigarettes: Anatomy of an Industry from Seed to Smoke*. New York: The New Press., 2001.
- Rogozinski, Jan. *Smokeless Tobacco in the Western World 1550–1950*. New York: Praeger, 1990.
- Sobel, Robert. *They Satisfy: The Cigarette in American Life*. Garden City, N.Y.: Anchor, 1978.
- Spinoza, Benedict. "Tractatus Politicus/Treatise on Politics." In *The Political Works of Benedict de Spinoza*. Translated and edited by A. G. Wernham. Oxford: Clarendon Press, 1958.
- Sullum, Jacob. *For Your Own Good: The Anti-Smoking Crusade and the Tyranny of Public Health*. New York: The Free Press, 1998.
- Tate, Cassandra. *Cigarette Wars: The Triumph of "the Little White Slaver."* New York: Oxford University Press, 1999.
- Tennant, Richard. B. *The American Tobacco Industry*. New Haven, Conn.: Yale University Press, 1950.
- Thornton, Mark. *The Economics of Prohibition*. Salt Lake City: University of Utah Press, 1991.



Tollison, Robert D. *Smoking and Society: Toward a More Balanced Assessment*. Lexington, Mass.: Lexington Books, 1986.

Wagner, Susan. *Cigarette Country: Tobacco in American History and Politics*. New York: Praeger, 1971.



Psychology and Smoking Behavior

Cigarette smoking causes more premature disease and death worldwide than any other known human behavior. Although the damage caused by smoking is the subject of biology and medicine, smoking is a behavior, and thus has also been the subject of much behavioral research.

The Behavior of Smoking

Modern psychological science concerns itself primarily with the study of behavior, attempting to answer questions such as: Why do individuals engage in a given behavior? What factors lead individuals to stop or continue an undesired behavior? And finally, can we use this knowledge to develop more effective treatments to help people cease the unwanted behavior?

With respect to cigarette smoking, distinctions between “psychological” and “biological” factors have given way in the late twentieth century to perspectives that view smoking as a biobehavioral, or, even more broadly, a biopsychosocial, disorder. Thus, smoking is best viewed as a behavior that is governed by multiple, intertwined factors, including **physiological** (biological), social, and psychological ones. Researchers have clearly demonstrated that nicotine (the ingredient of cigarette smoke most responsible for affecting mood or thought) exerts influence on multiple brain systems, all of which, in turn, affect behavior, thinking, and feeling. It follows that in the study of smoking behavior, attempts to disentangle psychological from biological factors ultimately create a false and unnecessary distinction. Instead, modern psychological science attempts to understand the interplay between various social, individual, and biological influences that, together, promote smoking and tobacco use.



physiology the study of the functions and processes of the body.

Tobacco Smoking as an Addictive Behavior

The once controversial question of whether cigarette smoking may constitute an actual addiction has been universally answered with a resounding “yes.” Indeed, an accumulation of well over 3,000 scientific papers has led to the unequivocal conclusion that cigarettes and other forms of tobacco use are addicting, that nicotine is the drug in tobacco most responsible for addiction, and that the pharmacological and behavioral processes that cause addiction to tobacco are similar to those responsible for addiction to other drugs. These facts do not necessarily imply that every smoker is dependent on nicotine (see sidebar). However, the vast majority of smokers who smoke with any degree of regularity ultimately progress to nicotine addiction. To fully appreciate this

conceptualization of smoking, a brief overview of precisely how drug dependence (or addiction) is defined by research scientists is necessary.

Simply stated, addiction arises when, for a given individual in a given set of circumstances, drug use results in a powerful rewarding (reinforcing) experience and abstinence from the drug (even for relatively short time periods) causes unpleasant physical and emotional experiences that are alleviated by taking the drug once again. When this leads to compulsive drug use that seems to take over the person's behavior and is difficult to stop, addiction has taken hold. Does this pattern of addictive behavior hold for cigarette smoking? Indeed, it does. For example, research has demonstrated the existence of a reliable withdrawal syndrome that results when the smoker goes without smoking for a given period of time. These withdrawal symptoms include: (1) **dysphoric** or depressed mood; (2) insomnia; (3) irritability, frustration, or anger; (4) difficulty concentrating; (5) restlessness; (6) decreased heart rate; and (7) increased appetite or weight gain. Craving,—an intense, often uncontrollable desire—for the drug is also frequently reported by smokers who are deprived of nicotine.

Another hallmark of addiction is difficulty in stopping the behavior. That is, people who are addicted to a drug often report that, whereas they may sincerely want to quit, they are unable to do so. Do smokers have a difficult time quitting? Yes. Most U.S. smokers say they want to quit, but only 3 percent are actually able to stop permanently each year. According to a literature review by John Hughes and colleagues (2004), smokers who try to quit without treatment have as high as 97 percent failure rate. Even people facing imminent life-threatening consequences often are unable to quit: Most smokers who have had heart attacks ultimately return to smoking. In sum, then, tobacco smoking is a behavioral disorder typified by persistent desires and unsuccessful efforts to quit, thus resulting in resuming smoking.

Cigarette smokers also meet other criteria for being considered addicted. These include development of tolerance (that is, a need for increased amounts of the drug to achieve desired effects), a great deal of time spent in activities necessary to obtain or use the substance (for example, chain-smoking), willingness to give up other things in favor of smoking (for example, avoiding events in nonsmoking venues, risking their health), and use of the drug despite knowledge of having a physical problem (for example, lung disease) that is likely to have been caused by the substance. Relative to the users of other drugs, a higher percentage of smokers are considered addicted. Interestingly, many drug abusers who also smoke say that it would be harder to stop smoking than to stop using their other drugs (even though they find other drugs like alcohol or cocaine more pleasurable). In sum, tobacco smoking can be a highly addicting behavior, comparable to, or even exceeding, the addictive potential of other, "harder" drugs of abuse, such as cocaine or heroin.

Why Do Smokers Smoke?

Research has clearly revealed that nicotine is reinforcing in both animals and humans. Even among addicted smokers, however, not all cigarettes are smoked solely in response to nicotine withdrawal. Indeed, when asked, cigarette smokers themselves consistently attribute their smoking



dysphoria a feeling of unhappiness and discomfort; being ill-at-ease. Cigarette smokers can experience dysphoria when deprived of cigarettes.

to a variety of other motives. These motives are governed by both negative reinforcement (for example, smoking to reduce stress) and positive reinforcement (for example, smoking to celebrate when already feeling good) processes.

The most commonly cited reason for smoking (among both novice and nicotine-dependent smokers) is smoking's alleged ability to reduce subjective stress and anxiety. Smokers often report that they smoke more when angry, depressed, or anxious, and that smoking helps to alleviate these negative mood states. It is not clear that either part of this statement is true, however. Some field studies have shown that negative feelings do not make smokers more likely to smoke. Laboratory studies assessing smoking's effect on anxiety have yielded inconsistent results. Thus, although most smokers clearly believe that smoking reduces negative emotions, this effect has been difficult to reliably produce under controlled, laboratory conditions. There is one exception: When negative emotions are due to nicotine withdrawal, nicotine provides quick relief.

Another interesting aspect of smoking's reputed relaxing properties is that nicotine is a central nervous system stimulant. Thus, smoking a cigarette actually increases autonomic nervous system arousal (for example, heart rate), generating something resembling the "stress response." But how can a drug that produces a "stress response" be perceived as relaxing? More research will clearly be needed in order to adequately answer this question. Of course, some smokers also attribute their smoking to nicotine's stimulant (arousing) properties.

Researchers believe that some of the pleasurable experiences associated with smoking are not solely attributable to nicotine. For instance, research suggests that the sensorimotor aspects of smoking (for example, the taste, the smell, the handling of the cigarette) can become reinforcing in and of themselves, largely as a result of their association with smoking. Through repeated pairing, the act of smoking likely becomes "conditioned" to a variety of emotional states (such as anxiety) and situations (such as after eating). In other words, the smoker associates a particular situation with the act of smoking a cigarette. Consider for a moment a typical pack-a-day smoker, who smokes 20 cigarettes a day. At 10 puffs per cigarette, this adds up to 200 administrations of nicotine a day, or over 72,800 "hits" a year. (No other drug of abuse is self-administered at such a high rate.) As a result of such frequent administrations of nicotine across a variety of situations, smoking invariably becomes linked to specific cues, causing the smoker to smoke some cigarettes "out of habit" rather than out of a craving for nicotine.

Finally, it is important to note that the majority of research on smoking motives (and other aspects of smoking behavior) has been conducted in developed Western countries, primarily in the United States, Europe, and Australia. Researchers do not know the extent to which smoking to reduce stress, for example, is a potent motive for smoking among smokers in developing countries. Moreover, well-validated measures of nicotine dependence that are suitable for use in the United States, for example, may be unsuitable in other countries, where smoking practices and beliefs differ. The lack of information about smoking behavior in other countries is another serious research gap that warrants attention.

The Mystery of Tobacco "Chippers"

In the 1990s, Saul Shiffman and colleagues described a group of smokers, called "chippers," characterized by their apparent invulnerability to developing nicotine dependence. These smokers smoked regularly for years, yet rarely smoked more than five cigarettes a day and did not appear to suffer from nicotine withdrawal when they went without smoking. How did they do it? Although research is still attempting to answer this question, Shiffman and his colleagues made the following observations about chippers:

- They typically smoke their first cigarette of the day hours after waking (whereas most addicted smokers smoke much sooner).
- They metabolize nicotine at the same rate as regular smokers.
- They report frequent casual abstinence (for example, not smoking for several days) from smoking (unlike addicted smokers).
- Based on self-report questionnaires, chippers evidence more self-control, and are less impulsive (more able to resist temptation), compared to regular smokers.
- Whereas regular smokers show marked changes in mood, craving, sleep disturbance, and cognitive performance when deprived of nicotine, chippers show none of these changes.

Smoking and Psychopathology

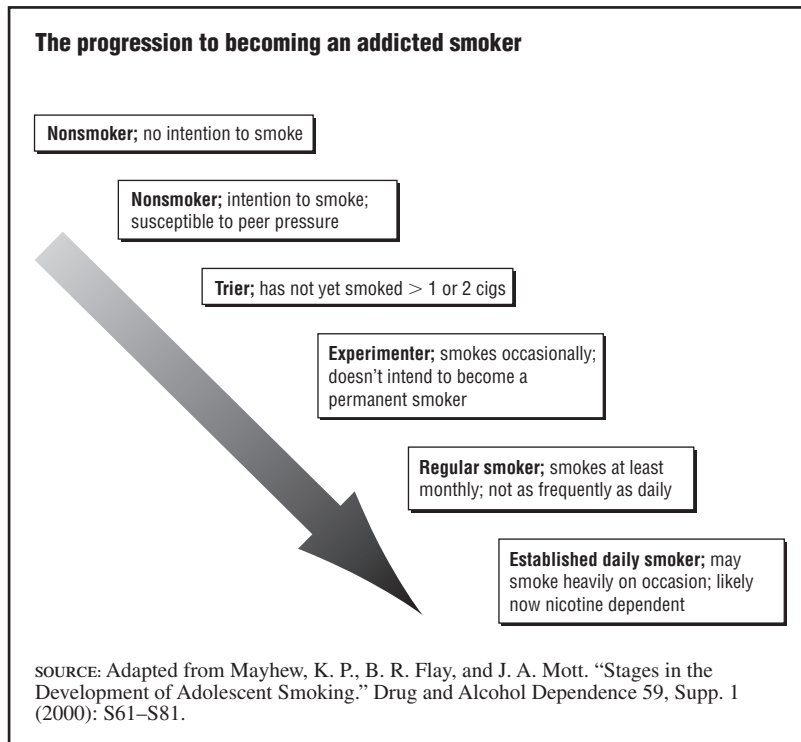
Research shows that smokers suffer more mental illness than non-smokers. Smokers are more likely to suffer from depression, anxiety disorders, substance abuse, conduct disorder, and schizophrenia, to name but a few. As an example, whereas approximately 23 percent of the United States population smoke regularly, as many as 90 percent of schizophrenics are heavy smokers. According to one analysis, persons with a psychiatric diagnosis smoke the majority of cigarettes consumed in the United States. Of course, questions arise as to what these associations mean and whether they inform scholastic understanding of smoking behavior. Given that virtually all of these psychological disorders are accompanied by negative mood states, the most common interpretation of the mental illness relationships is that smokers smoke in order to regulate their mood (self-medicate). However, the empirical evidence that smoking genuinely alleviates unpleasant mood is scant. It is important to note, however, that several longitudinal studies have suggested that some forms of psychopathology (for example, depression and delinquency problems) significantly increase the chances that someone will go on to become a smoker.

Whereas these studies suggest that suffering mental illness increases the risk of becoming a smoker, investigations conducted in the 1990s suggest this relationship goes the other way, too: Smoking itself can predict the onset of anxiety and depressive disorders. This fact suggests that the link between smoking and psychopathology may be attributable, at least in part, to other factors (such as genetic variations) that render individuals vulnerable to both smoking and psychopathology. Several biologically based personality variables, particularly neuroticism (anxiety) and psychoticism (distorted thinking), are associated with both smoking and various psychological disorders, including depression and anxiety. Thus, it is conceivable that genetically transmitted vulnerabilities may predispose people to both smoking and to psychopathology.

What Factors Promote Smoking Initiation?

The factors that promote smoking among regular, adult smokers likely differ from those associated with smoking initiation (which typically occurs during adolescence). So, why do individuals begin smoking in the first place? No one is born addicted to smoking, so addiction-related motives can be ruled out as an explanation for smoking onset. Research suggests other factors: (1) peer influence, which is arguably the most important predictor of who becomes a smoker; (2) sibling (and parental) smoking; (3) beliefs that smoking confers advantages in social life; (4) perception that tobacco use is the norm (at least in one's own social circles); and (5) prior experimentation with cigarettes, which is a strong predictor of subsequent smoking. Finally, some of the smoking motives expressed by adults are probably applicable to understanding smoking uptake among adolescents as well.

According to the leading scientific theories, smokers typically proceed through stages of smoking on their way to becoming nicotine-dependent (see figure). Broadly stated, during the early stage, smokers smoke for psychosocial motives, prompted by friends and social situations in which smoking is viewed as normal behavior. Most smokers are believed

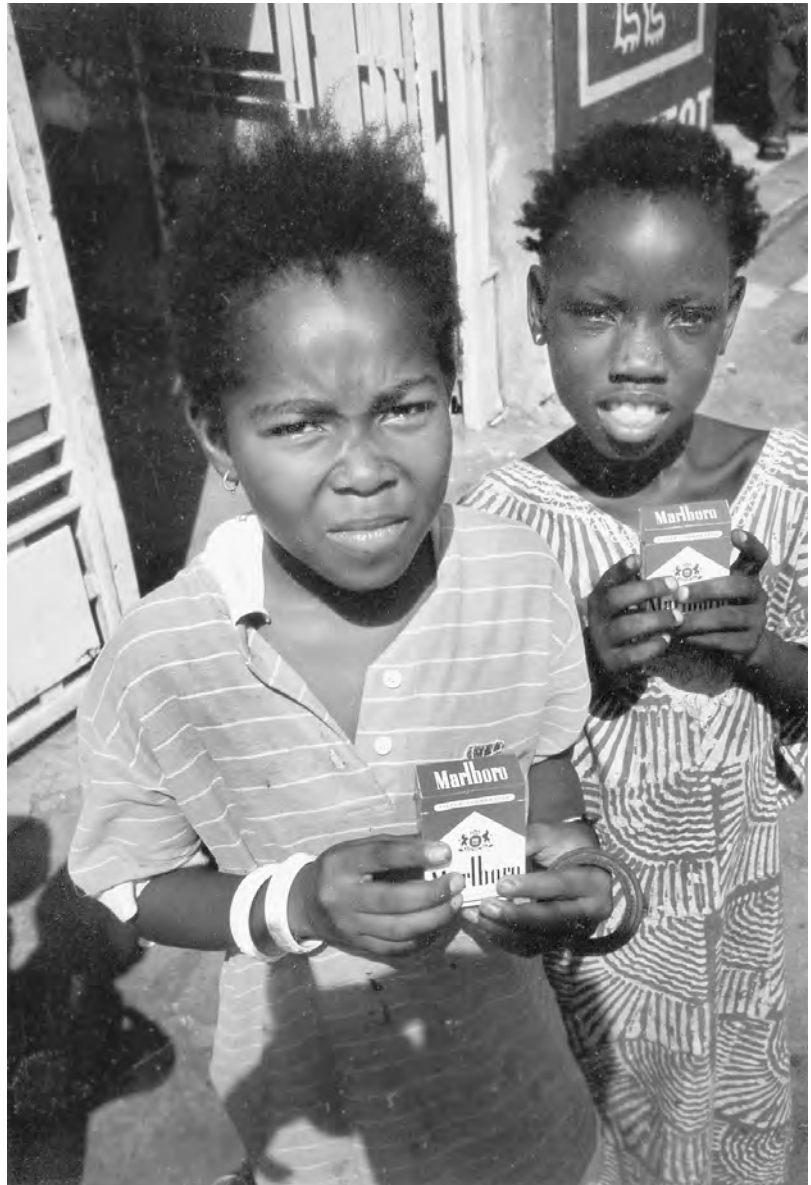


to progress rapidly to the next stage, in which their smoking is driven by the positively reinforcing pharmacological effects of nicotine. At this stage, smokers appear to seek both the relaxing and stimulating effects of the drug. Some smokers then progress to the final stage where their smoking is primarily governed by the need to stave off or escape from withdrawal symptoms; that is, addiction-related motives.

Most research has focused on understanding factors that make it more likely that a person will begin smoking. Less effort has gone into understanding factors that act to protect individuals from smoking in the first place. Identifying these factors may ultimately improve smoking prevention and intervention programs.

The Changing Landscape of Smoking

One landmark in the history of smoking behavior was the 1964 publication of the United States Surgeon General's report, *Smoking and Health*, wherein the link between smoking and cancer was first widely disseminated. As a result of this groundbreaking health information, many people began to quit smoking. Indeed, since the 1960s, the public's recognition of the health dangers attributable to smoking has grown significantly. One need only look at social policy change since the 1990s to see profound societal and legal shifts in attitudes toward smoking. And society has been witness to a gradual, yet steady, decline in overall smoking prevalence rates, at least in the United States. Analyses suggest that the decline in smoking prevalence is due to multiple factors: increased awareness of risk; rising cigarette prices; restrictions placed on smoking in public (and some private) places; promotion of



Children are influenced by exposure to cigarette products and the smoking behaviors of adults and young adults. In low-income countries, particularly where distribution of tobacco products is uncontrolled, children often use colorful cigarette packs as toys. Tobacco companies consider cigarette packs to be the primary vehicles for advertising their brands, and free merchandise puts tobacco products within easy reach of children. PHOTO BY ANNA WHITE

quitting; and help in quitting. Together, these factors have made smoking a far less appealing and affordable behavior.

Conclusions

Cigarette smoking is a destructive, complex behavior that is governed by multiple, interrelated factors. As such, understanding the psychology of smoking demands a multidisciplinary approach that considers biological, psychological, and social factors. As a field, psychology has made tremendous strides in the understanding of the processes that promote and maintain tobacco smoking. However, psychologists and behavioral scientists have more work to do. Millions of people die every year from diseases directly attributable to smoking. Whereas state-of-the-art smoking cessation treatments are available (including nicotine replacement therapy and behavior therapy), far more research into

the mechanisms underlying smoking initiation, maintenance, and cessation is still needed.

See Also Addiction; Bad Habits in America; Consumption (Demographics); Nicotine; Quitting; Youth Tobacco Use.

■ JON D. KASSEL
■ SAUL SHIFFMAN

BIBLIOGRAPHY

- Benowitz, Neal L., ed. *Nicotine Safety and Toxicity*. New York: Oxford University Press, 1998.
- Bolliger, Christoph T., and Karl-Olav Fagerström, eds. *The Tobacco Epidemic*, Vol. 28. New York: Karger, 1997.
- Fiore, M. C., et al. *Treating Tobacco Use and Dependence: Clinical Practice Guideline*. Rockville, Md.: U.S. Department of Health and Human Services, Public Health Service, 2000.
- Gilbert, David G. *Smoking: Individual Differences, Psychopathology, and Emotion*. Washington, D.C.: Taylor and Francis, 1995.
- Kassel, J. D., L. R. Stroud, and C. A. Paronis. "Smoking, Stress, and Negative Affect: Correlation, Causation, and Context Across Stages of Smoking." *Psychological Bulletin* 129 (2003): 270–304.
- Mayhew, K. P., B. R. Flay, and J. A. Mott. "Stages in the Development of Adolescent Smoking." *Drug and Alcohol Dependence* 59 (2000): Supp. 1: S61–S81.
- Orleans, C. Tracy, and John Slade, eds. *Nicotine Addiction: Principles and Management*. New York: Oxford University Press, 1993.
- Shiffman, S., et al. "Smoking Behavior and Smoking History of Tobacco Chippers." *Experimental and Clinical Psychopharmacology* 2 (1994): 126–142.
- Shiffman, Saul, and Thomas A. Wills, eds. *Coping and Substance Use*. Orlando, Fla.: Academic Press, 1985.
- Slovic, Paul, ed. *Smoking: Risk, Perception, and Policy*. Thousand Oaks, Calif.: Sage, 2000.
- U.S. Department of Health and Human Services. *Reducing Tobacco Use: A Report of the Surgeon General—Executive Summary*. Atlanta, Ga.: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2000.
- Wagner, Eric F., ed. *Nicotine Addiction Among Adolescents*. New York: Haworth Press, 2000.



Public Relations

Public relations (PR) is an important element of a firm's promotional mix or strategy, whereby the firm communicates information to the public with a goal of influencing their attitudes and behavior. The primary purposes of promotion are to inform, persuade, and remind. Many PR activities may be regarded as persuasion-based because the communications are



linking the firm with desirable attributes and images. Scholars and social historians often consider PR synonymous with “image management,” or less positively with “spin” or “media manipulation.”

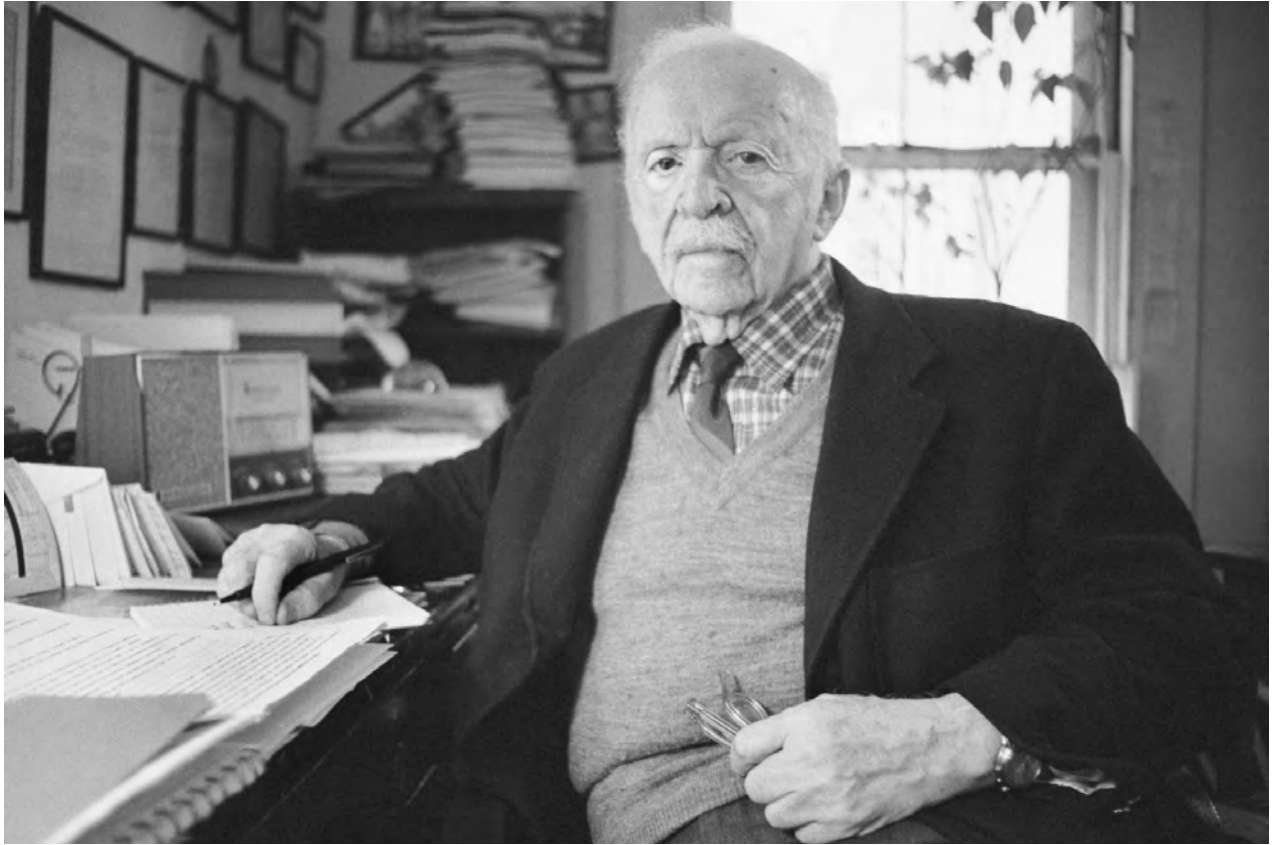
Although marketing and sales activities commonly have an objective of selling a firm’s products, PR efforts are typically focused on enhancing the image of the firm or the entire institution. PR involves a very broad range of activities; thus it can be challenging to find agreement about how the term is best defined. Nevertheless, Denny Griswold, founder of *Public Relations News*, a leading PR newsletter for publicists and professionals in the PR field, offers a widely accepted definition of PR: “The management function which evaluates public attitudes, identifies the policies and procedures of an individual or an organization with the public interest, and plans and executes a program of action to earn public understanding and acceptance” (Seitel 2001). PR can involve communication through both paid and unpaid means, with PR practitioners communicating on either a personal or non-personal basis with several publics including customers, competitors, the academic community, the government, regulatory authorities, trade associations, special interest groups, the investment community, suppliers and distributors, employees, and the press. PR practitioners perform several functions, including press relations, product publicity, corporate communication, lobbying, employee and investor relations, and crisis management.

Early PR Efforts by the Tobacco Industry

Ivy Lee and Edward Bernays are considered key pioneers of modern public relations. Lee was a former Wall Street reporter who became involved in publicity work in 1903 and formed a PR agency with George Parker in 1904. Lee’s clients included the hard coal industry, the Rockefeller family (one of the wealthiest families in the United States, who owned the Colorado Fuel and Iron Company), and the American Tobacco Company. During the mid-1920s, George Washington Hill, president of American Tobacco, sought Lee to direct the firm’s PR activities, which included guidance and critical comment about various advertising campaigns. One of Lee’s assignments was to improve relations with those possessing candy and sugar interests. Relations had become strained due to an effective Lucky Strike advertising campaign that encouraged female consumers to “Reach for a Lucky instead of a sweet.” Lee’s firm was paid a retainer of \$40,000 per year for its efforts, which was a considerable amount at the time.

In 1928, the American Tobacco Company also became a key client of Bernays (he previously worked for Liggett and Myers, the producers of Chesterfields), who was the mastermind of a PR strategy that encouraged women to start smoking cigarettes in public places. A promotional campaign was introduced at the 1929 Easter parade in New York City, in which ten young women, including Ruth Hale (a leading feminist), lit “torches of freedom” as a protest against women’s inequality. This freedom march gained front-page exposure in newspapers.

Bernays was assigned the formidable task of altering consumers’ perceptions about the color green because internal market research indicated that many women did not hold a favorable view of Lucky Strike’s green packaging. In 1934, Bernays was noted for facilitating green as the fashion color of the year by coordinating both a “Green Ball” with New York’s socialites and a “Green Fashions Fall Luncheon” with leading



fashion editors. The color was omnipresent at both events and supplemented with press releases indicating that green was a symbol of hope, victory (over depression), solitude, and peace. Presentations were given by both a noted art academic on the subject of “green in the work of great artists” and a renowned psychologist on green’s psychological connotations. A Color Fashion Bureau was established, and letters and announcements were sent to influential interior decorators, department store managers, home-furnishings buyers, art industry groups, and women’s clubs to communicate that green was a color with several virtues. These events were organized by Bernays without other participants knowing the identity of his client.

Hill recognized the importance of PR. Lee and Bernays were simultaneously on the American Tobacco payroll at great expense for a considerable number of years. At first, neither Lee nor Bernays was aware of the duplicity and duplication of many of their efforts for the same company. Interestingly, once Lee and Bernays discovered their concurrent employment, Hill explained, “If I have both of you, my competitors can’t get either of you” (Pollay 1990).

The Tobacco Industry Research Committee and the Tobacco Institute

During the early 1950s, scientific and popular articles began to more commonly associate lung cancer with smoking, and smokers became increasingly “health concerned.” Several epidemiologic studies linked

Edward Bernays, a pioneer of modern public relations, died in 1995 at the age of 103. He continued to attend PR-related meetings until shortly before his death.
© BETTMANN/CORBIS

Tobacco PR Consultants Try to Create “Controversy” About Secondhand Smoke

The tobacco industry continues to use science as a PR tool to resist or forestall proposed bylaws that prohibit smoking in indoor, public settings. Internal tobacco industry documents, which are publicly accessible through various court proceedings, reveal that tobacco firms and their PR consultants have aggressively discredited, undermined, and refuted scientific research findings relating to the health consequences of environmental tobacco smoke exposure. When assessing Philip Morris’ PR activities, researchers Elisa Ong and Stanton Glantz said that the firm has “gone beyond ‘creating doubt’ and ‘controversy’ about the scientific evidence that demonstrates that active and passive smoking cause disease, to attempting to change the scientific standards of proof” (2001).

smoking with lung cancer in the early 1950s and *Reader’s Digest* articles in 1952 and 1953 highlighted the relationship of smoking with cancer. Tobacco firms became increasingly uneasy about the negative publicity, which prompted the industry to hire Hill and Knowlton, a renowned PR firm, in 1953. Recommendations by Hill and Knowlton led to the formation of the New York–based Tobacco Industry Research Committee (TIRC) in 1954. On 4 January 1954, a full-page PR advertisement, using the headline “A Frank Statement to Cigarette Smokers,” circulated in 448 newspapers in 258 U.S. cities reaching an estimated readership of more than 43 million, to announce that the TIRC was being established with a mandate of supporting scientific research related to the health effects of tobacco use. The advertisement cast doubt on unfavorable research findings and included the statements: “We [the tobacco industry] accept an interest in people’s health as a basic responsibility, paramount to every other consideration in our business. We believe the products we make are not injurious to health. We always have and always will cooperate closely with those whose task it is to safeguard the public health” (Glantz et al.).

The TIRC, renamed the Council for Tobacco Research in 1964, continued to function with the purpose of maintaining uncertainty and “controversy” over the health effects of smoking by maintaining files on experts, carefully monitoring media stories, arranging meetings with key press editors and writers, generating favorable publicity through news releases, and providing grants for scientific research that was reportedly independent. The TIRC put forward arguments that more research was needed before a conclusive link could be made between smoking and cancer, placed an emphasis on people’s genetic susceptibility to cancer, speculated which other factors were attributable to lung cancer, claimed that tests on mice were not applicable to humans, and attempted to discredit the existing studies that reached unfavorable conclusions.

The Washington-based Tobacco Institute was established in 1958 to take over lobbying and PR activities, representing its members on matters of common interest pertaining to litigation, politics, and public opinion. By the late 1980s, the annual budget of the Tobacco Institute was estimated to be more than \$20 million. The tobacco industry increasingly focused its efforts toward resisting increases in excise taxes, restrictions on indoor smoking, and proposals to ban advertising. The tobacco industry also continued to deny that nicotine was addictive—on 14 April 1997, seven U.S. tobacco executives made an infamous testimony to this effect in U.S. Congress—even though internal research indicated otherwise. The Council for Tobacco Research and the Tobacco Institute were both abolished in accordance with the 1998 U.S. Master Settlement Agreement.

Key PR Tools

Tools commonly used by PR practitioners include new product publicity, product placement, Internet websites, and event or “issue” sponsorship. New product publicity involves efforts to generate positive media attention about specific products or services being introduced to the marketplace. During the 1950s, cigarette promotions frequently portrayed newly introduced filtered products as technological breakthroughs and made assertions that were meant to reassure smokers



with health concerns. In 1958, for example, Philip Morris organized a press conference at New York's Plaza Hotel to unveil its new "high filtration" Parliament brand. At the conference, a Philip Morris executive described the new filter—coined "Hi-Fi"—as "hospital white" and explained that this was an event of "irrevocable significance." Meanwhile, test tubes bubbled in the hotel foyers and personnel, wearing long white laboratory coats, responded to questions.

In 1964, consumer health concerns were reawakened with the release of the first U.S. Surgeon General's report on smoking and health. The tobacco industry responded by launching several low (machine-measured) yield products, which were supported by promotions implying that they were healthier or less hazardous. During the 1970s, several line extensions of familiar products were introduced, making use of the "Light" product descriptor. In the 2000s, corporate websites of tobacco firms emphasize their efforts to introduce new products that purportedly deliver lower levels of toxins to the smoker, again portraying these products as technological breakthroughs.

PR practitioners may also garner publicity through product placement, which entails efforts to have product exposure during special events or in films, television programming, stage-theater, concerts, and computer games. Philip Morris, for example, had product placement arrangements for the motion pictures *Superman II* (1980) and *License to Kill* (1989), and allegedly spent \$200,000 to have actor Martin Sheen smoke Marlboro throughout *Apocalypse Now* (1979). Internal tobacco industry documents also reveal that, in 1983, the Brown & Williamson

James J. Morgan, left, president and CEO of Philip Morris USA, and Michael E. Szymanczyk, executive vice president of sales and marketing, unveil their company's Action Against Access program in New York, 27 June 1995. Although promoted as a program to prevent underage tobacco sales, internal tobacco industry documents reveal that the purpose of this and similar programs was to avert or delay regulatory measures and to improve public opinion about tobacco industry marketing practices. AP/WORLD WIDE PHOTOS

Tobacco Corporation agreed to pay \$500,000 to actor Sylvester Stallone in exchange for him smoking the firm's brands in a minimum of five feature films. Cigarette product placement payments are prohibited in accordance with the 1998 U.S. Master Settlement Agreement, but many tobacco control groups and health practitioners remain concerned about how tobacco use is portrayed in television programming and film.

Using Internet websites, PR initiatives have attempted to "reposition" tobacco corporations such that they are perceived as responsible firms within a controversial industry. One employed strategy involves tobacco firms communicating their support of youth prevention campaigns and youth access laws. The Tobacco Institute's first prominent program related to youth access included distribution of both a booklet titled "Helping Youth Say No" and signs for posting at retail that stated, "It's the Law: We Do Not Sell Tobacco Products to Persons Under 18." The R.J. Reynolds Tobacco Company initiated the "Right Decisions, Right Now" program in 1991, procuring actor Danny Glover as a spokesperson. "We Card" is an active industry-initiated program that was established in 1995 under the auspices of the Coalition for Responsible Tobacco Retailing. The self-described mandate of this coalition is to prevent underage tobacco sales in the United States by providing training and education opportunities to owners, managers, and front-line employees of retailers that sell tobacco. Member organizations of this coalition include tobacco firms, retailers, and law enforcement agencies. Philip Morris began publicizing its "Action Against Access" program in 1995 as a complement to "We Card," and in 1998, the firm formed a Youth Smoking Prevention department that has an annual budget of more than \$100 million.

Internal tobacco industry documents reveal, however, that the purpose of these programs is to avert or delay regulatory measures and to improve public opinion about tobacco industry marketing practices. These industry-sponsored programs have been ineffective at diminishing youth tobacco use, largely because they portray smoking as an adult activity (thus, framing cigarettes as "forbidden fruit") and emphasize the influential role of peer pressure and parents as role models (meanwhile, omitting discussion about the role of industry marketing practices).

Finally, tobacco firms often become involved in event or "issue" sponsorships to improve the image of both the company and its products through being associated with useful works. Sponsorship objectives are typically distinguishable as either corporation related or product related. In addition to enhancing the company's image, common corporation-related objectives include: 1) increasing public awareness of the company and its services; 2) altering public perception; 3) being involved in the community and having local relevance; 4) building business relations and goodwill; and 5) enhancing employee relations and motivation. Tobacco industry representatives commonly maintain that their sponsorships allow events to be staged that might otherwise be denied, and view sponsorships as an opportunity to be regarded as good corporate citizens. With respect to "issues" sponsorship, Philip Morris ran prominent \$100 million promotional campaigns during the late 1990s that communicated the philanthropic and social activism activities of the firm, relating to topics such as feeding the

hungry and supporting domestic violence crisis centers. The campaigns did not specify, however, that the money spent toward promoting these efforts considerably exceeded what was actually contributed to those in need.

See Also Advertising; American Tobacco Company; British American Tobacco; Lobbying; Marketing; Philip Morris; Regulation of Tobacco Products in the United States; Sponsorship.

■ TIMOTHY DEWHIRST

BIBLIOGRAPHY

- Cosco, Joe. "Tobacco Wars: The Battle Between Titans Heats Up." *Public Relations Journal* 44 (1988): 14–19, 38.
- Drope, Jacqui, and Simon Chapman. "Tobacco Industry Efforts at Discrediting Scientific Knowledge of Environmental Tobacco Smoke: A Review of Internal Industry Documents." *Journal of Epidemiology and Community Health* 55 (2001): 588–594.
- Ewen, Stuart. *Captains of Consciousness: Advertising and the Social Roots of the Consumer Culture*. New York: McGraw-Hill, 1976.
- Glantz, Stanton A., et al. *The Cigarette Papers*. Berkeley: University of California Press, 1996.
- Irwin, Richard L., and Makis K. Asimakopoulos. "An Approach to the Evaluation and Selection of Sport Sponsorship Proposals." *Sport Marketing Quarterly* 1 (1992): 43–51.
- Lamb, Charles W., Jr., Joseph F. Hair, Jr., and Carl McDaniel. *Marketing*, 5th ed. Cincinnati, Ohio: South-Western College Publishing, 2000.
- Landman, Anne, Pamela M. Ling, and Stanton A. Glantz. "Tobacco Industry Youth Smoking Prevention Programs: Protecting the Industry and Hurting Tobacco Control." *American Journal of Public Health* 92 (2002): 917–930.
- Muggli, Monique E., et al. "The Smoke You Don't See: Uncovering Tobacco Industry Scientific Strategies Aimed Against Environmental Tobacco Smoke Policies." *American Journal of Public Health* 91 (2001): 1,419–1,423.
- Ong, Elisa K., and Stanton A. Glantz. "Constructing 'Sound Science' and 'Good Epidemiology': Tobacco, Lawyers, and Public Relations Firms." *American Journal of Public Health* 91 (2001): 1749–1757.
- Pollay, Richard W. "Propaganda, Puffing and the Public Interest." *Public Relations Review* 16 (1990): 39–54.
- Pollay, Richard W., and Timothy Dewhirst. "The Dark Side of Marketing Seemingly 'Light' Cigarettes: Successful Images and Failed Fact." *Tobacco Control* 11 (2002): i18–i31.
- Pratt, Cornelius B. "The 40-Year Tobacco Wars: Giving Public Relations a Black Eye?" *Public Relations Quarterly* 42 (1997–1998): 5–10.
- Seitel, Fraser P. *The Practice of Public Relations*, 8th ed. Upper Saddle River, N.J.: Prentice Hall, 2001.
- Tye, Larry. *The Father of Spin: Edward L. Bernays and the Birth of Public Relations*. New York: Crown, 1998.
- Yach, Derek, and Stella A. Bialous. "Junking Science to Promote Tobacco." *American Journal of Public Health* 91 (2001): 1745–1748.



Quitting

European observers noted as early as the sixteenth century that tobacco users found it difficult to quit their practice once they had adopted the habit. The Spanish archbishop Bartolomé de Las Casas Cuzco observed in 1527 that Spanish soldiers on Hispaniola seemed unable to stop using the plant. In 1604 King James I of England in his *Counterblaste to Tobacco* wrote that smokers became “bewitched” to tobacco and overcome by “lust” for the “vile custome.” Sir Francis Bacon observed in 1622, “The use of tobacco . . . conquers men with a certain secret pleasure so that those who have once become accustomed thereto can hardly be refrained therefrom” (Slade 1998).

Nineteenth-century American authors frequently warned readers that tobacco *enslaved* smokers, **snuff** users, and tobacco chewers. In 1852 one author warned boys that tobacco users were bound “in chains not easily broken” and compared tobacco with **opium** (Trask 1852).

Industrialist Henry Ford pointed out the addictive quality of cigarette smoking in 1914 in his popular book *The Case Against the Little White Slaver*. By the 1930s many medical writers saw the tobacco habit as “a form of drug addiction” (Dorsey 1936).

Thus, from an early time doctors and laypersons generally understood that quitting tobacco use was very difficult. However, a scientific consensus did not emerge until 1988, with the publication of *The Health Consequences of Smoking: Nicotine Addiction: A Report of the Surgeon General*, which said that the smoking habit was a biologically based addiction like that associated with cocaine or heroin. How then might one quit, given the great difficulty in doing so?

Three Twentieth-Century Models

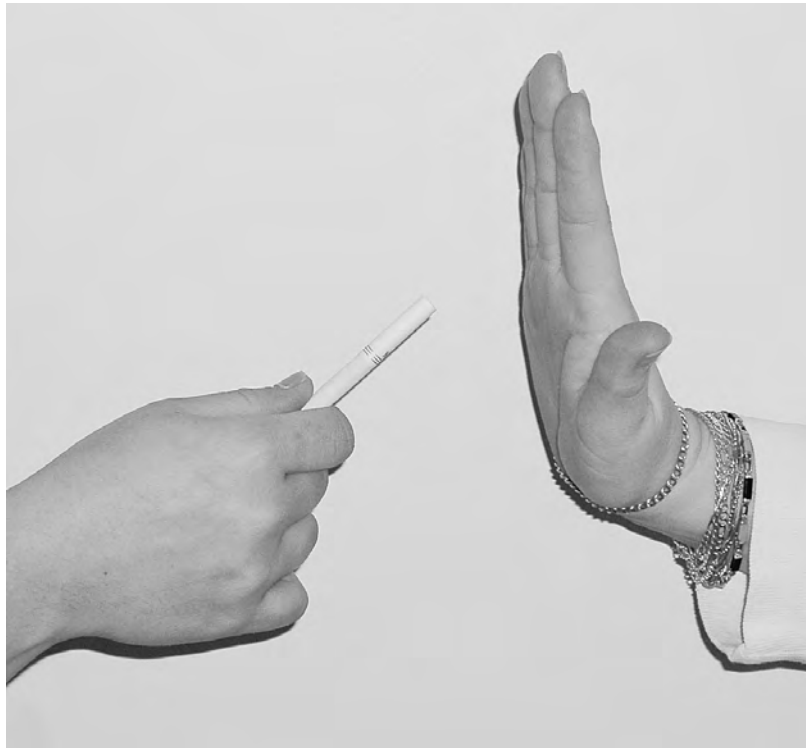
In advice typical for the nineteenth century, one author recommended that users focus their “stern, resistless will” on breaking their dependency (Trask). He added that prayers, staying busy, signing a pledge, drinking copious amounts of pure water, and hydrotherapy could aid the slave to tobacco.



snuff a form of powdered tobacco, usually flavored, either sniffed into the nose or “dipped,” packed between cheek and gum. Snuff was popular in the eighteenth century but had faded to obscurity by the twentieth century.

opium an addictive narcotic drug produced from poppies. Derivatives include heroin, morphine, and codeine.

If only quitting smoking was this easy.
Unfortunately, mere willpower is seldom
power enough to quit the addictive habit.
© KELLY A. QUIN. REPRODUCED BY
PERMISSION



In the first half of the twentieth century writers continued to recommend the nineteenth-century smoking cessation measures and added recommendations such as drinking copious amounts of fruit juices, deep breathing, and psychoanalysis. A few physicians advised patients to use amphetamines, tranquilizers, or lobeline sulphate as aids to cessation. Taking the alkaloid lobeline ($C_{22}H_{27}NO_2$) and tobacco simultaneously caused smokers to become nauseous because of a cross-tolerance between lobeline and nicotine. Some physicians believed it also helped reduce cravings for nicotine because of similar pharmacological effects on the nervous system. By the 1930s scientists understood that lobeline “caused a brief stimulation of the motor centers in the spinal cord and medulla. This stimulation is soon followed by depression, and later paralysis with large doses. The feature of the action of the drug is the stimulation of the motor nerve endings in the involuntary muscles” (Dorsey 1936).

As strong scientific evidence linking smoking with lung cancer emerged in the 1950s, health scientists began to design formal programs to assist those smokers who were unable to quit on their own. The clinical treatment programs were generally based on techniques and ideas about self-control or pharmacological interventions.

WAYNE MCFARLAND. Dr. Wayne McFarland was a pioneer in the field of clinical treatment. In the 1950s he developed the Five Day Plan to quit smoking, and began to conduct smoking withdrawal clinics on a large scale in 1962. Although McFarland was associated with the Seventh Day Adventist Church, his Five Day Plan was a nonreligious smoking cessation program often cosponsored by local hospitals and

The Five Day Plan

The Five Day Plan, developed in the 1950s by Dr. Wayne McFarland, sought to strengthen smokers' willpower and to weaken the physical craving for nicotine experienced during withdrawal. Participants met for five evenings at various convenient places such as school auditoriums, hotels, civic halls, or hospitals for one and a half to two hours. To motivate the smokers, participants were given frightening lectures on the hazards of smoking and shown graphic films of smokers having cancerous lungs removed. Ex-smokers gave hopeful testimonials and participants were encouraged to select a buddy for mutual support.

Along with the evening meetings, participants were given behavioral and psychological tools to use while on their own. The plan advocated complete and immediate cessation. To sustain abstinence, a three-pronged assault, with mental, physical, and spiritual components, was made on the addiction.

The plan's author advised taking large quantities of fruit juices and copious amounts of water with the hope that

this would reduce craving sensations. Rhythmic breathing was also recommended to increase the oxygen supply to the brain and to fortify willpower.

Various behavioral interventions were suggested. One might take walks after meals or help his or her spouse with the dishes. Long hot showers in the morning and evenings, as a form of hydrotherapy, were recommended for their calming effect. The participants were taught to avoid spicy foods, sugar, coffee, and alcohol. The belief was that these stimulating foods would induce craving.

To fortify the will, the plan recommended repeating the mantra: "I choose not to smoke." Though the plan was nonreligious, it did incorporate a generic spirituality into its cessation armamentarium. Participants were instructed to ask for divine help at moments of crisis in accord with their own beliefs. In substance, the plan's recommendations echoed early-twentieth- and late-nineteenth-century recommendations. The main difference was its formal organization and system of social support.

local voluntary health groups such as the National Tuberculosis and Respiratory Disease Association (now the American Lung Association, or ALA). The clinics were free or only a small nominal fee was charged. Between 1961 and 1964, 50,000 Americans completed the Five Day Plan. Often more than 100 people attended a single Five Day Program at one location for one week. In the greater Los Angeles area alone, 8,000 to 10,000 people had completed 300 clinics by 1970. Because of the difficulty of following ex-smokers over time and the lack of prospective studies on the attendees, researchers do not know how successful the program was. Evidence from the time suggests that significant numbers of people were able to quit for a short time, but many returned to smoking later.

BORJE E.V. EJRP. Another early programmatic attempt to aid smokers in quitting their addiction was made by the Swedish physician Borje E.V. Ejrup. He began his work in Stockholm in 1955 and continued it at the New York Hospital/Cornell Medical Center in the 1960s. By 1967 he had treated 7,000 patients with his method.

Ejrup was especially interested in the "hard core" smokers with a strong **physiological** dependence on nicotine. He gave patients lobeline hydrochloride in injections and in oral form in order to support them in breaking their physiological dependence. In addition, Ejrup prescribed



physiology the study of the functions and processes of the body.

the tranquilizer meprobamate to allay anxiety. Because many patients were concerned about weight gain, he also gave them an amphetamine to reduce hunger.

Patients came to Ejrup's Tobacco Withdrawal Clinic every weekday for the first two weeks for injections and tablets. They also received individual counseling from a physician. Ejrup advised physicians to be dramatic in their counseling sessions as they attempted to warn, persuade, and cajole would-be ex-smokers.

DONALD T. FREDRICKSON. Donald T. Fredrickson, M.D., director of the Smoking Control Program at the New York City Department of Health, planned and directed the first smoking control program of the New York City Department of Health from 1964 to 1967. Nearly 100 volunteer ex-smokers, drawn mainly from the upper middle class, comprised most of the staff of the program. Fredrickson's program had three phases, beginning with motivational lectures, and progressing through group sessions involving discussion, question and answer, and mutual encouragement.

The core of Fredrickson's program was based on a lay self-help model derived from Alcoholics Anonymous, Gamblers Anonymous, and Weight Watchers. In addition, he derived elements of his model from conversations with ex-smokers, reports of other clinics, and studies of a handful of behavioral scientists.

Fredrickson believed that habituation to smoking was, in part, learned behavior, and the smoker needed to learn to manage emotional and psychological states without cigarettes. He instructed smokers that they needed to be highly motivated and to faithfully exercise the virtues of patience and persistence in order to alter their behavior through psychological retraining. Hopefully the smoker would experience the program as a positive exercise in self-mastery while achieving a new dimension of self-control.

ADAPTATIONS. The three early programs described above became the models on which many later smoking withdrawal clinics in North America and Europe were based. McFarland's Five Day Plan was transplanted to the United Kingdom and Canada and was often co-sponsored by various health agencies and hospitals in the United States. Adaptations of Ejrup's pharmacological and intensive counseling treatment regimen were deployed by clinics in the United States, the United Kingdom, Denmark, and Germany. Fredrickson's self-help, self-control program became a model for other stop smoking clinics by 1970 including those of the American Cancer Society (ACS), the American Lung Association (ALA), and the Los Angeles County Department of Health.

Programs in the 1960s to 1970s

The ACS, ALA, local health departments, local hospitals, and local voluntary health associations began offering free or low-cost smoking cessation clinics in small numbers in 1964. By 1974, 13,000 smokers in California alone had participated in ACS stop smoking clinics. In the

1970s other voluntary agencies like the Young Men's Christian Association (YMCA) and the American Heart Association (AHA) began to offer smoking cessation clinics. During the period from 1977 to 1981, the ACS held 18,000 stop smoking clinics across the United States. All of these agencies continued to offer stop smoking clinics in the 1980s, notable among these were the American Lung Association's Freedom from Smoking Program and the ACS's Fresh Start smoking cessation program.

These clinics, generally based on a self-control rationale, usually included lectures, question-and-answer sessions, self-evaluation tests, the buddy system, some form of individual therapy or group therapy or group support in which participants shared experiences and stories, and handbooks that gave advice about changing behaviors. The non-commercial clinics usually had from four sessions to twelve or more sessions lasting from one to eight weeks and sometimes as long as six months.

In addition to these noncommercial stop-smoking clinics, by 1970 there was a \$50 million per year industry of for-profit smoking cessation programs. Some of these programs included Smokewatchers, Quit Now, Smokenders, and Schick Centers. By 1977 Smokenders alone reported that it had 150,000 graduates of its eight-week program. The commercial clinics sometimes used adaptations of the Fredrickson model, hypnosis, and aversive conditioning.

Due to high drop-out rates and the difficulties of following patients over time, researchers are not certain of how effective these programs were. Impressions from the time and current data indicate that clinics had some initial success but over time many smokers returned to tobacco use.

Besides these clinical interventions, health agencies, among whom the ACS was the largest and most active, also attempted to induce cessation through educational campaigns directed at the population level. The ACS waged their "Who Me? . . . Quit Smoking!" and "The Time to Stop Is Now" campaigns beginning in 1965. In 1968 the ACS began its "I Quit" or "IQ" smoking cessation campaign. Other notable population level interventions included the ACS's "Target Five" campaign from 1977 to 1981, in which 20 million adults were reached with antismoking messages and, during which, the ACS sponsored 18,000 Quit Smoking! clinics through local affiliates. The Great American Smokeout, held annually since 1977, has been another prominent attempt at intervening at the population level. For example, in 1983, 19 million Americans participated in the Great American Smokeout. During this event the ACS, through a national publicity campaign, attempts to persuade smokers to try to quit for one day hoping that a fraction of them will quit permanently.

EXPERIMENTAL STUDIES. Clinical delivery of smoking cessation treatment preceded the large increase in formal, experimental studies of smoking cessation that began in the mid-1960s, a field that one study described as still in its infancy in 1968. During the 1970s there was a great deal of wide-ranging research into smoking cessation methods. Most of the research was based on behavioral strategies of aversion or self-control. In aversion strategies the idea was to associate unpleasant



stimuli with smoking so that smoking would no longer be experienced as pleasurable. Among the aversion methods studied were giving electric shocks to people while they smoked, having people rapidly smoke cigarette after cigarette or smoke so much that they became ill, blowing smoke in the face of a cigarette user as he or she smoked creating irritation and discomfort, and having smokers concentrate on negative, disgusting, or unpleasant images in their minds while they smoked. It was hoped these negative associations would deter smoking.

In other studies researchers hoped to help participants resist the idea or craving to smoke; in essence, to help them increase their ability to control their smoking behavior. Researchers did this by making contingency contracts wherein smokers would receive some reward, such as money, if they avoided smoking, and wherein they would have to pay money if they smoked. They tried social contracts, like the buddy system, wherein smokers attempted to quit with a partner. It was hoped that through increased social support smokers could resist the temptation to smoke. In the 1980s experimental research began to focus on physician advice models, work site interventions, and community wide approaches. In these approaches it was hoped that less intensive interventions directed at a much larger population would end up, on balance, creating more ex-smokers than intensive interventions directed at individuals and small groups. In addition, researchers increasingly studied nicotine replacement strategies such as the nicotine patch with and without behavioral components. These interventions continued to demonstrate modest effects with relatively low quit rates because of the strength of “multiple societal, psychosocial, biobehavioral, and biological processes that maintain smoking behavior” (Lichtenstein and Glasgow 1992).

The 1990s to the Present

Based on research from the 1990s into the new millennium, scholars and medical professionals understand that nicotine is the addicting drug that has the poorest success rate for cessation when compared to alcohol, cocaine, and opioids. Withdrawal symptoms might include craving sensations, irritability, anger, anxiety, difficulty concentrating, restlessness, decreased heart rate, or weight gain.

Approximately 87 percent of those who successfully quit smoking do so on their own, while only 13 percent quit with the help of a formal program or drug therapy. Smokers usually have to make several attempts at quitting before achieving success.

Since the 1990s some progress had been made with medical interventions to help with smoking cessation. Specifically, nicotine replacement therapies in the form of gum, patch, and nasal spray, and the use of bupropion, a non-nicotine-based quitting medication, have shown promise. Researchers have shown that the concomitant use of drug therapy (including nicotine replacement) and receiving counseling of some kind give the addicted smoker the best chance at quitting.

See Also Addiction; Nicotine; Quitting Medications.

■ COLIN TALLEY

BIBLIOGRAPHY

- Bernstein, Douglas A. "Modification of Smoking Behavior: An Evaluative Review." *Psychological Bulletin* 71 (1969): 418–440.
- Brandt, Allan. "The Cigarette, Risk, and American Culture." *Daedalus* 119 (Fall 1990): 155–176.
- . "Blow Some My Way: Passive Smoking, Risk, and American Culture." In *Ashes to Ashes: The History of Smoking and Health*. Edited by S. Lock, L. A. Reynolds, and E. M. Tansey. Amsterdam and Atlanta, Ga.: Editions Rodopi B.V., 1998.
- Diehl, Harold S. *Tobacco and Your Health: The Smoking Controversy*. New York: McGraw Hill, 1969.
- Dorsey, John L. "Control of the Tobacco Habit." *Annals of Internal Medicine* 10 (November 1936): 628–631.
- Gehman, Jesse Mercer. *Smoke Over America*. Paterson, N.J.: Beoma Publishing House, 1943.
- Goodman, Henry A., ed. *World Conference on Smoking and Health: Summary of the Proceedings*. New York: National Interagency Council on Smoking and Health, 1967.
- Koslowski, Lynn T., Jack E. Henningfield, and Janet Brigham. *Cigarettes, Nicotine, and Health: A Biobehavioral Approach*. Thousand Oaks, Calif.: Sage Publications, 2001.
- Lichtenstein, Edward, and Carolin S. Keutzer. "Modification of Smoking Behavior: A Review." *Psychological Bulletin* 70 (1968): 520–533.
- Lichtenstein, Edward, and Brian G. Danaher. "Modification of Smoking Behavior: A Critical Analysis of Theory, Research, and Practice." In *Progress in Behavior Modification*, Vol. 3. Edited by Michel Hersen, Richard M. Eisler, and Peter M. Miller. New York: Academic Press, 1976.
- Lichtenstein, Edward, and Russell E. Glasgow. "Smoking Cessation: What Have We Learned Over the Past Decade?" *Journal of Consulting and Clinical Psychology* 60 (1992): 518–527.
- McFarland, J. Wayne, and Elman J. Folkenberg. *How to Stop Smoking in Five Days*. Englewood Cliffs, N.J.: Prentice Hall, 1964.
- Richardson, Robert G., ed. *The Second World Conference on Smoking and Health*. New York: Health Education Council, 1971.
- Ross, Walter S. *Crusade: The Official History of the American Cancer Society*. New York: Arbor House, 1987.
- Rustin, Terry A. "Management of Nicotine Withdrawal." In *Principles of Addiction Medicine*, 2nd ed. Edited by Allan W. Graham and Terry K. Schultz. Chevy Chase, Md.: American Society of Addiction Medicine, 1998.
- Schwartz, Jerome L. "A Critical Review and Evaluation of Smoking Control Methods." *Public Health Reports* 84 (June 1969): 483–506.
- Slade, John. "The Pharmacology of Nicotine." In *Principles of Addiction Medicine*, 2nd ed. Edited by Allan W. Graham and Terry K. Schultz. Chevy Chase, Md.: American Society of Addiction Medicine, 1998.
- Trask, George. *Thoughts and Stories on Tobacco for American Lads*. Boston: G. C. Rand, 1852.
- Wilkins, Jeffery N., David G. Gorelick, and Bradley T. Conner. "Pharmacologic Therapies for Nicotine Dependence." In *Principles of Addiction Medicine*, 2nd ed. Edited by Allan W. Graham and Terry K. Schultz. Chevy Chase, Md.: American Society of Addiction Medicine, 1998.



Quitting Medications

Up to the end of the 1970s behavioral treatments were the only procedures with some efficacy available. Particularly the aversive method “rapid smoking” had a reasonably good efficacy record.

Early Development of Nicotine Replacement Therapy

The first scientifically evaluated drug treatment for tobacco dependence or smoking cessation, nicotine replacement therapy (NRT), was conceptualized in 1967 and developed in Sweden during the 1970s. Two physicians at the University of Lund, Stefan Lichtneckert and Claes Lundgren, approached the nearby pharmaceutical company AB Leo with the idea of using nicotine for smoking cessation after they had observed crew members in a submarine use smokeless tobacco. The notion that tobacco use was driven by nicotine was not widespread in the late 1960s, and AB Leo’s research director, Ove Fernö, himself a heavy smoker, agreed to fund Drs. Lichtneckert and Lundgren’s research.

After trying several administration forms (including aerosol) the researchers chose gum, mainly for safety reasons. The first gum was abandoned because it released its nicotine too quickly. In order to slow down the release, Dr. Fernö introduced the use of an ion exchanger into which the nicotine could be incorporated, a complex binding the nicotine to the gum until it comes into contact with saliva when it is released. However, using the **ion exchanger complex** slowed down the release of nicotine; in order to improve absorption a buffer was added to the gum.

Around 1973 Professor Michael Russell at the Department of Psychiatry at Denmark Hill in London became interested in the idea of using nicotine in smoking cessation after having used behavioral methods without much success. In the United States, Murray Jarvik and Nina Schneider were the first researchers to experiment with nicotine gum and they became great ambassadors of the product. At the Medical School at the University of Lund, a Smoking Cessation Clinic established and headed by Professor Håkan Westling came to use gum liberally for its patients beginning in 1970. The experience from the uncontrolled clinical use by Drs. Lichtneckert and Lundgren was important for testing out various reformulations of the gum that were used later in the centers above.

Initial Marketing Authorizations

In Sweden there was a discussion about whether the food or the medicine agencies should regulate nicotine gum. Gum was considered food, but nicotine was not an approved food additive. After several years, during which the Swedish tobacco monopoly showed an intention to market the gum, the government decided that the gum should be regulated as a medicine.

Nicotine gum was first approved in Switzerland in 1978. In a U.S. regulatory agency advisory committee meeting in 1983, there was a lot



ion exchanger complex a method of controlling the nicotine levels of cigarettes by adding ion exchangers, usually resins, to the tobacco or filter.



People who are trying to quit smoking may use skin patches (shown here) or chewing gums that contain nicotine. The medications help relieve nicotine withdrawal symptoms and can make it easier to break the addictive patterns of tobacco use. PHOTOGRAPH BY ROBERT J. HUFFMAN/FIELD MARK PUBLICATIONS

of controversy surrounding the gum's possible approval. Fear of abuse of the gum was cited as one of the FDA's concerns.

Nicotine Nasal Spray

It was evident that a gum could not deliver nicotine with the same speed and to the same extent that a cigarette could. As a way to remedy the relatively slow absorption of nicotine from the gum, in 1979 Professor Russell and Dr. Fernö agreed to investigate the absorption of nicotine through the nose. Russell's group headed most of the clinical development with the nicotine nasal spray and advocated that in a smoker's clinic with heavy dependent smokers it was the most effective tool. In the United States in the 2000s, nicotine nasal spray and nicotine inhalers are available by prescription.

The Nicotine Patch

In the early 1990s it became clear that not every cigarette smoker could or liked to chew gum, and many experienced side effects like irritation in the oral cavity and some indigestion. This led to underdosing and thoughts on how to remedy the problem. In 1984, Drs. Jed Rose and Murray Jarvik from the University of California Los Angeles (UCLA) began to experiment with nicotine given transdermally (through the skin). They applied for a patent for transdermal delivery of nicotine, which was later approved. Around the same time, U.S.-based ALZA Corporation and the German-based Lohman Therapie Systeme started to develop nicotine patches, which are similar to adhesive bandages and are available in different shapes and sizes. The nicotine patch releases a constant amount of nicotine in the body; the nicotine dissolves through the skin and enters the body, thus providing relief from some of the withdrawal symptoms people experience when they quit smoking.



pharmacokinetics the branch of medicine that deals with the action of drugs within the body, specifically absorption, distribution, and elimination.

Other Nicotine-Delivery Products

In the 1990s and early 2000s, a number of nicotine-delivery products were developed by different pharmaceutical companies. In order to provide consumer options, Pfizer developed an oral inhaler. This preparation delivers nicotine with approximately the same characteristics as a 2-milligram gum and the efficacy is also the same. The Swiss company, Novartis, was the first to develop a lozenge with a 1-milligram dose, later followed by a 2-milligram dose. UK-based GlaxoSmithKline developed a 2- and 4-milligram lozenge that roughly mimics the **pharmacokinetics** of the Pfizer and Novartis 2- and 4- products.

Nicotine Replacement Therapy in the Future

Since the mid-1980s consumers have witnessed the medicine regulatory authorities outside the United States relaxing their attitude toward nicotine and the expressed safety concerns. Since this time, many contraindications have been lifted, better availability—from prescription-only, over the counter, and general sale—has been allowed, and wider use with new indications like temporary abstinence and reduced smoking has been granted. In the 2000s, patches are only used for complete cessation while the other products are used for both cessation and relapse prevention, reducing smoking, and recreational use. The gum formulation is the best-selling product both in the United States and worldwide, followed by the patch.

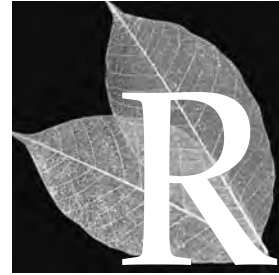
“It is argued that it is not so much the efficacy of new nicotine delivery systems as temporary aids to cessation, but their potential as long-term alternatives to tobacco, that makes the virtual elimination of tobacco a realistic future target,” Michael Russell wrote in *The Lancet* (1991). How nicotine will be consumed in the future has to do with how it will be regulated. Public health officials have maintained that a regulatory framework—where one agency has the power to regulate all nicotine-containing products—would be instrumental in determining the best public health impact of cessation products and abstinence from nicotine. In the United Kingdom, organizations such as the British Royal College of Physicians and the House of Commons have petitioned the British Department of Health to move in that direction.

See Also Addiction; Nicotine; Quitting.

■ KARL FAGERSTRÖM

BIBLIOGRAPHY

- Bolliger, Christoph T., and Karl-Olov Fagerström, eds. *The Tobacco Epidemic*. Vol. 28, *Progress in Respiratory Research*. New York: Karger, 1997.
- Haustein, Knut-Olaf. *Tobacco or Health? Physiological and Social Damages Caused by Tobacco Smoking*. New York: Springer, 2003.
- Schneider, N. *How to Use Nicotine Gum*. New York: Simon & Schuster, 1988.



Regulation of Tobacco Products in the United States

The U.S. federal government regulates all consumer products except cigarettes and other tobacco products. Products from foods and drugs to cars and car seats are all subject to rigorous regulation to ensure that they are safe and that they work as consumers expect. But with the exception of a program to ensure the collection of taxes from their sale, there is virtually no regulation of tobacco products. In fact, tobacco is expressly exempted from regulation under a number of consumer product statutes, such as the Federal Consumer Product Safety Act.

The most logical agency in the federal government to regulate tobacco products is the U.S. Food and Drug Administration (FDA). The FDA regulates food, drugs, cosmetics, and medical devices like X-ray machines and surgical instruments. Indeed, about 25 cents worth of every dollar spent on consumer products goes to a product regulated by FDA. In the 1990s the FDA did attempt to regulate tobacco products but, as will be explained, the agency's efforts were overturned in court.

Other federal agencies have tobacco-related responsibilities that do not involve product regulation. Some are involved in studying the health effects of tobacco products, while others inform the public of the risks of tobacco products and how to quit. The work of these other agencies also will be described.

Why Regulate Tobacco Products?

A logical first question many people ask is why tobacco products should be regulated at all. Some people believe that the public is already aware of the risks associated with tobacco products and that regulation is not needed. Others question why they are permitted to be sold at all. If

tobacco products are so dangerous, so this argument goes, why not ban tobacco products entirely?

Many experts believe that the answer to this very sensible question is that prohibition would not work. Almost 50 million adults smoke. Most of these tobacco users are addicted to the nicotine in tobacco. These people would still be dependent on nicotine if tobacco sales were made illegal. Experts fear that, as was the case when alcohol sales were made illegal in the early twentieth century, a black market for tobacco products would quickly come into existence.

A black market is a system of illegal sales of prohibited products. One concern is that black market tobacco products could be more dangerous than the products available today because of even more questionable ingredient quality and product purity. The tens of millions of smokers who might seek out cigarettes in a black market could thus be exposing themselves to even greater risks than they would under a system in which sales are lawful.

What Would Tobacco Product Regulation Include?

Traditional regulation of consumer products is designed to ensure that ingredients or components are safe and that the products will work as promised. FDA regulation of health claims for food and drug products is a good example of a regulatory approach that might work for tobacco products.

Food and drug manufacturers have to first demonstrate to the FDA that there is scientific support for the claims they make about their products. Most importantly, they have to submit their evidence to the FDA before they can make a claim on a product label or package. The FDA then decides if there is adequate scientific evidence to support the claim. For example, a breakfast cereal company that wants to claim that its new high-fiber cereal will reduce the risk of cancer must first prove it to the FDA. If the FDA is not satisfied that there is sufficient clinical or **epidemiological** data from the scientific studies to support the claim, the company cannot make the claim. This important consumer protection system prevents the public from being exposed to unproven claims.

By contrast, in the current unregulated marketplace for tobacco products, cigarette manufacturers are free to make any claims about their products. Smokers, especially those concerned about their health and interested in quitting, have no way of knowing whether claims promising to reduce exposure to cancer-causing chemicals in smoke are actually true (see sidebar, p. 493).

Other features from the food and drug regulatory system could be applicable to the regulation of tobacco products. One would be to evaluate the safety of new ingredients before they can be added to a tobacco product already on the market. Another would be to reduce the risk of tobacco products by restricting the level of harmful compounds to which tobacco users are exposed. Yet another would be to monitor the marketplace to make sure products are being used as intended. This task is particularly important to ensure that children and adolescents are not using tobacco products.



epidemiological pertaining to epidemiology, that is, to seeking the causes of disease.

Unregulated Health Claims for Tobacco Products

A new generation of tobacco products has entered the marketplace in the last decade. These products offer promises of reduced exposure to dangerous chemicals in tobacco smoke, and even make claims to reduce the risk of cancer and other diseases.

The products take various forms. Some burn tobacco, or use special methods to burn or heat tobacco. Others are tobacco-based but do not burn. The products that burn tobacco include Omni and Advance. Omni, manufactured by a company called Vector, invested \$40 million in an advertising campaign prominently featuring the claim “Reduced Carcinogens. Premium Taste.” Two-page ads for Omni bearing that claim appeared regularly in *Parade* magazine in 2002. The products that use novel methods to burn or heat tobacco include Eclipse and Accord. Their claims are similar to Omni’s. The non-combusting products include Ariva, Revel, and Exalt; these promise tobacco satisfaction in situations where smoking is not possible (e.g., at work or at home).

Whether they burn or not, all of these products are aimed squarely at the health-concerned smoker. They have entered the marketplace in the absence of any independent scientific evaluation of their claims, and without

any governmental scrutiny of the products or their claims.

From a public health perspective, these products may pose a significant threat to efforts to help smokers quit. Health-concerned smokers who see these products may now think that a safer cigarette genuinely exists. This may make them less inclined to try to quit.

There is the added concern that former smokers may start smoking again, thinking they can now safely consume tobacco products. Likewise, those who never smoked may light up for the first time, using one of these new products under the assumption that a safe cigarette exists.

In the absence of public health–based regulation of these products, there is no way to know whether this new generation of products will actually reduce exposure and risk. The great fear held by some public health experts is that these new products may be nothing more than a scientifically sophisticated version of the “light” cigarette. We now know, many decades too late to help smokers who switched to “light” cigarettes over the last 30 years, that “lights” were deliberately designed so as not to reduce tar and nicotine deliveries when smoked by human beings. Back then, well-intentioned public health officials encouraged health-concerned smokers to switch to “lights.” Experts urge that we avoid repeating the same mistakes with today’s products.

The FDA’s Attempt to Regulate Tobacco Products in the 1990s

In 1994, under then-Commissioner David Kessler, the FDA announced that it would investigate the role of nicotine in the design and manufacture of tobacco products. If there was sufficient evidence that tobacco companies deliberately designed their products to create and sustain an addiction to nicotine, the FDA claimed that it should assert jurisdiction and begin to regulate those products.

From 1994 to 1996, the FDA gathered evidence from public health experts, current and former tobacco industry scientists, and tobacco industry documents. Some of the most important evidence proving what the tobacco industry knew about nicotine’s role in causing addiction came from the industry itself in admissions contained within internal documents (see sidebar p. 494).

In 1996 the FDA gathered all the evidence from its nicotine investigation and made a two-part determination under the Federal Food, Drug, and Cosmetic Act: 1) that the nicotine in tobacco products was a

What the Tobacco Industry Said Privately About Nicotine and Addiction

Throughout the mid-1990s, thousands of previously secret internal tobacco industry documents were made available to the public. These documents were particularly helpful to the FDA during its investigation of the role of nicotine in the design and manufacture of cigarettes. Here are a few of the most revealing statements about nicotine and addiction from the industry's own documents, which helped the FDA to determine that tobacco products are drug delivery devices.

Nicotine is addictive. We are, then, in the business of selling nicotine—an addictive drug effective in the release of stress mechanisms.

■ (ADDISON YEAMAN, BROWN & WILLIAMSON, 1963)

In a sense, the tobacco industry may be thought of as being a specialized, highly ritualized and stylized segment of the pharmaceutical industry. Tobacco products, uniquely, contain and deliver nicotine, a potent drug with a variety of physiological effects.

■ (CLAUDE TEAGUE JR., R.J. REYNOLDS, 1972)

The cigarette should be conceived not as a product but as a package. The product is nicotine. . . . Think of the cigarette pack as a storage container for a day's supply of nicotine. . . . Think of a cigarette as a dispenser for a dose unit of nicotine. Think of a puff of smoke as the vehicle of nicotine. . . . Smoke is beyond question the most optimized vehicle of nicotine and the cigarette the most optimized dispenser of smoke.

■ (WILLIAM L. DUNN, PHILIP MORRIS, 1972)

drug; and 2) that the products (i.e., cigarettes and other tobacco products) were devices for the delivery of the drug nicotine.

Simultaneously, the FDA issued a final rule designed to reduce the numbers of children and adolescents who start smoking. The 1996 regulation made it illegal for retailers to sell cigarettes to minors. Other provisions were designed to make tobacco advertising less appealing to young people. For example, ads that children might see in magazines, other publications, or in stores would have been limited to a black-and-white, text-only format. This would have preserved the industry's ability to advertise to adults, but in a format that experts said would have been less attractive to youngsters.

Shortly thereafter, the FDA was sued by tobacco manufacturers, growers, retailers, and advertisers. They claimed that the agency's actions were illegal. The case made it all the way to the U.S. Supreme Court. While the case was being heard in the federal courts, the FDA began enforcing a few provisions of the 1996 final rule. From 1997 to 2000, the FDA worked with the states to conduct over 200,000 inspections of retailers to enforce the rule prohibiting the sale of tobacco products to minors. Over \$1 million in fines was collected from retailers who illegally sold cigarettes to minors more than once.

In 2000 the U.S. Supreme Court issued a 5–4 decision that stripped the FDA of legal authority over tobacco products. The Court ruled that Congress never intended for the FDA to have regulatory powers over these products under federal law. In order for the FDA to regain these powers, Congress would have to pass a new law granting the FDA that authority.

Other Federal Agencies

Other federal agencies are involved in tobacco-related work that is not directly tied to product regulation. Here is a brief description of what some of them do.

- The **National Cancer Institute** (NCI) funds important research into such questions as how tobacco causes cancer and what can be done to make tobacco products less harmful. The NCI issues reports that summarize research findings.
- The Office on Smoking and Health within the **Centers for Disease Control and Prevention** (CDC) provides critical guidance to the states on which programs work best to prevent young people from starting to use tobacco and on how to help addicted smokers who want to quit. The CDC also works with governments around the world to share advances in prevention and treatment efforts.
- The **Office of the Surgeon General** releases regular reports on smoking and health issues. The Surgeon General reports are important summaries of what is known about tobacco-related disease and what can be done to reduce the death and disease toll caused by tobacco. The first-ever Surgeon General's report on smoking and health, published in 1964, was a landmark publication in the history of public health.

The Federal Trade Commission also compiles and releases an annual report on the **tar** and nicotine levels for all marketed cigarettes in the United States, as well as a report on the annual marketing expenditures of the tobacco industry.



tar a residue of tobacco smoke, composed of many chemical substances that are collectively known by this term.

The Future of U.S. Tobacco Regulation

The World Health Organization is leading a global effort to enact a treaty known as the Framework Convention on Tobacco Control. One of the key provisions of this treaty calls for all countries to begin to regulate tobacco products as drug delivery devices. Such regulation could consist of advertising and marketing restrictions, as well as limits on permissible levels of toxins in tobacco smoke. At the time of this writing, it is unclear whether the United States will ratify this treaty. Public health experts continue to hope that the U.S. Congress will enact new legislation granting the FDA regulatory authority over tobacco products.

See Also Additives; Advertising Restrictions; Politics; Product Design; Prohibitions; State Tobacco Monopolies; Taxation; Warning Labels; Youth Marketing; Youth Tobacco Use.

■ MITCHELL ZELLER

BIBLIOGRAPHY

Dunn, William L. "Motives and Incentives in Cigarette Smoking: Summary of CTR-Sponsored Conference in St. Martin." Richmond, Va.: Philip Morris Research Center, 1972. Cited in *Regulation of Cigarettes and Smokeless Tobacco Under the Federal Food, Drug, and Cosmetic Act*. Washington, D.C.: Department of Health and Human Services, U.S. Food and Drug Administration, 1996.

- Glantz, Stanton A., et al. "Looking Through a Keyhole at the Tobacco Industry: The Brown & Williamson Documents." *Journal of the American Medical Association* 274, no. 3 (19 July 1995): 219–224.
- Hilts, Philip J. *Smokescreen: The Truth behind the Tobacco Industry Cover-Up*. Reading, Mass.: Addison-Wesley, 1996.
- Kessler, David A. *A Question of Intent: A Great American Battle with a Deadly Industry*. New York: Public Affairs, 2001.
- Kessler, David A., et al. "The Food and Drug Administration's Regulation of Tobacco Products." *New England Journal of Medicine* 335 (26 September 1996): 988–994.
- Kessler, David A., et al. "The Legal and Scientific Basis for FDA's Assertion of Jurisdiction over Cigarettes and Smokeless Tobacco." *Journal of the American Medical Association* 277, no. 5 (5 February 1997): 405–409.
- Kluger, Richard. *Ashes to Ashes: America's Hundred-Year Cigarette War, the Public Health, and the Unabashed Triumph of Philip Morris*. New York: Alfred A. Knopf, 1996.
- Pertschuk, Michael. *Smoke in Their Eyes: Lessons in Movement Leadership from the Tobacco Wars*. Nashville, Tenn.: Vanderbilt University Press, 2001.
- Teague, Claude, Jr. "Research Planning Memorandum on the Nature of the Tobacco Business and the Crucial Role of Nicotine Therein" (14 April 1972). Available: <<http://legacy.library.ucsf.edu/tid/nmv59d00>>.
- Yeaman, Addison. "Implications of Battelle Hippo I & II and the Griffith Filter" (17 July 1963). Available: <<http://legacy.library.ucsf.edu/tid/xrc72d00>>.



Retailing

The retailer is a critical link in the supply chain of tobacco. Retailers serve as the bridge between the tobacco manufacturers and the consumers of tobacco products. Retailing practices have changed substantially since the introduction of commercially produced tobacco products. However, the importance of the retailer to the viability and prosperity of the tobacco companies has remained constant.

History

In the middle of the nineteenth century, Americans were the heaviest per capita consumers of tobacco. Most Americans lived in rural areas and the "typical citizen was a native-born outdoorsman, short on cash and uneager to spend what he earned on things he could grow himself or swap with a neighbor or a traveling peddler. He tended to take his tobacco Indian-style, either chewing it or smoking it in a pipe, in an age when brand-name goods hardly existed" (Kluger). At that time, the most popular commercial tobacco products were chew and **plug** tobacco, which was sold by the town's old-time tobacconist and rural crossroads storekeepers.

These tobacco products featured imaginative names such as My Wife's Hat, Wiggletail Twist, and Sweet Buy & Buy. Outside the front



plug a small, compressed cake of flavored tobacco usually cut into pieces for chewing.



Smokers like this one frequently smoke 20 or more cigarettes a day (one pack). Instead of purchasing them by the carton, which is cheaper, most smokers purchase their cigarettes by the pack at some form of retail outlet. PHOTOGRAPH BY KELLY A. QUIN

door, a carved figure of a Native American often signaled the location of the local tobacconist shop. These shops were popular in America between the 1870s and the 1930s. In fact, the U.S. Census Bureau estimated that there were 580,000 cigar and tobacco shops in the United States in 1917.

Tobacco shops were a place of leisure and refuge and “possessed special qualities—warmth, camaraderie and congeniality—that appealed strongly to male senses. It became a pleasantly informal neighborhood forum with back rooms for pinochle, stud poker or just plain conversation. . . . The bastion of togetherness, a well-frequented social club, took on an atmosphere of exclusivity and privacy only surpassed by the local saloon. The price of admission was only a five-cent cigar” (Petronie 1996).

Eventually sales of cigarettes and smoking tobacco exceeded sales of chewing tobacco after concerns that chewing tobacco and spitting was a messy habit, socially inappropriate in a more crowded urban America, and a cause of tuberculosis and other diseases. Moreover, cigarettes were being mass manufactured very cheaply by Durham, North Carolina, entrepreneur named Buck Duke.

Another Durham resident, a farmer named John R. Green, pioneered tobacco merchandising after he purchased a smoking tobacco company in 1862. He launched a smoking tobacco under the name Bull Durham and widely advertised it, gave gifts to frequent buyers, and gave special premiums to dealers. Buck Duke also excelled in promoting his tobacco products by heavily advertising and giving under-the-table payment to tobacco retailers who most aggressively pushed his brands. He also gave them special premiums such as floor mops and imitation diamond stickpins. Other companies followed suit. In its early days before it became a major powerhouse company, underling Philip Morris even gave company stock to select retailers for helping launch its brands and giving them preferential display treatment.



Retailing in low-income countries includes a preponderance of street vendors not commonly seen in developed countries. Here a street vendor in Senegal displays his wares on a table: Marlboros, cola nuts, gum, hard candy, and stick toothbrushes.

PHOTO BY ANNA WHITE



bidis thin, hand-rolled cigarettes produced in India. Bidis are often flavored with strawberry or other fruits and are popular with teenagers.

flue-cured tobacco also called Bright Leaf, a variety of leaf tobacco dried (or cured) in air-tight barns using artificial heat. Heat is distributed through a network of pipes, or flues, near the barn floor.

Current Retailing

In the twenty-first century, tobacco products are sold in a wide variety of stores, including convenience stores, gas stations, liquor stores, supermarkets, and pharmacies. Cigarettes are sold in bowling alleys, donut shops, bars, and smoking paraphernalia shops known as “head shops.” Some bars and restaurants sell cigarettes by the pack from the bartender or a vending machine. Of these different locations, the highest sales volume of tobacco occurs at convenience stores, where more than half of all cigarettes are sold in the United States.

Most contemporary tobacco retailers offer several types of tobacco products, such as cigarettes, cigars, **bidis** (a type of cigarette imported from India), smokeless tobacco, and loose-leaf tobacco. A handful of specialty stores offer a selection of loose-leaf tobaccos (for example, **flue-cured** Bright leaf, thick-cut Virginia blend, and Turkish blend) and allow customers to roll their own cigarettes by loading their blends into premanufactured filter tubes.

Importance of Retail Outlets

The retail outlet is a critical venue for the tobacco industry. Stores are the primary location where tobacco products are sold to consumers. Cigarettes are an \$80-billion industry each year in America. Scholars do not know the exact number of retail outlets that sell tobacco products in the United States, but estimates range from 534,000 to more than



A tobacco retailer in the United States displays his products. Note that tobacco products are behind the counter and are not sold via self-service. Cigarettes, both domestics and imported, are placed on shelving units behind the clerk and smokeless tobacco products are located above the shelving units. The shelving units, which are often provided by the tobacco companies, feature colorful branded advertising for popular R.J. Reynolds Brands, such as Camel and Winston. Even though this store sells a variety of consumer products, the shelving units and advertising for cigarettes are prominent and dominate the coveted retail space behind the point of purchase at the cash register. AP/WIDE WORLD PHOTOS

1.3 million. Having cigarettes available in so many locations keeps them readily accessible twenty-four hours a day to the country's 50 million smokers. Even though it is cheaper for smokers to buy their cigarettes by the carton than the pack, most smokers still purchase them by the pack. Economists have suggested that this is probably because many smokers do not want an excess quantity of cigarettes at their disposal, which may tempt them to smoke more. Many smokers also want to quit smoking and want to feel that each pack is their last.

In addition to providing the supply of tobacco, retail outlets also feature advertising and promotional materials that convey the image of cigarette enjoyment to customers in the store. This helps stimulate demand for the product. Although cigarette advertising has been banned on radio, television, and some print channels in many industrialized nations, there are few restrictions on cigarette advertising at stores. U.S. stores that sell cigarettes contain approximately ten to twenty distinct cigarette advertising and promotional items. Branded cigarette advertising appears everywhere on posters, window decals, lighted signs, display racks, clocks, and gas pumps. All customers, both youth and adult, are exposed to these advertisements. Some of these advertisements are displayed near candy shelves or video games, or at 3 feet or below, the eye level of a small child. Point-of-sale advertising may encourage youth smokers to experiment with a particular brand. These advertisements are also tempting to former smokers who can experience cigarette cravings when seeing the imagery of their former brand. According to point-of-sale marketing experts, well-designed cigarette advertising and point-of-sale displays can boost product sales by up to 10 to 20 percent.

Virtually all companies want their products to be displayed in the prime locations. They also want strategically placed point-of-sale advertising that promotes their brand imagery. How are the tobacco companies so successful in securing prime placement of their products and advertising in the most coveted locations inside of stores? The short answer is that they pay retailers. According to a 2001 report on cigarette industry advertising and promotional expenditures filed with the U.S. Federal Trade Commission, the major cigarettes companies spend

over 85 percent of their \$11.2 billion promotional budget at the retail outlet. Some of this money is for promotional allowances, which are paid to retailers to ensure that tobacco products get the best and most visible shelf space in the store. Cigarette companies also give payments to retailers and special discounts on cigarettes for prime placement of cigarette advertising and promotional materials. Finally, the companies also spend money on value-added promotions, which include offering multipack specials whereby customers can “buy two packs, and get one free.”

Regulation

PREVENTING YOUTH ACCESS. Although some states have had laws in place since the early 1900s making it illegal for merchants to sell tobacco products to minors, this issue began to receive heightened attention in the late 1980s. In 1987, a researcher published a study showing that an eleven-year-old girl was successful in purchasing cigarettes in 75 of 100 attempts at stores (Difranza 1987). Subsequent studies confirmed the finding that underage youth had easy access to cigarettes. The most effective solution is a law that bans tobacco sales to minors and is actively enforced by penalizing storeowners or clerks who sell to underage youth. In the 2000s, as required by a 1992 federal law known as the Synar Amendment, all U.S. states prohibit the sale of tobacco products to individuals under age eighteen (a few states have nineteen as their minimum age of sale) and must show evidence that they are enforcing these restrictions. When the U.S. Food and Drug Administration (FDA) claimed jurisdiction over tobacco products in 1996, it created a federal policy banning tobacco sales to minors and it created a nationwide enforcement system. However, a coalition of major tobacco companies and retailers, including the National Association of Convenience Stores, challenged the FDA’s legal authority over tobacco products and prevailed in a Supreme Court ruling delivered in March 2000. Even though the federal level enforcement system was disbanded, all state laws banning sales to minors remain in place.

Some regulations govern the manner of tobacco sales. For instance, some communities and states ban self-service of tobacco products, which requires that the product be kept behind the counter or in an overhead bin accessible only to the clerk. This prevents customers, especially teen tobacco users, from stealing the product from shelves. Communities in countries such as Australia, Canada, Iceland, and Ireland have banned tobacco product displays. That is, tobacco products must be kept under the counter or in some other location that is not visible to consumers.

Some laws prohibit minors from purchasing, using, or possessing tobacco products. Florida has some of the strictest laws banning youth possession of tobacco products, whereby minors are subject to having their driver’s license revoked after multiple violations.

The exact impact on youth tobacco use of these laws is hotly contested. Several studies in the early 1990s demonstrated large decreases in youth smoking when enforcement actions lowered the rate of cigarette sales to minors. These studies did not have control groups, and controlled studies of the effect of enforcement on youth smoking rates showed that the impact was either modest or nonexistent. Restrictions on retail sales to youth may simply drive them to find other means of obtaining cigarettes. However, studies do indicate that comprehensive programs aimed

at preventing youth initiation, using a combination of media campaigns, cessation programs, and changes in the retail environment, may help reduce youth initiation. Additionally, a newer research area is examining the impact of policies that impose penalties on youth for purchasing, using, or possessing the product. This area is also controversial with some evidence suggesting that these policies may have an impact on reducing youth smoking. However, many tobacco control advocates criticize this punitive approach for focusing on youth rather than on the adults who manufacture, distribute, advertise, and sell tobacco products to youth.

TOBACCO PRICING. Sales and excise taxes are commonly applied to tobacco products. Most excise taxes are paid prior to their distribution to retailers, but retailers are responsible for charging sales taxes if they are levied in that area. Half of the states in the United States are “fair trade” states, which means that they have laws that establish a minimum price for cigarettes. The minimum price is a set percentage markup applied to the manufacturer’s invoice price at the wholesaler and retailer level. Despite the fact that tobacco products are addictive, increased tobacco prices reduce consumption by cutting down on both the number of people using the product as well as the amount that they consume. Youth are especially sensitive to prices, so higher prices have a greater impact on reducing their consumption than they do on the behavior of adults.

TOBACCO ADVERTISING AND MARKETING. In the United States, cigarette advertising is preempted by federal law, which means that states are blocked by the federal government from regulating tobacco advertising. In 1999, Massachusetts attempted to ban all outdoor cigarette advertising within 1,000 feet of schools and playgrounds and prohibited advertisements placed lower than 5 feet. This would have curtailed advertising at stores in close proximity to schools. However, the tobacco companies challenged the legality of the policy and won in a U.S. Supreme Court decision handed down in June 2001. This case highlighted the many challenges in regulating tobacco advertising in countries such as the United States that have constitutional provisions protecting freedom of speech.

The Master Settlement Agreement (MSA) between the major cigarette manufacturers and forty-six state Attorneys General contains some restrictions on tobacco advertising, but the only restriction on retailers is that they cannot display tobacco advertisements that are larger than 14 square feet.

Several countries have comprehensive bans on tobacco advertising, including advertising at retail locations. These countries include Canada, Finland, Norway, France, Italy, New Zealand, Portugal, Jordan, Singapore, and Thailand. Moreover, the European Union has agreed to phase out all tobacco advertising by 2006.

Internet Tobacco Sales

Websites selling tobacco products started appearing in the mid-1990s. Scholars do not have reliable data on the number of vendors over time, but one study identified 88 Internet cigarette vendors in January 2000 and more than 800 in January 2004. Some industry analysts predict





duty a tax, usually on certain products by type or origin; a tariff.

that Internet cigarette vendors will sell more than \$5 billion worth of cigarettes by 2005.

Although the majority of English-language websites are located in the United States, Internet vendors are located all over the world. Many of these international vendors sell **duty**-free cigarettes at prices that are far cheaper than cigarettes sold in retail outlets because taxes and duties are not collected on these products. Duty-free vendors are located in the British Virgin Islands, Netherlands Antilles, Panama, and Portugal, but most are in Switzerland. Nearly half of the Internet vendors located in America are located on Native American reservations. Members of the Seneca tribe in western New York State have more than 100 websites selling cigarettes and this area has been called the “Internet cigarette capital of the world by one reporter for the *Buffalo News* named Michael Beebe who writes about Internet cigarette sales.” Tribal vendors tout on their websites that they sell from sovereign land and that their treaties with the United States allow them to sell cigarettes tax free. The U.S. government disputes this position and the U.S. Supreme Court has ruled that tribal entities can sell products tax free only to tribal members, which means that they cannot sell tax-free cigarettes to non-tribal members either on or off of tribal lands. The other location where many Internet vendors are located is in tobacco-producing states in the southeastern United States. This is mainly because these states have very low cigarette excise taxes and the website owners can purchase cigarettes very cheaply for resale online.

In the 2000s, few regulations affect these Internet vendors, but several laws have been proposed. These policies affect both youth access and tax collection. One study published in 2003 by researchers at the University of North Carolina at Chapel Hill (Ribisl et al.) showed that youth aged eleven to fifteen were successful in purchasing cigarettes from Internet vendors in 92 percent of purchase attempts. This fueled interest in a federal law banning Internet tobacco sales to minors. Several states, such as California, Maine, and Rhode Island already have such laws, but have experienced difficulty enforcing them against out-of-state vendors, which suggests that a federal law may be needed. Some proposed laws would require Internet vendors to collect the excise taxes at the level that they are charged in the customer’s state. Traditional (non-online) tobacco retailers regularly support these regulations. They feel the market is not a fair one because Internet vendors can sell tobacco products more cheaply. Finally, given the global reach of the Internet, the World Health Organization has been interested in regulating Internet tobacco marketing. Cigarette advertising on the Internet is prohibited under the terms of the Framework Convention on Tobacco Control, an international tobacco control treaty created by the World Health Assembly, but countries must ratify the treaty for it to go into effect.

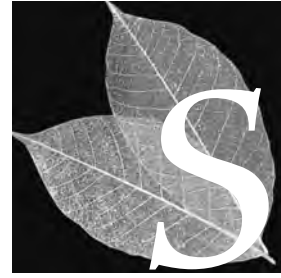
See Also Marketing; State Tobacco Monopolies; Trade.

■ KURT RIBISL

BIBLIOGRAPHY

DiFranza, Joseph. R., et al. “Legislative Efforts to Protect Children from Tobacco.” *Journal of the American Medical Association* 257, no. 24 (1987): 3387–3389.

- Feighery, Ellen. C., et al. "Cigarette Advertising and Promotional Strategies in Retail Outlets: Results of a Statewide Survey in California." *Tobacco Control* 10 (2001): 184–188.
- Feighery, Ellen. C., et al. "How the Tobacco Companies Ensure Prime Placement of Their Advertising and Products in Stores: Interviews with Retailers about Tobacco Company Incentive Programs." *Tobacco Control* 12 (2003): 184–188.
- Jacobson, Peter D., et al. *Combating Teen Smoking: Research and Policy Strategies*. Ann Arbor: University of Michigan Press, 2001.
- Kluger, Richard. *Ashes to Ashes: America's Hundred-Year Cigarette War, the Public Health, and the Unabashed Triumph of Philip Morris*. New York: Vintage, 1997.
- Petrone, Gerard S. *Tobacco Advertising: The Great Seduction*. Atglen, Pa.: Schiffer Publishing, 1996.
- Ribisl, Kurt M., "The Potential of the Internet as a Medium to Encourage and Discourage Youth Tobacco Use." *Tobacco Control* 12 (2003): Supp. 1: i48–i59.
- Ribisl, Kurt M., et al. (2003) "Internet Cigarette Sales to Minors." *Journal of the American Medical Association* 290 (2003): 1356–1359.
- Taylor, Allyn. L., and Douglas. W. Bettcher. "Who Framework Convention on Tobacco Control: A Global 'Good' for Public Health." *Bulletin of the World Health Organization* 78, no. 7 (2000): 920–929.
- Tofler, A., and Simon Chapman. "'Some Convincing Arguments to Pass Back to Nervous Customers': The Role of the Tobacco Retailer in the Australian Tobacco Industry's Smoker Reassurance Campaign 1950–1978." *Tobacco Control* 12 (2003): Supp. 3: iii7–iii12.
- U.S. Department of Health and Human Services. "Preventing Tobacco Use among Young People: A Report of the Surgeon General." Atlanta, Ga.: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 1994.
- . "Reducing Tobacco Use: A Report of the Surgeon General." Atlanta, Ga.: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2000.



“Safer” Cigarettes

Since the beginnings of the modern cigarette in the late nineteenth century, public health officials have attributed a variety of toxic effects to cigarette smoking. At the same time, manufacturers, scientists, entrepreneurs, and public health leaders have, at various points, promoted or recommended product changes that would allegedly make cigarette smoking less harmful, though not entirely harmless or “safe” for use.

For example, in the 1880s tobacco smoke was known to contain nicotine, which both physicians and the public widely believed to be poisonous. Entrepreneurs developed novel products that allegedly blocked nicotine and other constituents, such as Dr. Scott’s Electric Cigarettes, containing a cotton filter which, the manufacturer claimed, “strains and eliminates the injurious qualities from the smoke” (Tate 1999). In the 1930s and 1940s, cigarette advertisements for major brands, such as Lucky Strike, Chesterfield, and Camel, routinely included health-related statements and testimonials from physicians. For example, Camel cigarette ads promised “28% less nicotine,” while Philip Morris promised reduced “throat irritation.”

Filters and Tar

As studies linking cigarette smoking and lung cancer became widely publicized in the early 1950s, tobacco manufacturers predicted that there would be an increase in consumer demand for cigarettes with filter tips, especially among “health conscious” consumers. P. Lorillard launched Kent cigarettes in 1952 with its “micronite” filter, which contained fibers that the company claimed trapped dust particles in the smoke. Kent advertisements claimed the filter removed “7 times more nicotine and **tars**” than other filter cigarettes and offered “the greatest health protection in cigarette history.” Kent sales received a substantial boost in 1957 when *Reader’s Digest* highlighted the brand in an article titled “Wanted—and available—filter tips that really filter,” which reported that Kent yielded 14 to 40 percent less tar than other leading filter brands. Kent sales shot up from 3.5 billion cigarettes in 1956 to



tar a residue of tobacco smoke, composed of many chemical substances that are collectively known by this term.”



epidemiological pertaining to epidemiology, that is, to seeking the causes of disease.

37.5 billion in 1958, making it the fifth most popular and fastest growing of any cigarette brand (“With Filters” 1958).

By 1962 over half (54.6%) of all cigarettes produced in the United States had filters, compared with only 1.4 percent in 1952. The landmark report of the Advisory Committee to the Surgeon General on Smoking and Health, released on 11 January 1964, concluded that the hazards of cigarette smoking were substantial enough to warrant “appropriate remedial action.” However, the committee concluded the available evidence was insufficient to draw any conclusions about the possible benefits of filters.

Nevertheless, **epidemiological** studies described in the Surgeon General’s report demonstrated that there was a clear dose-response relationship between the number of cigarettes a person smoked and his or her risk of lung cancer. Additionally, animal studies showed that tobacco “tar,” the particles in tobacco smoke, caused tumors when painted on laboratory animals. Based on this evidence, another expert committee organized by the Surgeon General in 1966 concluded, “The preponderance of scientific evidence strongly suggests that the lower the ‘tar’ and nicotine content of cigarette smoke, the less harmful are the effects.”

In 1967, at the first World Conference on Smoking and Health, U.S. Surgeon General William H. Stewart warned that a “stalemate” had been reached in smoking prevention and cessation efforts. While some people had quit smoking because of health warnings, young people continued to take up the habit (Stewart 1967). Thus, Stewart and other public health leaders believed that they were obligated to do something to help prevent disease in people who would not, or could not, quit smoking. For example, the National Clearinghouse for Smoking and Health, a government office, began an educational campaign in 1968 titled “If You Must Smoke . . .” aimed at people who wanted to reduce their risk but did not want to quit smoking. The pamphlet gave five suggestions: Choose a cigarette with less tar and nicotine; don’t smoke the cigarette all the way down (the last few puffs have more tar and nicotine); take fewer draws; reduce inhaling; and smoke fewer cigarettes.

Consumer advocates in Congress, including Senators Maurine Neuberger and Warren G. Magnuson, proposed legislation to require cigarette makers to disclose the average amount of tar and nicotine in cigarettes of each brand. This information would allow consumers to compare brands objectively and to choose brands with lower tar and nicotine content. In the long run, consumer advocates hoped, legitimate competition between manufacturers would lead to changes in cigarette design that would make cigarettes less hazardous, ultimately benefiting consumers. Cigarette manufacturers opposed these proposals. But when the Federal Trade Commission proposed to require cigarette companies to disclose tar and nicotine information to consumers, the major companies agreed to voluntarily provide this information on cigarette packages and advertising.

Scientific Research on “Less Hazardous Cigarettes”

In 1968, President Lyndon Johnson ordered the creation of a federal task force to address the growing incidence of lung cancer. The group’s first recommendation was for an organized research program aimed at developing a “less hazardous cigarette.” At the time, public health leaders

and scientists were optimistic that an organized, collaborative research program, bringing together government, academia, and industry, could develop techniques to identify and remove hazardous ingredients in cigarette smoke.

Over the following decade, the National Cancer Institute (NCI), the federal government's cancer research arm, spent more than \$50 million on research to develop "less hazardous cigarettes." The majority of funds were spent on developing animal tests, including exposing dogs to cigarette smoke. By the mid-1970s, the research program had identified some potential design changes they believed would make cigarettes less harmful, including use of reconstituted tobacco sheet, inert filler, and high-porosity paper. Additionally, public health leaders predicted that new "light" (low-tar) cigarettes entering the market would substantially reduce lung cancer rates. NCI Director Frank Rauscher, speaking before Congress, predicted of the new low-tar products: "If these cigarettes are acceptable to the public taste wise, we should see a diminution of the increasing curve of lung cancer incidence in the next years" (Rauscher 1976).

However, by the late 1970s, attitudes toward this strategy began to change. Government officials and voluntary agencies took a tougher stance against tobacco with a renewed commitment toward helping smokers to quit and preventing young people from starting. The focus of scientific research shifted toward studies of strategies for smoking prevention and cessation, the addictive nature of nicotine, and the effects of smoking on nonsmokers. The 1981 Surgeon General's report, *The Changing Cigarette*, took a far more cautious approach than earlier reports to claims about the health benefits of switching to lower tar cigarettes, acknowledging that there is no safe level of smoking and that switching to low-tar cigarettes may reduce lung cancer risk but "the benefits are minimal."

Similar government-led efforts to promote the development of reduced risk products were pursued in the United Kingdom. Starting in 1973, a government laboratory began monitoring tar and nicotine yields from brands of cigarettes, and the government published public information posters and leaflets classifying familiar cigarette brands into "Low," "Medium," and "High" tar categories. Additionally, an Independent Scientific Committee on Smoking and Health (ISCSH), made up of scientific experts in biology and medicine, provided advice to the government and the tobacco industry. The ISCSH developed guidelines for the testing and approval of additives and synthetic materials used in cigarettes. Some scientists believed that synthetic materials could be developed to replace tobacco that would be less harmful than tobacco when burned. Two synthetic tobacco substitutes were approved for commercial use in 1977, Cytrel and NSM (new smoking material), both using modified cellulose. In July 1977, twelve cigarette brands were launched containing at least 25 percent synthetic material in place of tobacco. However, these products never gained popularity among smokers and were eventually taken off the market.

Novel Cigarettes and New Claims

Tobacco companies did experiment with other types of technological innovations to develop cigarettes that could potentially be marketed as less harmful. Documents and testimony of former tobacco company

employees introduced in lawsuits over the past ten years suggest that some tobacco companies had developed innovative technologies but did not pursue them because of fear of legal actions. For example, in the 1970s, Liggett Group, Inc. began a research effort called the XA Project, which focused on blending additives to tobacco to neutralize cancer-causing compounds. However, the company abandoned the project reportedly because of company lawyers’ concerns that marketing the product would require admitting that conventional cigarettes were hazardous, thereby making the company vulnerable to lawsuits from smokers who used the company’s conventional products.

In 1988, the R.J. Reynolds Tobacco Company introduced a high-tech cigarette called Premier, which was touted as a virtually smokeless cigarette. It contained aluminum capsules with tobacco pellets inside, which were heated instead of burned. The product required its own instruction booklet showing consumers how to light it. While R.J.R. reportedly spent more than \$800 million developing the brand, smokers who tried it said it left an unpleasant charcoal taste in their mouths. Additionally, public health officials argued that the Food and Drug Administration should regulate it as a drug-delivery device. Reynolds abandoned the brand less than a year after it was introduced.

But despite previous setbacks in the marketplace, manufacturers have continued to develop and market high-tech cigarettes with claims that they reduce exposure to toxic ingredients in tobacco smoke or reduce secondhand smoke. For example, some new cigarettes employ tobacco that has been genetically modified to produce lower levels of some cancer-causing agents. Additionally, tobacco lozenges containing powdered tobacco are being marketed to smokers for situations where they cannot smoke. However, in 2001 an expert committee convened by the Institute of Medicine, a nongovernmental U.S. scientific organization, determined that these products have not yet been evaluated sufficiently to determine whether they are in fact less harmful.

In the 2000s, scientific and public health experts urge the need for government regulation of tobacco products as a crucial step toward reducing tobacco-related harm. An effective regulatory plan could provide the U.S. government with the authority to require changes in products to reduce their toxicity, to evaluate ingredients in new products as they enter the market, and to oversee advertising claims made by manufacturers about potential reduced risk products. But even if innovative high-tech products can reduce health risks for smokers in the United States and other developed countries, they are unlikely to make an impact on the rapidly expanding cigarette markets in developing countries, where government oversight and public concern about the health effects of smoking are substantially weaker.

See Also Cigarettes; Menthol Cigarettes; Product Design; Toxins.

■ MARK PARASCANDOLA

BIBLIOGRAPHY

The Changing Cigarette: A Report of the Surgeon General. Washington, D.C.: U.S. Government Printing Office, 1981.

Congressional Record—Senate. 89th Cong., 2nd Sess., 27 July 1966, volume 94: 16468–16475.

- National Commission on Smoking and Public Policy. *A National Dilemma: Cigarette Smoking or the Health of Americans*. New York: National Cancer Society, 1978.
- Rauscher, F.J. Testimony. Cigarette Smoking and Disease, 1976. Hearings before the Subcommittee on Health of the Committee on Labor and Public Welfare. U.S. Senate, 94th Cong., 2d sess., on S.2902, 19 February, 24 March, and 27 May 1976. Washington, D.C.: U.S. Government Printing Office, 1976.
- Schwartz, J. "Safer Smoke." *Washington Post Magazine* (31 January 1999): 9–24.
- Smoking and Health. Public Report of the Advisory Committee to the Surgeon General of the Public Health Service*. Public Health Service Publication No. 1103. Washington, D.C.: U.S. Government Printing Office, 1964.
- Status Report. Smoking and Health Program, National Cancer Institute*. Bethesda, M.D.; National Cancer Institute, 1979.
- Stewart, William H. *Influencing Smoking Behavior. World Conference On Smoking and Health (Summary of the Proceeding), September 11–13, 1967*. New York: National Interagency Council on Smoking and Health, 1967.
- Stratton, Kathleen et al., eds. *Clearing the Smoke: Assessing the Science Base for Tobacco Harm Reduction*. Washington, D.C.: National Academy Press; 2001.
- Swann, Cheryl, and Sir Peter Froggatt. *The Tobacco Products Research Trust, 1982–1996*. London: Royal Society of Medicine Press, 1996.
- Tate, Cassandra. *Cigarette Wars: The Triumph of "the Little White Slaver."* New York: Oxford University Press, 1999.
- U.S. Congress. Reviewing Progress Made Toward the Development and Marketing of a Less Hazardous Cigarette. Hearings before the Consumer Subcommittee of the Committee on Commerce. U.S. Senate, 90th Cong., 1st sess., 23–25 August 1967. Washington, D.C.: U.S. Government Printing Office, 1968.
- "With Filters, Record Cigarette Sales." *Business Week* (27 December 1958): 49–54.



Sailors

Sailors, or more broadly speaking mariners of all types, were vital to the transmission of tobacco from America to Europe. Sixteenth- and seventeenth-century witnesses attested that people involved in the maritime trade (ship captains, sailors, and slaves) were among the first to use tobacco in the Old World. In 1571 the Dutch herbalist Matthias de l'Obel described "many sailors, all of whom have returned from [the Indies] carrying small tubes . . . [which] they light with fire" (Goodman 1993). In 1619, a Spanish writer observed that sailors and "all of the people who travel by sea" inaugurated tobacco use in Spain, and that initially tobacco was "thought of as something vile and low, and a thing of slaves and tavern drinkers, and people of low consideration" (Norton 2000). Throughout the seventeenth and eighteenth centuries, depictions of sailors often showed them with a pipe in hand. (However, sailors were restricted to using **snuff** or chewing tobacco while on ship, since open fires were a shipboard hazard.)

Demographic figures also suggest that sailors served as agents of tobacco diffusion. The rapid increase in transatlantic commerce in the



snuff a form of powdered tobacco, usually flavored, either sniffed into the nose or "dipped," packed between cheek and gum. Snuff was popular in the eighteenth century but had faded to obscurity by the twentieth century.



Satirical English cartoon of veteran sailors exchanging tales in London, 1801.
© HULTON-DEUTSCH COLLECTION/CORBIS

second half of the sixteenth century meant that mariners became an ever more important and conspicuous segment of society. During one of the peak years, in 1594, at least 150 ships sailed between Seville and the Indies, which required more than 7,000 men to crew according to estimates. These 7,000-plus men would have been a visible presence in Seville, which had a population of about 130,000 in those years. The increasing demographic weight of sailors in the last decades of the sixteenth century meant that there was a critical and visible mass of tobacco consumers from whom the custom could spread to other groups in society. Chronology bears this out, for it is in the last decade of the sixteenth century that tobacco began to be systematically exported to Europe.

Not only were sailors a conspicuous group of tobacco aficionados, but they also helped transform tobacco from an exotic good erratically imported to a readily available commodity by developing a nascent distribution system. One way that sailors supplemented their pathetic income was to bring over small quantities of goods to sell. A ship manifest from 1602 reveals that a ship captain brought back about 181 kilograms of tobacco into Seville on his own account; this was a time period in which the important and wealthy merchants did not yet take an interest in importing tobacco. Critics of the plan to make tobacco's sale the exclusive prerogative of the Crown in 1636 argued that it would hurt the marginal members of society who depended on the tobacco trade. They evoked pilots, sailors, and passengers who, returning from the Indies, relied on sales of meager amounts of tobacco in order to pay off their boats fares. The petitioners described tobacco as so thoroughly

entrenched in the local petty economy that if its free trade were prohibited by the monopoly, many subjects would not be able to pay for their upkeep, they would default on their debts, and a wave of bankruptcies would wreck the economy in Seville.

Why were humble mariners early agents for tobacco's diffusion to the Old World? In the first place, sailors were a group of Europeans who had enduring contact with Native Americans, particularly in the sixteenth century. Ships sailing from Europe to the Americas often anchored on islands that were unconquered—such as many of the Lesser Antilles until the seventeenth century—and crews traded with the local Indians to get provisions. In such interactions, sailors were initiated into tobacco rites of Native Americans. For instance, during Francis Drake's 1585–1586 expedition to the West Indies, the crew stopped on Dominica to procure food and potable water, and also traded for tobacco with the Island Caribs.

The fact that sailors occupied a marginal social position also likely contributed to their precocious adoption of the Native American custom of consuming tobacco. Sailors existed on the lower rungs of the very stratified societies of early modern Europe, in terms of both pay and status. Tobacco promised relief to the overworked and undernourished: It was said to ease fatigue and suppress pangs of hunger and thirst. Such effects would have been attractive to poor sailors in precarious economic circumstances.

Another reason that humble mariners may have had a class-related propensity to be on the vanguard of tobacco users was that they were less constrained by the status concerns that inhibited their higher ranking peers from bringing home the tobacco habit. While those of a superior rank might have felt free in the frontier ambience of the Indies to experiment with native practices, once back home they would have been reluctant to maintain a practice associated with New World "savagery." Already hovering near the bottom of the social hierarchy, sailors could do little damage to honor or status they did not possess.

Sailors were ideal agents of transmission because they functioned as an intact mobile community. When they returned to the Old World they did not simply disperse, but often continued to maintain links with each other. In Seville, sailors tended to live in certain neighborhoods such as the Triana neighborhood across the river from the main part of town. Seamen who came from elsewhere congregated in inns and taverns that catered to sailors. Because tobacco was learned as a social habit, linked to rituals of sociability, makes sense that the practice would be easier to maintain if one had a community with which to share the habit.

■ MARCY NORTON

BIBLIOGRAPHY

- Castro y Medinilla, Juan. *Historia de las virtudes y propiedades del tabaco*. Cordoba: Salvador de Cea Tesa, 1620.
- Goodman, Jordan. *Tobacco in History: The Cultures of Dependence*. London: Routledge, 1993.
- Linebaugh, Peter, and Marcus Rediker. *The Many-Headed Hydra: Sailors, Slaves, Commoners, and the Hidden History of the Revolutionary Atlantic*. Boston: Beacon Press, 2000.



Norton, Marcy. "New World of Goods: A History of Tobacco and Chocolate in the Spanish Empire, 1492–1700." Ph.D. diss., University of California at Berkeley, 2000.

Ortiz, Fernando. *Cuban Counterpoint: Tobacco and Sugar*. Translated by Harriet de Onís. New York: Alfred A. Knopf, 1947. Reprint, Durham, N.C.: Duke University Press, 1995.

Pérez-Mallaina, Pablo E. *Spain's Men of the Sea: Daily Life on the Indies Fleets in the Sixteenth Century*. Translated by Carla Rahn Phillips. Baltimore: Johns Hopkins University Press, 1998.



Secondhand Smoke



sidestream smoke the smoke that rises from a burning cigarette.

mainstream smoke the cigarette smoke actually inhaled by the smoker.

Secondhand smoke (SHS) is the mixture of gases and particles from a burning cigarette (or other tobacco product) that end up in the surrounding air. The sources include smoke that comes off the lit end of a cigarette, called "**sidestream smoke**," as well as smoke exhaled by the smoker. The smoke delivered directly to the smoker from the cigarette is called "**mainstream smoke**." Thus, exhaled smoke is sometimes referred to as "exhaled mainstream smoke." Secondhand smoke has a number of names, including "environmental tobacco smoke" (ETS) and "tobacco smoke pollution." The act of breathing in secondhand smoke has been called "involuntary smoking" and "passive smoking" (in contrast to the "active smoking" of the cigarette smoker).

In the United States, public health advocates have argued for the use of the term "secondhand smoke" as a matter of policy because it focuses attention on the nonsmoker who breathes in other people's smoke. Tobacco industry researchers introduced the term ETS in the early 1970s, believing it to be a more precise description of the earlier term "passive smoke." The term "tobacco smoke pollution" is used infrequently in public discussions but is notable for its formal use in indexing scientific literature by the U.S. National Library of Medicine.

Composition and Effects

In the 2000s, researchers know much about secondhand smoke's composition and effects. More than half of the smoke (by weight) from a burning cigarette is sidestream smoke. It is qualitatively similar to mainstream smoke: Both are produced by the combustion of tobacco and contain more than forty known or suspected human carcinogens, such as benzo(a)pyrene, 4-aminobiphenyl, and formaldehyde; irritants such as ammonia and nitrogen oxides; and compounds that affect cardiovascular function, such as smoke particles and 1,3-butadiene. The exact concentrations of compounds in mainstream and sidestream smoke differ quantitatively and change over time. Sidestream smoke, which is produced while the cigarette sits idle, actually contains more harmful compounds than mainstream smoke, because it is generated at a lower, "dirtier" burning temperature. An additional reason exhaled smoke and sidestream smoke differ is because exhaled mainstream smoke has been filtered through the smoker's lungs. The health effects of active and passive smoking are not necessarily identical—although

they are similar for cardiovascular effects—because it matters how the smoke is breathed, and specifically where the smoke lands in the lungs.

Based on scientific research since the 1970s, experts have reached a number of conclusions about the effects of secondhand smoke on human health. In children and infants, it is a cause of respiratory symptoms and infections (for example, bronchitis), fluid in the middle ear, asthma, reduced lung function (difficulty breathing), sudden infant death syndrome (SIDS), and low birth weight. In adults, it is a cause of lung cancer, nasal sinus cancer, asthma, and cardiovascular disease. Evidence since the early 1990s suggests that secondhand smoke exposure also increases the risk of breast cancer. In policy as well as medical discussions of the health effects of secondhand smoke, lung cancer is generally the focus; however, mortality from cardiovascular disease is much greater. In the United States alone, every year the exposure of nonsmokers to secondhand smoke is estimated to cause 3,000 lung cancer deaths and between 35,000 and 62,000 cardiovascular disease deaths. The short-term effects on the cardiovascular system are also significant: In as little as thirty minutes, a nonsmoker's heart, blood, and blood vessels can be adversely effected similar to a pack-a-day smoker. The accumulation of research findings has established secondhand smoke as an important toxic air contaminant, and exposures should be prevented.

Rise of Secondhand Smoke as Public Health Concern

Secondhand smoke received relatively little attention from the public health community until the 1970s, when the environmental consciousness of the decade offered a new way to think about it. Cigarette smoke was characterized as one more form of pollution to which the public was involuntarily subjected. Thus, smokers were not just harming themselves but also those around them, implying a different sense of individual responsibility and a rationale for smoking restrictions. The U.S. tobacco industry was aware of the changing political climate as early as 1978, when a study for the Tobacco Institute, the industry's trade organization, described the antismoking movement's focus on passive smoking as "the most dangerous development to the viability of the tobacco industry that has yet occurred" (Roper Organization 1978). Although the tobacco companies had begun basic chemical research on secondhand smoke as early as the 1930s, their research efforts expanded greatly in the 1980s, following the increased scientific and public attention to the topic.

When the first **epidemiological** studies of secondhand smoke exposure were published in the early 1980s, an energized antismoking movement was quick to embrace results that indicated that secondhand smoke was not just a nuisance, but also a toxic air pollutant with serious health consequences. In one of the most influential studies, published in 1981, Japanese epidemiologist Takeshi Hirayama followed the health status of a group of 91,540 nonsmoking wives in Japan from 1966 to 1979 and concluded that those who had husbands that were heavy smokers showed a twofold increased risk of lung cancer compared to those who had nonsmoking husbands. This study and several others published that same year set off an international debate about the health consequences of secondhand smoke exposure. On one side were



epidemiological pertaining to epidemiology, that is, to seeking the causes of disease.

the tobacco industry and its allies who argued that risks were small and inconsequential; on the other side were public health advocates who argued that even small risks would produce a large amount of disease in a population that was widely exposed.

Exposure data and additional scientific evidence about the health effects of secondhand smoke accumulated, and in 1986 two scientific reviews were released that were a watershed for public policy: The U.S. Surgeon General's report, *The Health Consequences of Involuntary Smoking*, and the National Academy of Science's report, *Environmental Tobacco Smoke: Measuring Exposures and Assessing Health Effects*. The reports concluded that secondhand smoke caused lung cancer in healthy adult nonsmokers and respiratory symptoms in children. By the late 1980s the U.S. Environmental Protection Agency (EPA) had begun a risk assessment of the respiratory effects of secondhand smoke, including as evidence thirty epidemiological studies of women who had never smoked living with smoking and nonsmoking husbands. The 1992 final report, which took four years to complete, confirmed earlier findings and took the additional step of classifying secondhand smoke as a known human **carcinogen**. Specifically, it was categorized as a Group A carcinogen, which means that the weight of the evidence conclusively demonstrates that the substance causes cancer in humans.



carcinogen a substance or activity that can cause cancer. Cigarette smoking has been proven to be carcinogenic, that is, cancer causing.

As of 2004, the most comprehensive risk assessment of the health effects of secondhand smoke is the 1997 report by the California Environmental Protection Agency (CalEPA), *Health Effects of Exposure to Environmental Tobacco Smoke—Final Report*. In addition to examining respiratory effects, the CalEPA report is notable for assessing the effects on the cardiovascular system among other diseases. Other important summary statements, all of which have reached similar conclusions, include the 1998 report of the British Scientific Committee on Tobacco and Health and the 2002 World Health Organization's (WHO) International Agency for Research on Cancer (IARC) Monograph on Tobacco Smoking.

Sparking and Fueling Controversy

The tobacco industry was aggressive in its criticism of the scientific research and the risk assessments on secondhand smoke because the results threatened cigarette company profits by increasing the likelihood of regulation and litigation. Researchers know much about industry efforts to confuse the public and prevent meaningful regulation of secondhand smoke. The release of previously confidential internal company documents, which were produced during litigation, reveals that the tobacco industry challenged scientific research in two ways: with its own research and with public relations campaigns that portrayed unwelcome scientific findings as controversial and inconclusive and risk assessments as faulty and biased. Beginning in the 1980s, the industry organized teams of experts worldwide to promote the position that other pollutants (for example, mold or gases given off by carpets) were the cause of indoor air quality problems and that expensive building ventilation systems provided the best resolution, a position it still actively promotes. In short, the tobacco industry sought to avoid any legislative action on banning smoking indoors in the United States and

internationally through an organized and constant effort to generate public doubt about mainstream scientific conclusions of secondhand smoke's health consequences.

All scientific research has limitations, and the tobacco industry was quick to use experts who could exploit weaknesses in the epidemiological studies or present invalid counter-results to muddy the conclusions. Many of the hired experts, who did not always disclose their financial ties to the industry, argued the studies were methodologically flawed. For instance, they claimed that researchers did not adequately account for the possibility that a current nonsmoker might have once smoked ("misclassification bias"). Critics also suggested numerous potential confounders, other factors that might explain why some people developed lung cancer, particularly that living in a household with smokers was associated with other lifestyle factors that could contribute to cancer, such as poor diet, lack of exercise, or hazardous occupation. Additionally, critics argued that studies did not adequately account for exposure to secondhand smoke; that is, the estimates of how much smoke people in the study were exposed to might be very uncertain. Peoples' exposures can be measured indirectly by measuring indoor air concentrations or by questionnaires and more directly by personal monitors or by the biochemical analysis of saliva, urine, and blood, which contain traces of tobacco smoke chemicals.

One of the first instances of the tobacco industry turning a weakness to its public relations advantage came in 1981. In the same year that the landmark Hirayama research was published, Lawrence Garfinkel of the American Cancer Society also published a study that found an increased risk of lung cancer from exposure to secondhand smoke. The results of the quantitative analysis, however, did not achieve what scientists call "statistical significance" (the probability that the result was a chance or random finding was greater than the conventional).

The tobacco industry took the opportunity to misrepresent the study in a series of advertisements in major U.S. newspapers, making the blanket claim that Garfinkel's results were "insignificant." When the industry followed a similar public relations strategy in Australia, a successful lawsuit declared that the advertisements were false and misleading. Almost two decades later, when the World Health Organization released findings from a ten-year epidemiological study in 1998, the tobacco industry misrepresented the statistical significance of this study in the media. The tobacco industry had already worked behind the scenes to undercut the study using their network of scientific consultants in Europe, known as Project Whitecoat. This strategy included "seeding" the medical literature with letters to the editor from pro-tobacco scientists. In addition, industry development of a network of influential scientists and experts successfully hindered regulation of secondhand smoke in Latin America in 1990s.

The tobacco industry also sought to generate research that would be useful for defending against regulation and litigation. The research results were often published with minimal scientific peer review, as proceedings of symposia or sponsored publications rather than in medical journals. In the case of the landmark Hirayama study, the tobacco industry sought to refute Hirayama's results, nearly a decade later, by enlisting a different group of Japanese scientists to help produce a different "Japanese spousal study," but the company kept its involvement



A powerful argument against smoking is the deadly effects of secondhand smoke on people who inhabit the same relative space as smokers. In this U.S. ad, showing a bride with a cigarette being extinguished on her chest, the caption reads, "Women married to a smoker have a 91% greater risk of heart disease. Secondhand smoke. Still want to breathe it?" AP/WIDE WORLD

with Japanese researchers hidden. In another development, three of the United States tobacco companies—Philip Morris, R.J. Reynolds, and Lorillard—created a nonprofit research organization called the Center for Indoor Air Research in 1988, which funded around 244 published studies over the next decade. The organization was used by the tobacco industry to fund research to deflect attention from secondhand smoke as a significant indoor air pollutant and to produce data to challenge the findings on the health effects of secondhand smoke for political and legal purposes. The organization was disbanded in 1998, as part of the terms of the Master Settlement Agreement between state governments and the major tobacco companies. As of 2004, Philip Morris is funding scientific research through an openly sponsored external grants program it created in 2000.

The risk assessments of secondhand smoke published in the 1990s received a great deal of attention because of their implications for smoking restrictions policy. In an attempt to undercut the conclusions of the 1992 EPA risk assessment, the tobacco industry successfully sued the EPA in federal court. The industry won a judgment in July 1998, on the grounds that the EPA had exceeded its authority established by Congress under the 1986 Radon Gas and Indoor Quality Research Act and did not follow proper administrative procedures, such as not properly representing industry interests in the review process. The judicial decision blocked the full implementation of the report as it related to lung cancer until it was overturned on appeal and formally dismissed by the U.S. District Court for the Middle District of North Carolina on 23 March 2003.

Secondhand smoke is one of the world's most significant air toxins and has been recognized as a global public health concern. Policy goals in the early twenty-first century focus on protecting children and workers, especially those in bars and restaurants where exposures are the highest. As of 2003, the American Lung Association considered nine U.S. states (Delaware, California, New York, Connecticut, Maine, Florida, Maryland, Utah, and Vermont) as having strong smoke-free air laws, and the number is expected to grow. The World Health Organization has made tobacco control and smoke-free environments one of its priorities, and legislatures are actively working on the issue worldwide.

See Also Antismoking Movement Before 1950; Antismoking Movement From 1950; Litigation; Lobbying; Medical Evidence (Cause and Effect); Product Design; Smoking Clubs and Room; Toxins.

■ JOSHUA DUNSBY

BIBLIOGRAPHY

- Bero, Lisa. "Implications of the Tobacco Industry Documents for Public Health and Policy." *Annual Review of Public Health* 24 (2003): 267–288.
- Brandt, Allan M. "Blow Some My Way: Passive Smoking, Risk, and American Culture." *Clio Medica* 46 (1998): 164–187.
- Glantz, Stanton. Tobacco Scam: How Big Tobacco Uses and Abuses the Restaurant Industry. Online. 2002. Regents of the University of California. Available: <<http://www.tobaccoscam.ucsf.edu>>.
- Glantz, Stanton A. et al., eds. *The Cigarette Papers*. Berkeley: University of California Press, 1996.

National Cancer Institute. *Health Effects of Exposure to Environmental Tobacco Smoke: The Report of the California Environmental Protection Agency*. Smoking and Tobacco Control Monograph no. 10. Bethesda, Maryland: U.S. Department of Health and Human Services, National Institutes of Health, National Cancer Institute. NIH Pub. No. 99-4645. Online. 1999. Available: <<http://cancercontrol.cancer.gov/tcrb/monographs>>.

Roper Organization. "A Study of Public Attitudes toward Cigarette Smoking and the Tobacco Industry. Volume 1." May 1978. Tobacco Institute Collection. Bates No.: TIMN0210766/0210819. Available: <<http://legacy.library.ucsf.edu/tid/ebr72f00>>.

U.S. Environmental Protection Agency. Environmental Tobacco Smoke Page. Online. Available: <<http://www.epa.gov/iaq/ets/>>.

Sexual Politics See Women.



Shamanism

The literature on shamanism and shamans has grown exponentially in recent years, and with it the uncritical tendency to call almost any religious specialist and curer of illness in traditional or tribal societies a "shaman."

The term derives from a language of tribal Siberia but has become widely adopted into many of the major languages. This is because of numerous perceived correspondences in different parts of the world in the shaman's role in his or her society and the belief systems in which shamans function. These include supernatural "election," initiatory ordeals, theories of illness and techniques of curing, the nature of the human soul, ecstatic trance, relations between the living and the dead, and relations between human beings and the spirits.

The differences are often overlooked. But so is one constant of shamanic practice in the traditional world: the ecstatic trance in which the shaman believes himself, with the concurrence of his social group, to project his soul on out-of-body journeys to the spirit world to seek knowledge and advice for the benefit of his society. The techniques by which shamans attain the desired visionary state vary. In Indian South and Middle America they most often involve plants with intoxicating qualities. Tobacco, *Nicotiana rustica*, is one of the most ancient and widely distributed of these "plants of the shaman."

Tobacco Shamanism in Native Cultures

One of the clearest indications of the importance of tobacco is seen in South American shamanism. The Matsigenka of eastern Peru, whose name means "people," call their shamans *seripi'gari*, "the one who is intoxicated by tobacco." This fact seems to set this Arawakan-speaking people apart from other Amazonian Indians who call their shamans by names that reflect their identity with the jaguar. But the difference is

only apparent: It is intoxication with *Nicotiana rustica*, tobacco that facilitates the Matsigenka shaman's initiation, his recruitment of the jaguar and other animals as spirit helpers, and his ultimate transformation into the powerful predatory feline after death.

Throughout his lifetime, the Matsigenka shaman maintains a close relationship with spirits that reside in the mountains, where he subsists exclusively on tobacco, either in solid or liquid form, and where he keeps jaguars and pumas as pets or "dogs." Matsigenka shamans also own "jaguar stones," sacred rocks they receive during initiation and which they are obliged to feed regular rations of tobacco. These stones help them transform into helping jaguar spirits; conversely, if neglected that can cause their owner's death.

Tobacco is thus indispensable to Matsigenka shamanic ideology and practice. However, as is the case with tobacco shamanism among other indigenous groups, it is accompanied by other visionary or "hallucinogenic" plants, in this case *ayahuasca* (*Banisteriopsis* spp.), a Quechua term meaning "vine of souls," and the solanaceous *Brugmansia*, formerly known as *Datura arborea*, or tree datura. Scholars believe that the botanicals' effects on consciousness are enhanced or heightened by nicotine, which is known to activate norepinephrine and serotonin, hormones that occur naturally in the brain and that share the same structure with and are thus closely related to several plant "hallucinogens," including psilocybine and mescaline. *Ayahuasca* contains tryptamines; *Brugmansia* contains scopolamine, hyoscyamine, and noratropine as its principal **alkaloids** and belongs to the same nightshade family as the Nicotianas.

Full-scale tobacco shamanism, in which tobacco is the sole ecstatic intoxicant, to the exclusion of whatever other psychotropic species are available in the environment, is in fact rare. The Warao of the Orinoco Delta in Venezuela provide the best studied example. To trigger the ecstatic trance that is one of the cornerstones of shamanism everywhere, the religious specialists of the Warao inhale extraordinary quantities of smoke perfumed with powdered or crushed *caraña* (*Protium heptaphyllum*), a resinous gum, from cigars as long as 3 feet. Warao shamans share with the spirits irresistible hunger for tobacco as their essential spirit food and feel ill when it is not available—this despite the fact that the swampy environment of the delta precludes tobacco cultivation and necessitates its importation from the island of Trinidad and areas adjacent to Warao territory.

So deeply embedded in the intellectual culture is tobacco and its effects that the Warao have constructed a complex and highly sophisticated universe with "houses" and "bridges" of tobacco smoke ringed by sacred mountains of the world directions, whose ruling spirits the shaman keeps contended and favorably disposed toward the people with gifts of tobacco.

Origin and Diffusion of Tobacco

The genus *Nicotiana* consists of some sixty-four species, the great majority native to the Americas. Only about a dozen have ever been used for tobacco. Of these, only two, *Nicotiana rustica*, and its much milder sister species, *N. tabacum*, have achieved cultural importance and wide distribution—the former as a shamanic intoxicant and "spirit food," and the latter, also widely dispersed through the Indian Americas from the 1700s onward, mainly for recreational smoking. *N. tabacum* is the progenitor of modern commercial tobacco blends. The word



alkaloid an alkaloid is an organic compound made out of carbon, hydrogen, nitrogen, and sometimes oxygen. Alkaloids have potent effects on the human body. The primary alkaloid in tobacco is nicotine.

“*Rustica*” means “wild,” but in fact both species are cultivated hybrids. Students of the genus *Nicotiana* believe them to have been in existence as long ago as 8,000 years, and that *Nicotiana rustica* and *N. tabacum* are among the first fruits of South American tropical agriculture.

Scholars also suggest that the high content of the alkaloid nicotine in *N. rustica*—as high as just under 19 percent in the leaf and several times that in the stems, compared with a low of 0.6 percent and a high of 9 percent in *N. tabacum*—and the resultant **physiological** and psychological effects to the point of addiction, account for its rapid and wide dispersal, and its quick adoption into visionary shamanism. To this discussion Johannes Wilbert adds the concept of “natural modeling,” the close functional relationship between the botany and pharmacology of tobacco and the physical and mental effects of its principal alkaloid, nicotine, on the human organism. Thus, certain shamanic beliefs, behaviors, physical and mental effects, and “otherworldly” experiences such as death and resurrection may all be to some degree attributable to the actual experience of nicotine intoxication. For example, *N. rustica* is often found growing in disturbed soil, such as burial sites, which conforms to the widespread belief that tobacco is a gift of ancestors and ancestor spirits.

Belief in tobacco as a life-giving force is confirmed by the proven effectiveness of fumigation with tobacco smoke, the application to the skin of tobacco poultices, and enemas against a variety of external and internal pathogens. The indigenous cultures believe the shaman’s breath itself has healing powers; made visible by tobacco smoke it is doubly efficacious. The early European literature on Indian South America contains numerous eyewitness accounts of shamans repeatedly blowing clouds of tobacco smoke over the bodies of patients. European travelers might have interpreted this as “superstition,” but there may in fact be a true biological effect of absorption of nicotine through the skin. In addition, nicotine may rid the skin of external pathogens and microorganisms, since botanists consider tobacco to be a powerful natural insecticide.

The Death and Resurrection Continuum

Shamans in various parts of the world undergo initiatory ecstasy and symbolic death and resurrection and repeat these traumatic experiences throughout their lifetime, often with the aid of a variety of “hallucinogenic” plants. This is evidenced by the name the Aztecs gave the very potent intoxicating seeds of the morning glory *Turbina corymbosa*. Tobacco is particularly well suited to dramatize the deathlike catatonic state and return to life that, thanks to the rapid biotransformation of nicotine in the body, is experienced by some candidate shamans in their initiatory rituals.

The Warao initiation ritual provides an instructive example of the death and resurrection continuum. During initiation, the master shaman feeds the candidate enormous quantities of “spirit food”—tobacco—and this continues as he falls into a deathlike trance and commences an out-of-body journey through a series of obstacles where, to pass safely across an abyss filled with hungry jaguars, snapping alligators, and blood-thirsty sharks, he consumes more tobacco smoke. Demons wait to slash him with sharp-bladed spears and knives until finally he reaches a great tree that has a hole through its center with rapidly opening and closing doors. This is the threshold between life and death through which he must pass at precisely the right moment, lest he be crushed



physiology the study of the functions and processes of the body.





By the time the early European explorers first arrived in the Americas, the many native cultures already had long traditions of chewing, smoking, and snuffing tobacco and other psychotropic plants ritually and socially in their pursuit of the supernatural. This colored engraving, printed in 1592 by Theodor de Bry, depicts a shamanic tobacco dance among the Tupinamba Indians of Brazil. RARE BOOKS DIVISION, THE NEW YORK PUBLIC LIBRARY, ASTOR, LENOX, AND TILDEN FOUNDATIONS

to death. When he fails to find his own bones among those of less fortunate predecessors, he returns and is restored to new life.

In another ritual, the Warao shaman, after smoking incessantly for an entire month, embarks on a frightful initiatory journey in which he is repeatedly “killed” by spirits and buried in coffins in foul-smelling swampy soil and beneath stone slabs. At last, he escapes and is restored to life. Initiation rituals like this one are virtually endless, not only in South America but wherever shamanism continues to be practiced throughout the world.

Transformation of Sight and Voice

Through constant use of tobacco, shamans are marked by bodily transformations of voice and sight. Initiatory trauma in tobacco shamanism often includes the tearing out of the vocal cords and the voice box. And, indeed, a dark-timbered and guttural singing and speaking voice is a mark of the tobacco shaman (as it is often also of the habitual smoker in the West). But nothing distinguishes the shaman more than “the paranormal sight which permits him to see the hidden and to foresee the future” (Wilbert 1986). In fact, tobacco shamans experience profound changes in

their eyesight, including better near vision during the day and, conversely, better eyesight under advanced nicotine intoxication in the evening and at night, this being facilitated by the release of **epinephrine** or glycogen or both. Fully initiated tobacco shamans may actually experience more or less acute amblyopia, or dimness of vision, due to the action of nicotine on the pupil, but with improved night vision have no difficulty seeing in a world that is primarily black and white.

Full recovery of vision usually occurs several weeks after nicotine intoxication. "Once fully initiated and endowed with the appropriate voice and sight," concludes Wilbert, "the tobacco shaman displays other characteristics that give evidence of his position apart from normal human beings: He eats little, he suffers no pain, he cures the sick, and he is very combative." Like other characteristics this last is a universal of shamanism, regardless of the presence or absence of tobacco or any other visionary plant. Shamans have to be combative because they do battle against evil spirits, demons, sorcerers, witches, and predatory animals that threaten their clients.

In the American tropics shamans identify themselves with the jaguar, the most powerful of all the animals and also the one that, like the shaman himself, is not bound to a single **ecological** niche. Jaguars and jaguar transformation are widely associated with tobacco and nicotine intoxication. One kind of tobacco called *kumeli*, literally means "tiger (jaguar) tobacco," which the shamans of the Carib-speaking Akawaio in Guiana smoke to achieve jaguar-like combativeness in order to drive away and destroy evil spirits.

Tobacco as Sacramental Food

Tobacco is an appetite suppressant, and tobacco shamans eat little. At least in part this must explain why indigenous peoples generally classify tobacco as "food," regardless of the method of ingestion, and attribute to the spirits the same hunger for it as experienced by humans, and, conversely, the same feelings of satisfaction. The idea that in making a gift of tobacco to humanity, the spirits somehow forgot to keep some for themselves, thus making themselves dependent on human beings for their essential nourishment, must have originated close to its initial cultivation, experimental use, and subsequent dispersal, perhaps in north central Peru or the valleys between Peru and Ecuador. Similar versions of this story are shared over wide areas, including North America. In these beliefs, not just the shaman's own helping spirits—many of which inhabit his own body—but a vast company of spirits and deities scattered throughout the environment and the upper- and underworld are wholly dependent on tobacco as nourishment. According to shamanic tradition, these spirits thus must rely on humans as the only producers of the sacred sustenance, in exchange for which they bestow health, rain, fertility, and other benefits.

Tobacco is also one of the most toxic "foods" known: One or two drops of an extract of the nicotine in a single cigar placed on the skin or the tongue is sufficient to kill an adult. That shamans do not share this dire fate presumably has to do with the rate and method of absorption into the gastrointestinal tract; in addition, the shaman culture holds the firm conviction that tobacco is a beneficial and very sacred bounty originating with the gods and spirits, which may play a role in the effect of nicotine on their bodies.



epinephrine also called adrenaline, a chemical secretion of the adrenal gland. Epinephrine speeds the heart rate and respiration.



ecology the interrelationships of a natural environment. For example, the ecology of a forest includes animals, plants, water, atmosphere, weather, and land forms.

South American shamans absorb nicotine through smoking, sucking, drinking, licking, smoking, and snuffing, the first being by far the most common across the continent and northward across Central America into Mexico and North America, as far north as the sub-Arctic and Arctic. Tubular pipes dating to the second and first millennium B.C.E. have been excavated in Mexico as well as in California, but smoking is likely to be much older than that. At some point tobacco made its appearance among the indigenous peoples of the Northwest Coast and Alaska, where by the early nineteenth-century pipes of wood or stone had evolved into true works of art. The method of diffusion that far north, whether overland from tribe to tribe, or by trade through Russian traders and colonists, is unknown. What scholars do know is that both ritual and recreational smoking was widely practiced in Siberia by the eighteenth century, and that at some point, both *N. rustica* and *tabacum* reached Nepal and the Himalayas. In Nepal, *N. rustica* became assimilated into shamanism as a ritual intoxicant consecrated to the Hindu god Shiva, while *N. tabacum* joined the company of indigenous and introduced recreational “drug” plants.

See Also Hallucinogens; Mayas; Native Americans; Social and Cultural Uses.

■ PETER T. FURST

BIBLIOGRAPHY

- Baer, Gerhard. “The Role of Tobacco in the Shamanism of the Matsigenka, Eastern Peru.” *Acta Americana* 3, no. 2 (1995): 101–116.
- Butt Colson, Audrey. “The Akawaio Shaman.” In *Carib-speaking Indians: Culture, Society, and Language*. Edited by Ellen B. Basso. Tucson: University of Arizona Press, 1977.
- Müller-Ebeling, Claudia, Christian Räscher, and Surendra Bahadur Shahi. *Shamanism and Tantra in the Himalayas*. Rochester, Vt.: Inner Traditions, 2000.
- Wilbert, Johannes. “Tobacco and Shamanistic Ecstasy among the Warao Indians of Venezuela.” In *Flesh of the Gods: The Ritual Use of Hallucinogens*. Edited by Peter T. Furst. New York: Praeger, 1972.
- . *Tobacco and Shamanism in South America*. New Haven, Conn.: Yale University Press, 1986.



Sharecroppers

sharecropping a form of agricultural labor that gained popularity after the Civil War. Laborers, usually families, lived and worked on land belonging to a proprietor. They grew staple crops like tobacco and cotton. Rather than regular cash wages, they were paid with shares of the crop at harvest time.

In the 2000s, tobacco production is fully mechanized. Herbicides destroy weeds before they are able to affect the plant, and the metal claws of mechanical harvesters collect ripened tobacco leaves as they roll down fields row by row. But for almost a century, sharecroppers predominated in the arduous and unrelenting cultivation of Bright leaf tobacco in the American South, from planting and weeding to harvesting and curing.

A system of labor in which workers received a share of the crop as compensation, **sharecropping** emerged after the Civil War (1861–1865)



In the 2000s, tobacco production is fully mechanized. But for almost a century after the Civil War, tobacco cultivation in the American South, especially Virginia and North Carolina, was handled mainly by sharecroppers. This photograph was taken in 1939 in North Carolina. LIBRARY OF CONGRESS

in the Bright leaf tobacco belts of Virginia and North Carolina. Favored by manufacturers for its mild taste, Bright leaf, or **flue-cured tobacco**, turned a golden hue from the intense heat of flues in the curing barn. Sharecropping represented a new way for landowners to control the labor of former slaves. Devastated by defeat and stripped of their most valuable investment, former slave owners were suffering financially. Lacking cash to pay wages, they adopted the practice of financing tobacco production by engaging in a lien on the prospective crop. With their aspirations for land unfulfilled, former slaves had no choice but to accept the new form of labor.

The Sharecropping System

Sharecropping contracts varied state by state and farm by farm. However, certain common features characterized them. Little more than a nod sealed most agreements between sharecroppers and landlords. Each year in December the head of a sharecropping family typically committed the labor of the entire family to cultivate about three to six acres of tobacco. Sharecroppers usually worked for no more than a half share of the crop, which they collected only after cultivating and harvesting. In effect, they were advancing a season's worth of labor to the landlord before receiving pay. Landlords furnished sharecroppers with housing, mules, seed, fertilizer, and tools, and extended them credit for food and necessities, usually through country stores. Sharecroppers also could keep gardens. At the end of the season, the landlord paid sharecroppers after deducting what they owed for living expenses, with interest. Often, the season's labor offered little actual profit and the possibility of debt.



flue-cured tobacco also called Bright Leaf, a variety of leaf tobacco dried (or cured) in air-tight barns using artificial heat. Heat is distributed through a network of pipes, or flues, near the barn floor.



tenant farmers landless farmers who rented acreage from landowners. The tenant family usually moved to a house on the rented land where they lived and worked. The rental was payable in cash or sometimes a specified amount of produce. The tenant often owned draft animals and implements and had established credit. Tenants were typically more independent than sharecroppers and occupied a higher place in the hierarchy of rural America.

During the late nineteenth century, agricultural depression contributed to an increase in the number of sharecroppers and **tenant farmers** as many white farmers lost their land. In 1890, more than 40 percent of farmers in North Carolina and 30 percent of farmers in Virginia occupied these two farming classes. Tenancy also had become common in the flue-cured culture after the Civil War. Unlike sharecroppers, tenant farmers paid the landowner for renting and working a plot of land with either cash or a share from the proceeds of the year's crop.

Despite differences in their tenure status and location, the way that farmers raised tobacco changed very little across time and space. Whether sharecroppers, tenant farmers, or small landowners, they relied on the labor of all family members and neighbors in all the states that produced Bright leaf tobacco, which by the twentieth century included South Carolina, Georgia, and Florida. Between January and December, they planted seeds, transplanted tobacco seedlings, and eliminated weeds and pests as the plants matured in the fields. Beginning in July, they started priming, the task of removing leaves individually as they ripened. Each day, women performed the delicate task of stringing the harvested tobacco to sticks before it was hung in the curing barn. After filling the barn, the men of the family spent several nights at the barn to control the temperature of the heated air as it cured the tobacco. After harvesting and curing, they prepared the leaves for market by grading them.

Changes to the System

During the 1930s, sharecroppers felt the brunt of low prices brought about by the Great Depression. As tobacco prices plummeted, landlords often absorbed their loss in income by passing debt onto their sharecroppers or dismissing them. The Agricultural Adjustment Act (AAA), a New Deal policy under President Franklin D. Roosevelt, revived Bright tobacco farming through a system of price supports and acreage reduction. While the AAA cotton program contributed to the displacement of sharecroppers and tenant farmers, the tobacco program helped stabilize sharecropping and tenancy. The number of sharecroppers and tenant farmers reached its height in the late 1930s, comprising an estimated 48 percent of all farmers in tobacco regions in 1937, according to the President's Committee on Farm Tenancy.

The 1950s witnessed the first significant dip in the number of sharecroppers. Federal farm policies and another slump in agricultural prices encouraged landowners to cut back acreage. Between 1940 and 1959, the number of sharecroppers and tenant farmers in Wilson County, North Carolina, a major tobacco-producing area, fell by nearly 40 percent, from 3,027 to 1,840. By the 1960s, the number of sharecroppers dropped even more dramatically as flue-cured tobacco became mechanized. In 1978, only 409 sharecroppers and tenant farmers remained in Wilson County. In addition to acreage reduction, migration to urban areas and the mechanical transformation of tobacco production contributed to the decline of sharecropping. Sharecroppers, once **ubiquitous** in Wilson County and across the tobacco South, are now as rare as agricultural machinery once was.



ubiquitous being everywhere; commonplace; widespread.

■ ADRIENNE PETTY

BIBLIOGRAPHY

- Badger, Anthony. *Prosperity Road: The New Deal, Tobacco, and North Carolina*. Chapel Hill: University of North Carolina Press, 1980.
- Daniel, Pete. *Breaking the Land: The Transformation of Cotton, Tobacco, and Rice Cultures since 1880*. Urbana and Chicago: University of Illinois Press, 1985.
- Kerr-Ritchie, Jeffrey R. *Freedpeople in the Tobacco South: Virginia, 1860–1900*. Chapel Hill: University of North Carolina Press, 1999.
- Prince, Eldred E. Jr., with Robert R. Simpson. *Long Green: The Rise and Fall of Tobacco in South Carolina*. Athens: University of Georgia Press, 2000.
- Tilley, Nannie May. *The Bright Tobacco Industry, 1860–1929*. Chapel Hill: University of North Carolina Press, 1948.
- United States Department of Commerce. Bureau of the Census. *Sixteenth Census of the United States: 1940, Agriculture*. Volume I, State Reports, Part 3, Statistics for Counties. Washington: U.S. Government Printing Office, 1942.
- . *United States Census of Agriculture, 1959*. Volume I, Counties, Part 26, North Carolina. Washington: U.S. Department of Commerce, 1961.
- . *1978 Census of Agriculture*. Volume I, State and County Data, Part 33, North Carolina. Washington: U.S. Department of Commerce, 1981.



Slavery and Slave Trade

According to the most recent estimates of the Atlantic slave trade, over 10 million Africans were forcibly exported to the Americas between the 1440s and 1860s (Klein 1999). The major reason for bringing all of these Africans to the Americas was the production of cash crops to make profits and satisfy European tastes. Tobacco was the first exotic luxury in the Americas to become an item of mass consumption.

From Servants to Slaves

At the beginning of the seventeenth century, the typical tobacco-field worker was an English or Irish **indentured servant**. By the century's end, it was an imported African slave. The early story of tobacco is one of this shift in labor relations.

Although tobacco was a familiar, even sacred, plant to Native Americans, the combination of European colonialism and changing consumer choices transformed it into one of the most lucrative commodities in the New World. In the seventeenth century the English colonies of the Chesapeake Bay (Virginia and Maryland) were the greatest tobacco-producing regions in the British Empire. The annual export of tobacco leaf increased from 65,000 pounds in the 1620s to 40 million pounds by 1700. British seamen, planters, and adventurers developed a taste for pipe smoking, chewing, and taking **snuff**, and tobacco gradually became popular among the general populace; some say this is because of tobacco's addictive qualities, while others claim it is because tobacco appeased appetites and was energizing. By the end of the century, annual tobacco consumption in England and Wales peaked at over



indentured servant a person who agreed to work for another for a specified term (usually a few years) to satisfy a financial obligation. During the American colonial period, immigrants sometimes paid their passage with indentured service.



snuff a form of powdered tobacco, usually flavored, either sniffed into the nose or “dipped,” packed between cheek and gum. Snuff was popular in the eighteenth century but had faded to obscurity by the twentieth century.



This engraving (c. 1730) shows a relaxed Virginia planter watching his slaves work in the tobacco field. Also depicted are the planter's manor house, hogsheads containing packed tobacco, and sailing ships near the wharf and in the harbor. The Chesapeake Bay colonies were a major tobacco-producing region in the early British Empire. THE GRANGER COLLECTION

two pounds per capita (Goodman 1993). This consumer choice helped spawn the enslavement of Africans.

The development of British capitalist agriculture, together with the removal of laboring people from the countryside during the seventeenth century, created a surplus population that resulted in increased immigration to New World colonies. Some immigrants were unwilling convicts, but many were free laborers who contracted for several years of service in exchange for transportation and post contract freedom dues, such as money, land, and supplies. Between 1630 and 1680, 75,000 indentured laborers entered the English mainland colonies, around three-fourths of whom were males (Blackburn 1997).

The profitability of tobacco, together with high mortality rates and abundant lands in the Chesapeake Bay region, however, created a labor shortage for tobacco planters. As a result, they made an economic decision to follow the existing model of the sugar industry, which was dependent on slavery, elsewhere in the New World. Moreover, there already existed an operative slave trade, an African slave promised a much longer work life than an indentured servant, and Africans could

be treated more harshly because they were considered **heathen** and beyond the pale of Christian civilization.

The English slave trade began in earnest with the Royal African Company in 1672. The constant demand for slave labor, however, proved too much, and, after 1689, the slave trade was managed by independent traders. About 20,000 African slaves were brought to the English mainland colonies during the seventeenth century, most of them in the 1680s and 1690s. Around one-third of the slaves were women and girls (Blackburn).

Although English and Irish servants were of a different provenance to African slaves, both groups were unfree laborers who forged a common front. The harboring of runaways, sexual unions between African men and English or Irish women, and interracial conviviality resulted in the passage of numerous laws prohibiting such actions by the Virginia legislature. These laws do not appear to have been completely effective. African slaves and Irish servants joined Nathaniel Bacon's rebellion against English colonial rule in 1676, with over one hundred of them refusing to surrender until they were guaranteed their freedom. They eventually failed. Moreover, colonial laws were passed in the 1660s and 1670s to codify African slavery in the Chesapeake region.

The Tobacco Revolution

The story of tobacco and slavery in the eighteenth century is one of a major regional transformation wrought by massive slave imports, a new planter regime, and the making of African American slave culture. In the Chesapeake region tobacco production increased from 30 million pounds in 1710 to over 100 million pounds by 1775 (Blackburn). Expanding consumer demand fueled the increase in production. Even though there appears to have been a decline in individual consumption, the general trend was upward. Western European consumption increased from about 70 million pounds of leaf in 1710 to 120 million pounds at the end of the century (Goodman). Furthermore, American plantation products like rum and tobacco became an acceptable means of exchange for slaves on the western and southwestern African coasts during the zenith of the Atlantic trade.

The increase in tobacco production resulted in greater demand for African slaves in the Chesapeake area. In 1700 there were 22,000 Africans in the mainland colonies, with 13,000 Africans in the Chesapeake district, but by 1760 there were 327,000 Africans in North America, with more than half laboring in the Chesapeake region (Thornton 1998). Many of the new imports to the Chesapeake came directly from the Bight of Biafra on Africa's western coast. It has been estimated that between 1710 and 1760, Igbo or Biafrans constituted around 40 percent of the total number of slaves brought to Virginia. Scholars disagree on why planters chose Igbo or Biafran slaves. Some argue for planter indifference, others for perceptions of slave resistance, and still others for physical abilities (Gomez 1998). Although some historians also have argued that slaves in Africa were chosen by planters for their intimate knowledge of crops like rice and tobacco, it is clear that physical strength was the most important criterion in the buying of slaves.

There is general agreement on the gender of slave imports; slave men outnumbered slave women by about two to one. This is because



heathen any person or group not worshipping the God of the Old Testament, that is, anyone not a Jew, Christian, or Muslim. May also be applied to any profane, crude, or irreligious person regardless of ethnicity.



plantation historically, a large agricultural estate dedicated to producing a cash crop worked by laborers living on the property. Before 1865, plantations in the American South were usually worked by slaves.

Creole originally, a person of European descent born in the Spanish colonies. Later, the term was applied to persons of mixed European and African descent. As an adjective, it can describe admixtures of European and African cultural components such as language, cookery, and religion.

males were more likely to be marketed in African societies, and planters in the Americas sought strong adult males for cash crop production. The tobacco region saw an early shift from importing male slaves to the natural reproduction of slaves. The combination of a more temperate climate, less destructive work patterns, and a more established planter society led to higher reproductive rates in the tobacco fields of the Chesapeake district than in the rice **plantations** of the Lowcountry and the sugar plantations of the Caribbean. By mid-century, it has been estimated that four-fifths of the slaves in the Chesapeake area were native-born (Berlin 1998). By the time of the American Revolution, the Chesapeake region was unique for its enslaved **Creoles** and a more equal gender ratio. In contrast, imported slave men continued to predominate in other cash crop regions—such as rice, indigo, and sugar—in the mainland and Caribbean colonies. This made the tobacco region unique among New World slave societies.

Unlike the planters in the Caribbean colonies, American planters remained in the colonies, made large fortunes from slave work, and built impressive homes. Most important, they formed an “interlocking directorate” through marriage partnerships, business interests, and political representation (Berlin 1998). These new tobacco lords fashioned a new paternal order. Small plots worked by planters, farmers, and their families were replaced by larger holdings worked by gangs of slaves supervised by overseers. There were more workdays, longer hours, closer supervision, and harsher punishments through the whip, manacle, and branding iron. Women and children filled the new gangs in the tobacco fields. Indeed, great financial rewards came from the production and reproduction of slave women. Thomas Jefferson observed: “a woman who brings a child every two years [is] more profitable than the best man on the farm [for] what she produces is an addition to the capital, while his labor disappears in mere consumption” (Berlin 1998). Many slave women and children were confined to routine agricultural, reproductive, and domestic work. In contrast, the work of some slave men became more diverse as tobacco planters switched to cereal grain production and livestock farming. Indeed, some slaves became skilled artisans in this new agricultural world. Slaves like “Jem” were reputed to “do any kind of smith’s or carpenter’s work” and “any kind of farming business” (Berlin 1998).

This tobacco revolution wrought resistance by slaves. During the early eighteenth century, planters uncovered several conspiracies and plots. Moreover, many slaves temporarily escaped slavery as suggested by thousands of advertisements for so-called runaways placed by slave owners in colonial newspapers. Furthermore, planters complained unceasingly to each other and in newspaper articles about productivity problems caused by slave sickness, work refusal, deliberate misunderstanding, breaking tools, and direct challenges to their authority. To them, the problem was how best to manage slaves; to the slaves, it was how best to carve out niches of freedom in a coercive slave regime.

But the most important collective expression of this resistance to the system of slavery and dehumanization in the tobacco kingdom was the development of slave culture. It was born from a complicated **synthesis** between the African past and the Chesapeake present. Moreover, it was made in the tobacco fields as well as during communal moments away from slaveholders. The building of slave quarters on



synthesis the blending of several elements into a coherent whole.

plantations removed the immediate supervision of the planter's family. The spread of tobacco cultivation for fresh soils entailed the constant movement of slaves into new areas. This growing slave network made connections, friendships, and kinships. One planter's complaint about the "continual concourse of Negroes on Sabbath and holy days meeting in great numbers" illustrates the extent of this broader slave community (Berlin 1998). Moreover, language, recreation, and spirituality provided the basis for a common cultural identity. The language of tobacco slaves had multilingual roots reflecting both African and British tones and idioms. Recreational activities such as music, song, dice, and athletics along with personal styles of dress, headgear, haircuts, and social interaction (for example, sucking teeth to demonstrate frustration) were crucial ingredients for cultural survival in a dehumanizing system. Even though renamed by their owners, slaves often clandestinely retained their own names. Births, marriages, and deaths reflected ancestral African customs either remembered by older generations or reintroduced by newer African imports. As many historians and anthropologists know, rural communities have long memories. Slave religion was dominated by African spiritual forms until the late eighteenth century when evangelical Christianity began to make its mark in the slave quarters.

Expansion and Contraction

The story of tobacco and slaves between the American Revolution and the Civil War is a story of contradictory pulls and tensions. Among the most important were expanded single-crop production and **diversification**, unique **manumission** rates, and new internal slave trading.

Tobacco continued to draw African slaves into the internal regions of Virginia and beyond from the late eighteenth century onward. In Pittsylvania county the slave population grew from 271 in 1767 to 4,200 by 1800 (Kerr-Ritchie 1999). Between 1720 and the Revolution, more than 15,000 Africans were transported into the internal regions. Over the next few decades, tobacco and slavery spread through southwest Kentucky and northeastern Tennessee. According to the U.S. Census, tobacco production in Kentucky amounted to over 108 million pounds in 1859, or 25 percent of the national total (Robert 1938). Much of this tobacco was worked by the 225,483 slaves listed in the state (University of Virginia 1998). This was also the major slaveholding region in the state.

Although tobacco and slaves continued to dominate the political economy of the Chesapeake, the region also experienced a marked degree of diversification from the early national period onward. This was due to a combination of factors including soil erosion, poor quality leaf, and depressed European markets due to the French revolutionary wars (1789–1815). Chesapeake planters switched from the old staple to crop mixtures of cereals and livestock according to both market prices and increasing demands from growing urban areas like Baltimore, Washington, Norfolk, and Richmond. Some slaves produced crops for these markets while others grew their own crops and marketed these themselves.

From the 1830s onward, the tobacco industry took off in Virginia and North Carolina. According to the 1860 U.S. Census, tobacco



diversification in agriculture, avoidance of overdependence upon one crop by producing several different crops.

manumission the act of voluntarily emancipating (freeing) a slave.



capital investment spending money to make an enterprise more efficient and more profitable. For example, modern tobacco growers make capital investments in advanced machinery to lower production costs.

plug a small, compressed cake of flavored tobacco usually cut into pieces for chewing.

manufacturing in the nation accounted for \$9 million of **capital investment** worth nearly \$22 million. Slaves provided the labor in these tobacco factories. The same federal returns counted 12,843 factory workers in Virginia and North Carolina, over four-fifths of whom were males (Robert). Manufacturers owned 48 percent, while slaveholders who hired out their slaves owned 52 percent. Their tasks included stemming, dipping, twisting, lumping, and prizing leaf. The chief product was **plug** or twist for chewing tobacco. One major difference between slaves engaged in rural production and those who did domestic work was a degree of quasi-freedom experienced by the latter group through work hiring, wage payment, and self-support. On 18 December 1856 the *Daily Dispatch* of Richmond observed: "For some years past our tobacco manufacturers have been compelled, in order to secure labor, first to purchase the consent of the negroes to live with them, and then to hire them of their owners." Consequently, they "have allowed the servants to dictate their own terms as to the amount of board money to be given, the extent of daily labor to be performed, and the price to be paid for such overwork as they may feel disposed to do" (Robert). But they still inhabited a slave society. The volume of newspaper and private reports on slaves shirking work, feigning illness, stealing goods, and torching warehouses points to the limitations of freedom in the tobacco factory. In February 1852 the hired slave Jordan Hatcher killed the factory overseer William Jackson with an iron bar because of an attempted whipping (Robert).

The manumission of slaves in the aftermath of the Revolution was particularly pronounced in the tobacco region. By 1810 there were over 108,000 free black people in the Upper South, most of whom lived in the urban areas of tidewater Virginia and Maryland (Berlin 1998). This regional concentration of free blacks continued. By mid-century, over 85 percent of all free blacks lived in the major tobacco region of Maryland, Virginia, North Carolina, and Delaware (Morgan 1992). The reasons for this expansion are complex. Economic decline and diversification reduced the need for slave labor, and manufacturing in Baltimore and Richmond encouraged the development of free wage labor. Furthermore, revolutionary **republicanism** and evangelical Christianity encouraged a natural rights philosophy in which all men were created equal.

At the same time, large numbers of slaves were being transported south. After the abolition of the Anglo-American transatlantic slave trade in 1808, there emerged an internal slave market. Comparisons of the U.S. Census returns for slaves by state suggest that between 1810 and 1860, nearly half a million slaves were exported from Virginia (Tadman 1996). Most slaves ended up working in the cotton states of the Lower South. Although it is difficult to determine exactly how many left the tobacco fields, it is unlikely that this region was not affected. On the one hand, tobacco slaves were needed for their labor and so were less likely to be sold. Conversely, many planters reduced their slave dependency by switching crops and selling their surplus slaves. Other planters immigrated with their slaves to the newer regions.

These contradictions had a major impact on slave culture. By the 1850s, slaves had deep roots in the tobacco region. They had Africanized the region, while the region had Americanized them. Slave culture was nurtured by manumission since the civil restrictions on people of African descent required the interaction of free people with slaves on all



republicanism originally a government without a monarch; republicanism has come to mean a form of representative democracy responsible to the electorate.



After the Civil War, African Americans in tobacco-producing regions were making the transition from slave labor to wage labor, sharecropping, and tenant farming. These workers in 1899 sort tobacco at the T. B. Williams Tobacco Company in Richmond, Virginia. LIBRARY OF CONGRESS

social levels. Moreover, the diversification of slavery entailed many slaves, especially men, to work, travel, and experience the world beyond tobacco and slavery. On the other hand, the expansion of tobacco and slavery, together with the development of the internal slave trade, undermined these cultural foundations by breaking up families and disrupting kinships. Even though slaves met this challenge through “broad marriages”—a marriage between people from different plantations or environments—and extended familial relations beyond the plantation, the impact of the slave trade must have been devastating. In interviews conducted over eighty years later, virtually every surviving ex-slave recalled the times when “Dey carry you down south” (Perdue, Barden, and Phillips 1976).

Emancipation

Tobacco and slavery underwent a revolutionary transformation during the Civil War era. For over two centuries, tobacco and slaves had ruled the political economy of the Upper South. In 1859 the Virginia piedmont was the primary tobacco region, returning over 120 million pounds, or over one-fourth of the U.S. total (Kerr-Ritchie). Moreover, slaves and slave owners were concentrated in the tobacco-producing regions east of the Chesapeake tidewater region. With the advent of secession and Civil War, this old regime broke down. The western part of Virginia, with almost no tobacco production and few slaves, stayed in the Union and formed its own state in 1863. The two major tobacco-producing states of Maryland and Kentucky also stayed in the Union. Moreover, the eastern front was largely fought in the old Chesapeake region with destructive consequences for tobacco and slavery. The Confederate enlistment of many planters and farmers left slaves to their own devices. Other slaves in the tobacco belt self-emancipated themselves toward Union lines in northern and southern Virginia. Many of these slaves enlisted in the fight against slavery. Some 43,375 men of African descent from the four major tobacco states of Virginia, Kentucky, Maryland and North Carolina fought for the Union military (Berlin 1992).



sharecropping a form of agricultural labor that gained popularity after the Civil War. Laborers, usually families, lived and worked on land belonging to a proprietor. They grew staple crops like tobacco and cotton. Rather than regular cash wages, they were paid with shares of the crop at harvest time.

The official end of armed hostilities and the legal end to slavery in 1865 brought three fundamental changes to the old tobacco regime. Although tobacco planters continued to dominate state politics, they never regained their previous political and legal influence in national affairs. Furthermore, emancipation entailed a shift from the supervision of slaveholding plantations and farms to semiautonomous production through wage labor, tenant farming, and especially family-based **sharecropping**. Finally, former slaves began the slow process of carving emancipation in their own image through the establishment of visible institutions like marriage, church, school, and the ballot box. Meanwhile, the old dominion was rapidly being replaced by a new dominion of tobacco capitalists, cigarette consumers, and younger working generations in the fields and factories.

See Also Africa; Caribbean; Chesapeake Region; Christianity; Labor; Plantations.

■ JEFFREY R. KERR-RITCHIE

BIBLIOGRAPHY

- Berlin, Ira. "The Tobacco Revolution in the Chesapeake." In his *Many Thousands Gone: The First Two Centuries of Slavery in North America*. Cambridge, Mass.: Belknap Press of Harvard University Press, 1998. Pp. 109–141.
- Berlin, Ira, et al. *Slaves No More: Three Essays on Emancipation and the Civil War*. New York: Cambridge University Press, 1992.
- Blackburn, Robin. "The Making of English Colonial Slavery." In his *The Making of New World Slavery: From the Baroque to the Modern, 1492–1800*. London: Verso, 1997. Pp. 217–276.
- Gomez, Michael A. *Exchanging Our Country Marks: The Transformation of African Identities in the Colonial and Antebellum South*. Chapel Hill: University of North Carolina Press, 1998.
- Goodman, Jordan. *Tobacco in History: The Cultures of Dependence*. London: Routledge, 1993.
- Kerr-Ritchie, Jeffrey R. *Freedpeople in the Tobacco South: Virginia, 1860–1900*. Chapel Hill: University of North Carolina Press, 1999.
- Klein, Herbert S. *The Atlantic Slave Trade*. New York: Cambridge University Press, 1999.
- Morgan, Edmund S. *American Slavery, American Freedom: The Ordeal of Colonial Virginia*. New York: Norton, 1975.
- Morgan, Lynda J. *Emancipation in Virginia's Tobacco Belt, 1850–1870*. Athens: University of Georgia Press, 1992.
- Morgan, Philip D. *Slave Counterpoint: Black Culture in the Eighteenth-Century Chesapeake and Lowcountry*. Chapel Hill: University of North Carolina Press, 1998.
- Perdue Jr., Charles L., Thomas E. Barden, and Robert K. Phillips, eds. *Weevils in the Wheat: Interviews with Virginia Ex-Slaves*. Charlottesville: University Press of Virginia, 1976.
- Robert, Joseph C. *The Tobacco Kingdom: Plantation, Market, and Factory in Virginia and North Carolina, 1800–1860*. Durham, N.C.: Duke University Press, 1938. Reprint, Gloucester, Mass.: P. Smith, 1965.
- Tadman, Michael. *Speculators and Slaves: Masters, Traders, and Slaves in the Old South*. Madison: University of Wisconsin Press, 1996.
- Thorton, John Kelly. *Africa and Africans in the Making of the Atlantic World, 1400–1800*. New York: Cambridge University Press, 1998.

University of Virginia. Geospatial and Statistical Data Center. United States Historical Census Data Browser. Online. 1998. University of Virginia. Available: <<http://fisher.lib.virginia.edu/census>>.

Walsh, Lorena S. "Slave Life, Slave Society, and Tobacco Production in the Tidewater Chesapeake, 1620–1820." In *Cultivation and Culture: Labor and the Shaping of Slave Life in the Americas*. Edited by Ira Berlin and Philip D. Morgan. Charlottesville: University Press of Virginia, 1993. Pp. 170–199.

Walvin, James. "The Indian Weed: Tobacco." In *Fruits of Empire: Exotic Produce and British Taste, 1660–1800*. New York: New York University Press, 1997. Pp. 66–88.

Smoke See Chemistry of Tobacco and Tobacco Smoke; Cigarettes; Product Design; Tar; Toxins.



Smoking Clubs and Rooms

There is something that is quintessentially Victorian about the image of the smoking room or the club. Middle-class smokers are known in particular to have celebrated their smoking habits, their refinement of taste, and their individual discernment. Countless pamphlets, books, poems, and periodical articles acted as etiquette guides for the aspiring connoisseur. Various anecdotal "whiffs" and "pipefuls" were presented as amusing relief for busy city gentlemen who sought solace in their tobacco in the smoking rooms of clubs, hotels, and bars in the great metropolitan centers of London, New York City, and Montreal. Nowhere is this mood better encapsulated than in the English novelist Ouida's *Under Two Flags: A Story of the Household and the Desert* (1867):

. . . that chamber of liberty, that sanctuary of the persecuted, that temple of refuge, thrice blessed in all its forms throughout the land, that consecrated Mecca of every true believer in the divinity of the meerschaum, and the paradise of the narghilé—the smoking-room.

Early Victorian proscriptions against smoking in the presence of women had encouraged the establishment of exclusively male rooms where men could retire after dinner, though it was the successor too of the salons and coffee houses of eighteenth-century civil society. The smoking room at the gentleman's club was a place for escape and conversation. It was a glorified masculine space (only a handful of female smoking clubs were established), mythologized as an idealized smoking utopia of rest, meditation, and sheer dedicated concentration on the joys of one's cigar.

Often smoking rooms were built in individual homes. Most famous of these was that of Queen Victoria's husband, Prince Albert, whose smoking room door was apparently the only one that did not bear both the legend "V & A," a solitary "A" sufficing. Like the club, the





The smoking room of an Atlantic steamer, 1940. Drawn by T. De Thulstrup. © CORBIS

smoking room was similarly a place of escape but it was also a space upon which the gentleman was expected to stamp his individuality. The smoking room was to be filled with all the trophies of an adventurous life, as well as the paraphernalia of smoking idiosyncrasy. Mirroring the attention to smoking detail found in Sir Arthur Conan Doyle's detective, Sherlock Holmes, J. M. Barrie, in *My Lady Nicotine* (1890), wrote separate chapters on each of the items found in his smoking room: his favorite blend of tobacco, his favorite pipes, his tobacco pouch, his smoking-table, and even his favorite smoking companions.

Smoking-room culture was not restricted to the English-speaking world. When Chichikov visits a minor Russian landowner, Nozdrev, in Nikolay Gogol's *Dead Souls* (1842), he is treated to a tour of his exhibition of tobacco pipes and other smoking instruments, all testaments to his individual character and masculinity.

One must not be too literal in what one considers a smoking room. Much of the importance attached to the club lays in regulated masculinity, in its isolation from the outside world and in the codes of behavior created around the culture of smoking that seek to protect a particular group. Other smokers, denied access to the salubrious surrounding of the club, created their own spatial boundaries through smoking. Voluntary associations—based around sport, trade, or mutual aid—frequently held smoking “concerts” in the late-nineteenth century to celebrate either their achievements or existence, the highly ritualized manner of their smoking serving to identify their special sets of interests. In bars and public houses all around the world men have used cigarettes to create the

same fraternal circle offered to the gentlemen of the club. As anthropologists have noted, the proffering of cigarettes to friends and colleagues assists in defining the group, enclosing a community to the exclusion of others, particularly nonsmokers. Often, as mass observation found in 1930s Britain (Mass-Observation), this could be accompanied by a particular language of smoking, in this case serving to define a particularly aggressive and male working-class smoking identity:

Smokers tend to talk of pitching and throwing the stub, rather than, more tamely, of dropping it; and quite often it is sent flying to some distance. Their actions, moreover, even more than their language, are frequently clothed in aggressiveness. Some speak of "grinding," "crushing," even "killing" a stub, and a favourite trick is to burn it to death in the fire or to drown it in the nearest available liquid. One man said: "I cannot let a stub smoulder. I must crush it out."

In the 1990s several attempts were made to revive the atmosphere of the smoking club with the establishment of a number of **cigar bars**, most notably in New York City and London. These, however, were only a minority interest and many proved short lived. What is more significant to social historians is the complete transformation in the meaning of the smoking room. Whereas Victorian smokers sought to create a regulated space in order to block out the outside world and protect the interests of the tobacco consumer, the twenty-first-century smoking room serves to exclude the smoker from the outside world of majority nonsmokers. The image connoted by Ouida, therefore, stands in sharp contrast to the reality of the small, congested, and uncomfortable smoking room found, for instance, in the modern international airport.



cigar bars cocktail lounges catering to cigar smokers. Cigar bars became popular in the 1990s as many restaurants and bars banned smoking.

■ MATTHEW HILTON

BIBLIOGRAPHY

- Barrie, J. M. *My Lady Nicotine*. London: Hodder and Stoughton, 1890. Reprint (with Margaret Ogilvy), New York: Scribner's, 1926.
- Corti, Egon C. *A History of Smoking*. New York: Harcourt, 1932.
- Hilton, Matthew. *Smoking in British Popular Culture, 1800–2000: Perfect Pleasures*. Manchester and New York: Manchester University Press, 2000.
- Mass-Observation, File Report 3192, 1949, Man and His Cigarette* (Tom Harrisson Mass-Observation Archives, Brighton, England; Harvester Press Microform Publications, 1983) pp. 126–127.



Smoking Restrictions

The social geography of smoking underwent a profound transformation during the twentieth century. At midcentury, cigarettes were a common feature of public places, including restaurants, offices, trains, and hospitals. But from the middle to the end of the century, the range of locations where smoking was considered appropriate inexorably

narrowed. The first restrictions were small-scale and incremental, as separate sections were established that could keep smokers and non-smokers apart without requiring that smoking cease altogether. But as an antismoking movement gained momentum on the strength of both changing cultural norms and scientific evidence about the harms of secondhand smoke, an activity that had once been synonymous with sociability was redefined as unpleasant and dangerous, and smokers began to be banished from many indoor public spaces.



snuff a form of powdered tobacco, usually flavored, either sniffed into the nose or “dipped,” packed between cheek and gum. Snuff was popular in the eighteenth century but had faded to obscurity by the twentieth century.



epidemiological pertaining to epidemiology, that is, to seeking the causes of disease.

The Spread of Public Smoking

During the nineteenth century, when tobacco was most commonly consumed as **snuff** or in cigars and pipes, public attitudes varied widely about the acceptability of its use. The United States and some European nations had vigorous antitobacco movements, closely aligned with temperance and religious crusades, which argued that smoking was a form of moral degeneracy and fought for its prohibition. Several states in the United States outlawed the sale of tobacco, though these measures were later repealed. As mass production and distribution techniques made rolled cigarettes the most prevalent type of tobacco product in the twentieth century, smoking became an increasingly mainstream and popular activity and moved steadily into the public sphere. This trend was fueled in large measure by the aggressive advertising of cigarette manufacturers, who sought to connect their product with images of modernity and sophistication. Cigarette consumption rose steadily during the first half of the century, and by the 1950s smoking had become a fixture of American society, a symbol of pleasure and sociability. About one-half of men and one-third of women smoked, and few public spaces were off limits to the enjoyment of cigarettes.

The first **epidemiological** studies demonstrating the link between smoking and lung cancer in the 1950s began to transform both professional and popular attitudes about the dangers of cigarettes. But the increasing attention to potential health hazards did little to change the acceptability of public smoking. Although smoking rates declined slightly in the wake of landmark reports documenting the link between smoking and lung cancer issued by the Royal College of Physicians in Great Britain in 1962 and the U.S. Surgeon General in 1964, these documents did not immediately trigger a notable shift in the places smoking was allowed. It was not until the 1970s that the modern-day movement emerged to remove cigarettes from public space.

The Emergence of Nonsmokers’ Rights in the 1970s

The first nonsmokers’ rights groups that were formed in the early 1970s drew explicitly on the rhetoric and discourse of the civil rights and environmental movements, claiming that everyone had a right to breathe clean air in places of public accommodation. Prominent early organizations included Group Against Smokers’ Pollution (GASP), a grassroots association with chapters in several states, and Americans for Non-Smokers’ Rights, based in Berkeley, California. Although such groups suggested that nonsmokers could suffer physical harm from cigarette smoke, there was scant data to support this idea, and regulations were



advocated primarily on the ground that smoking was a noxious annoyance. The first limitations were imposed on public transportation. In 1971 United Airlines became the first air carrier to institute nonsmoking sections for their passengers, and in 1973 the Civil Aeronautics Board required that all U.S. airlines create such sections. Similar regulations were instituted that set aside a limited number of seats for smokers on interstate buses. Over the following decade, cities and states around the country began to enact regulations on indoor spaces. In 1973, Arizona passed ground-breaking legislation limiting places where smoking was allowed; Minnesota followed suit two years later, requiring no-smoking zones in buildings open to the public. Many regulations were enacted at the local level. In 1977, Berkeley, California, became the first city to pass an ordinance limiting smoking in restaurants.

These measures served a dual purpose. Public health advocates who were appalled at the toll of illness and death that smoking extracted saw them as a way not only to clear the air that was shared by all, but also to decrease the social legitimacy of smoking. Thus, while the bans were generally framed as a protection of innocent third parties, they also conferred a secondary benefit to smokers themselves by encouraging people to smoke less or not at all.

The 1980s: From Nuisance to Toxin

Although the Surgeon General's 1972 report on smoking identified secondhand smoke as a potential danger to nonsmokers, concerns about the precise nature and extent of the harm remained speculative. It was not until the following decade that scientific evidence began to accumulate that secondhand smoke was a health hazard in addition to a nuisance. In 1980 and 1981, scientific journals published epidemiological research from the United States, Greece, and Japan that suggested that those who breathed "environmental tobacco smoke"

As a result of a smoking ban in restaurants and bars in many of Cape Cod's towns, three men stand in a snow storm to smoke their cigarettes outside the Hyannis, Massachusetts, bar/restaurant Bobby Byrne's, 6 March 2003. AP/WORLD WIDE PHOTOS



Japanese smokers gather around ashtrays in a corner of a Tokyo railway station, 18 October 1998. Restrictions on smoking have been springing up in Japan. Smokers are limited to special parts of train platforms and small no-smoking sections are common in family-style eateries. AP/WORLD WIDE PHOTOS

suffered from decreased lung function and increased risk of lung cancer. Since these investigations involved people who had experienced heavy exposure to smoke in the home over long periods of time, there were questions about whether and to what extent the data could be extrapolated to other enclosed public spaces. But over the next several years, additional studies gave weight to the argument that nonsmokers suffered physical harm by breathing others' cigarette smoke. Reports from a variety of scientific agencies, including the National Academy of Sciences, the Office of the U.S. Surgeon General, and the Environmental Protection Agency, lent an official imprimatur to the danger and gave a powerful impetus to a movement that already had considerable social support. The most damning statement against environmental tobacco smoke (ETS) came in 1992, when the Environmental Protection Agency declared that ETS was a Class A **carcinogen**, placing it in the same category as such known and deadly toxins as asbestos and benzene.



carcinogen a substance or activity that can cause cancer. Cigarette smoking has been proven to be carcinogenic, that is, cancer causing.

By the mid-1980s, almost all states had enacted some restrictions on where people could smoke in public; some 80 percent of the U.S. population lived in areas covered by such laws. Between 1985 and 1988, the number of communities around the country that had enacted laws restricting public smoking almost quadrupled, to more than 300. In 1986 the U.S. Congress banned all smoking on flights of less than two hours, and two years later banned smoking on all domestic flights.

As the movement to eliminate cigarettes from public spaces gained momentum, the tobacco industry recognized the grave threat that the increasing marginalization of smoking posed to their market and undertook a variety of activities to maintain its acceptability. Attempting to reframe the issue as one of manners, not health, the industry took out advertisements that urged people to resolve disputes over public smoking through polite accommodation rather than the heavy hand of legal regulation. Industry representatives aggressively lobbied politicians and business leaders in an effort to combat regulations on smoking in restaurants and workplaces, and provided covert funding to so-called smokers' rights groups that sought to portray the move to ban public smoking as intolerant zealotry. At the same time, the industry engaged in a variety of practices to undermine scientific evidence and perpetuate uncertainty about whether secondhand smoke was truly harmful. The industry created the Center for Indoor Air Research to fund studies that would refute the growing evidence. But in spite of the enormous financial resources of the industry, the movement to limit the spaces where smoking was allowed had broad-based public support, and the spheres within which smoking was legally and socially acceptable shrank steadily and dramatically in the last two decades of the twentieth century.

Restrictions Abroad

Because smoking is a behavior deeply rooted in cultural attitudes toward pleasure, risk, sociability, manners, and individual rights, there has been wide variation in the ways that countries around the world have limited smoking in public spaces. Public sentiment in many countries runs against smoking bans as an unwarranted state intrusion on a personal habit. Although the trend in most industrialized democracies since the late 1900s has been toward enacting some form of legal regulation, the scope of these laws and the extent to which they are observed varies widely. France, for example, first passed regulation limiting smoking in places "open to the public" in the 1970s and attempted to strengthen these limits through subsequent measures in the 1990s, but the laws have never been vigorously enforced, and smoking is routine in many places where it is rare in the United States, such as schools, hospitals and restaurants. Smoking restrictions in Japan have spread much more slowly than in the United States or Europe, and have generally been justified out of consideration for others rather than as a health risk. Reflecting the growing international consensus on limiting smoking, airlines in almost all countries began in the 1980s to institute some form of restriction on smoking, though many continue to maintain smoking sections.

A monk sits before a golden Buddha shrine in Thailand. Smoking inside religious shrines like this one is strictly forbidden.

© PAUL SEHEULT; EYE UBIGUITOUS/
CORBIS



Restrictions in the Twenty-First Century: How Far to Press?

By the end of the twentieth century, there was in the United States a strong cultural norm, buttressed by science, against smoking in indoor public spaces. Nevertheless, controversies continued to swirl over whether restrictions should extend beyond enclosed environments such as restaurants and workplaces, where the health risk to nonsmokers was clear, to outdoor areas. In 1995 the city of Palo Alto, California, banned smoking within 20 feet (6 meters) of all public buildings, and other cities began to enact ordinances that prohibited smoking in places such as parks, beaches, and sports arenas. But such moves could provoke a backlash. In 2000 the community of Friendship Heights, Maryland, banned smoking in all public places, but was forced to repeal the ban a year later in the face of widespread opposition. In 2001, the town once again made headlines after city council members introduced a measure—subsequently vetoed—that would subject people to fines for smoking in their own homes if the smoke crossed over their property line into their neighbor's home.

Even bars, which were among the last bastions of indoor smoke, came under attack. In 1998 California extended its restaurant smoking ban to include pubs, and in 2003 New York City banned smoking in virtually all bars and restaurants. The laws were justified as workplace safety measures to protect waiters, bartenders and other employees who had no choice but to spend hours in smoky environments. Smoking bans have been enacted in other countries as well, sometimes at the national level. On 30 March 2004, Ireland became the first European country to ban smoking in all workplaces, including pubs and restaurants. But it remains to be seen whether these bans can be successfully enforced in the long run.

The debate over whether smoking should be banished from all public spaces was encapsulated in an exchange in 2000 in the journal *Tobacco Control*. The journal's editor, Simon Chapman, one of the leading figures in the international antitobacco movement, argued in an editorial that the increasingly restrictive stance toward smoking in public

risked tainting tobacco control advocates into “the embodiment of intolerant, **paternalistic** busybodies, who not content at protecting their own health want to force smokers not to smoke, even in circumstances where the effects of their smoking on others is immeasurably small” (Chapman 2000). But another prominent antitobacco activist argued, “Even if outdoor environmental tobacco smoke were no more hazardous than dog excrement stuck to the bottom of a shoe, in many places laws require dog owners to avoid fouling public areas. Is this too much to ask of smokers?” (Repace 2000).

As this exchange suggests, the contemporary movement to restrict public smoking has not only involved questions of health but has also touched on sensitive social, cultural, and political issues. Even as the scientific evidence about the danger of environmental tobacco smoke has grown more powerful, debates have continued to rage over how far smoking restrictions should go and the role of the state in constraining individual behavior.

See Also Advertising Restrictions; Regulation of Tobacco Products in the United States; Secondhand Smoke.

■ JAMES COLGROVE

BIBLIOGRAPHY

- Bayer, Ronald, and James Colgrove. “Science, Politics and Ideology in the Campaign Against Environmental Tobacco Smoke.” *American Journal of Public Health* 92, no. 6 (2002): 949–954.
- Brandt, Allan M. “Blow Some My Way: Passive Smoking, Risk, and American Culture.” In *Ashes to Ashes: The History of Smoking and Health*. Edited by Stephen Lock, Lois Reynolds, and E. M. Tansey. Amsterdam: Rodopi, 1998.
- Brownson, Ross C. et al. “Environmental Tobacco Smoke: Health Effects and Policies to Reduce Exposure.” *Annual Review of Public Health* 18 (1997): 163–185.
- Chapman, Simon. “Banning Smoking Outdoors is Seldom Ethically Justifiable.” *Tobacco Control* 9 (2000): 95–97.
- Feldman, Eric A., and Ronald Bayer, eds. *Unfiltered: Conflicts Over Tobacco Policy and Public Health*. Cambridge, Mass.: Harvard University Press, 2004.
- Goodin, Robert. *No Smoking: The Ethical Issues*. Chicago: University of Chicago Press, 1989.
- Kluger, Richard. *Ashes to Ashes: America’s Hundred-Year Cigarette War, the Public Health, and the Unabashed Triumph of Philip Morris*. New York: Knopf, 1996.
- Nathanson, Constance. “Social Movements as Catalysts for Policy Change: The Case of Smoking and Guns.” *Journal of Health Politics, Policy and Law* 24, no. 3 (1999): 421–488.
- Rabin, Robert L., and Stephen Sugarman, eds. *Regulating Tobacco*. Oxford: Oxford University Press, 2001.
- Repace, James. “Banning Outdoor Smoking Is Scientifically Justifiable.” *Tobacco Control* 9 (2000): 98.
- Sullum, Jacob. *For Your Own Good: The Anti-Smoking Crusade and the Tyranny of Public Health*. New York: Free Press, 1998.



paternalistic fatherly; acting as a parent.

Although paternalism presumes an obligation for the stronger to provide for the weaker, it implies superiority and dominance over them as well. For example, slave masters often had paternalistic feelings for their slaves, whom they considered childlike.



Smuggling and Contraband



contraband trade traffic in a banned or outlawed commodity. Smuggling.

There is no comprehensive study of tobacco smuggling and contraband in the sixteenth, seventeenth, and eighteenth centuries but the work that has been done for particular countries mentioned here suggests that smuggling and contraband can be broken down into three main spheres of activity. In the New World *rescate*, or **contraband trade**, between colonial producers and foreign interlopers challenged the efforts of mercantilist European states to monopolize the trade of their colonies in the interest of the metropolitan economy. In Europe, with the exception of Holland and the Spanish Netherlands, most governments classified tobacco as both a pernicious and luxury commodity and drew considerable revenues from it by levying heavy taxes and assigning trade, manufacture, and distribution to either private or state monopolies. Domestic tobacco cultivation was either prohibited or subjected to severe restrictions. European smuggling might be directed either to evade prevailing duties and regulations on imported tobacco or to the illegal cultivation and distribution of the home-grown product. Since the whole objective of tobacco smugglers was to avoid notice, historians have to assume that many of them were successful in doing so and that the official complaints and accounts of their activities only represent the tip of a much larger iceberg.

Contraband Trade at New World Plantations

CARIBBEAN REGION. French and English vessels were present in the Caribbean from the 1560s engaged either in privateering or in contraband trade at Spanish or indigenous settlements on the islands and the Spanish Main. Although it is likely that tobacco—featured with hides, sugar, and other commodities—acquired by illegal barter during these early years, it was not until the 1590s that Spanish colonial officials reported that the *rescate* in tobacco was reaching crisis proportions. By then the traffic was particularly noticeable at Caracas, Cumaná, and Cumanagoto in eastern Venezuela, at Port-of-Spain on Trinidad, and at San Tomé de la Guayana on the lower Orinoco River. French, English, Dutch, and occasional Irish traders were seen there. Their interest in the trade reflected growing consumer demand for tobacco in northwestern Europe and the increasing risks of acquiring it from Spain or Portugal.

After the outbreak of the Anglo-Spanish war in 1585 periodic embargos on foreign shipping in Iberian ports seriously disrupted trade with the peninsula. Faced by mounting costs of maintaining and protecting its annual *flota* (Atlantic convoy) to the Caribbean, the Spanish monarchy abandoned any attempt to maintain direct trade with its more marginal colonies in the region. The struggling settlements in eastern Venezuela, Trinidad, and the Orinoco were left to pay high prices for sparse supplies of European goods received either from coastal traders dispatched from the official ports-of-call of the *flota* or from other colonies privileged to receive special trade vessels with Spain. It is in these circumstances that the marginal colonies chose to trade with interlopers. Censorious Spanish officials dismissed the settlers as “riff-raff who had no other source of income than the tobacco crop that was

so esteemed in Flanders and England” (Andrews, p. 227). In fact the trade was vital to the impoverished communities and all, including local magistrates, participated in it. The planters at Cumanagoto were reported to have sold some 30,000 pounds of tobacco in 1603.

By 1606 the volume of the *rescate* had grown to such proportions that the Spanish Crown prohibited all tobacco growing in eastern Venezuela and the Windward Islands for ten years. Facing summary execution if they were captured in the latter colonies, foreign interlopers turned their attention instead to the tiny Trinidad and Orinoco settlements that continued to provide them with approximately 200,000 pounds of tobacco each year between 1605 and 1612. Don Fernando de Berrio, governor of the tiny settlements on Trinidad and the Orinoco, it was reported, “conducts the business of bargaining, divides the goods among his companions and pays for them.” At Trinidad “in Lent they say four ships arrived, the crews whereof lodged in the town as they might in their own country. Some of them stayed in the monastery of St. Francis, where they say a good friar provided them with a chicken on Friday, and others stayed in the governor’s house, allegedly to treat him when he was sick” (Andrews 1978). In 1612 the onset of unwelcome investigations by a specially commissioned Spanish judge immediately diminished and, within four or five years, shut down the illegal trade.

Illicit barter at undersupplied Spanish colonies resurrected in the second quarter of the seventeenth century, operating from the Dutch colony on Curaçao and the network of Dutch, English, and French settlements on Barbados, St. Christopher, Guadeloupe, Martinique, Montserrat, Nevis, and Tobago. Cut off from trade with Spain by the effective blockade enforced by Dutch privateering fleets, Spanish colonists relied particularly on the Dutch to supply them with slaves and vital European goods in exchange for tobacco, hides, cacao, and other commodities. In the 1640s and 1650s the catastrophic drop in tobacco prices and disruptions of civil war at home made the French and English tobacco colonies in the Lesser Antilles almost exclusively dependent on Dutch traders. The unwillingness of the English West Indian planters to comply with acts of parliament of 1650 and 1651 that prohibited foreign vessels from trading at English colonies prompted Oliver Cromwell to send fleets to the Caribbean to deal with Dutch interlopers in 1651, 1654, and 1655. It was Dutch traders who kept French and English planters going when their own national merchants showed no interest and it was the slaves, equipment, and practical knowledge supplied by the Dutch that allowed these colonies to make the transition from tobacco to sugar production after the mid-seventeenth century.

BRAZIL. Commercial production of tobacco in Brazil seems to have begun around 1600, concentrated thereafter mainly around Bahia. The first monopoly contracts for export appear to have been granted to private entrepreneurs in the early 1630s. In 1644, however, prompted by the serious shortage of slaves for the Brazilian sugar **plantations** after the loss of Angola to the Dutch, the restored Portuguese monarchy authorized the Bahian planters to trade their product directly to Mina. This allowed Brazilian producers to develop a thriving black market in the waters off the West Africa coast, selling their tobacco to foreign merchants rather than exchanging it for slaves.



plantation historically, a large agricultural estate dedicated to producing a cash crop worked by laborers living on the property. Before 1865, plantations in the American South were usually worked by slaves.



Woodcut showing United States revenue officers attacking smugglers at Masonborough, North Carolina, 1867.
© BETTMANN/CORBIS

BERMUDA, VIRGINIA, MARYLAND. English settlers on Bermuda seem largely to have complied with the shipping monopoly of the Bermuda Company but, knowing their own tobacco to be inferior, made their profits by trading for tobacco grown at Spanish West Indian plantations and shipping it to England as their own less heavily taxed product. Settlers in Virginia appear to have been interested in trade with the Dutch from the very onset of commercial production. From 1621 to 1776 all tobacco exported from the English Chesapeake colonies of Virginia and Maryland was required to be shipped to England first, no matter what its ultimate destination. The Dutch settlement of New Amsterdam, established on the Hudson River in 1624, offered a means of avoiding English customs duties which were higher than those prevailing in Holland. The Dutch were also willing to buy in bulk and give long-term credit. A brisk trade developed between Virginia and New Amsterdam in the 1620s and 1630s, supplemented by a growing number of vessels from Holland in the 1640s when the connections with England were disrupted by the Civil War.

Chesapeake planters vigorously opposed the exclusion of the Dutch and continued to ship with them in spite of the restrictions imposed by the Cromwellian legislation of 1650 and 1651. They were further encouraged by fact that New Amsterdam had abolished duties on tobacco in 1653. In 1660 the governors of Virginia and New Amsterdam concluded a free trade treaty. Neither stern warnings from London nor the passage of the Navigation Act of 1661 dissuaded the English Chesapeake colonists, as the Council for Foreign Plantations

complained in 1662, from conveying “both by land and water . . . great quantities of tobacco to the Dutch whose plantacons [plantations] are contiguous” (Van der Zee 1978). The **acquisition** of New Amsterdam (New York) in 1667 put an end to this intercolonial trade; however, by this time Virginia and Maryland producers were engaged in illicit direct trade to Scotland, Ireland, and Europe.

Examples of Smuggling in Western Europe

GREAT BRITAIN. Tobacco imported into England from 1606 on was subjected to significant customs and impost dues that were differentiated to favor the product of English over foreign colonies. Royal proclamations throughout the reigns of James I and Charles I indicate that smuggling was already a serious problem. During the seventeenth century, although tobacco was quietly run ashore in obscure harbors and creeks, most smuggling took place on the customs quays in London and the outports by collusion between underpaid and overworked customs officers and merchants. Foreign tobacco was misidentified as originating from English plantations. Until 1713 tobacco declared unfit for consumption was free from **duty** and merchants commonly bribed customs agents to declare good tobacco as damaged and therefore duty free. Under-weighting of imported and exported tobacco **hogsheads** was rife. As London retailers complained in 1625, “Lewd persons under pretence of selling tobacco keep unlicensed alehouses and others barter with mariners for stolen and uncustomed tobacco” (*Calendar of State Papers Domestic, 1625–6 1897*).

In the early eighteenth century systematic efforts to crack down on customs fraud shifted the focus of smuggling to the re-landing trade. Customs dues were remitted for tobacco re-exported for sale abroad. Merchants reclaimed their duty by re-exporting their tobacco and subsequently conveyed it to Dunkirk, Ostend, the Channel Islands and the Isle of Man, from where it was clandestinely re-landed in Devon, Cornwall, Dorset, the eastern and western Midlands, Ireland, and Scotland. Most smugglers were peaceable, honest merchants and seamen, although the profits of the proximity to London led to the emergence of criminal armed gangs in Kent and Sussex by the early eighteenth century. By 1750 some one-third of the total 8.6 million pounds of tobacco consumed in England and Scotland had not been subjected to full duties. Excise duties were imposed in 1789 ensuring that illegal trafficking would continue.

FRANCE. In France tobacco use developed very slowly and by the 1670s consumption levels were only one-tenth of those prevailing in England. The import, manufacture, distribution, and retail of tobacco came under a state monopoly in 1674. The jurisdiction of the monopoly extended to all but the eastern frontier provinces and domestic cultivation was prohibited within it except for certain parishes in Normandy and the region around Bordeaux and Montauban in the southwest. External trade in tobacco was free but its import was restricted to specific ports where it could be sold only to the agents of the monopoly. For the latter maritime smuggling proved to be the least problematic in the period before the French Revolution. Although legitimate merchants did occasionally make clandestine landings, serious maritime smuggling was



acquisition the purchase—sometimes called a merger—of a smaller company by a larger one. During the late twentieth century, major tobacco companies diversified their holdings through acquisition of nontobacco products.



duty a tax, usually a tax on certain products by type or origin. A tariff.

hogshead a large wooden barrel formerly used to store and transport cured leaf tobacco. A hogshead typically held approximately 800 to 1000 pounds (350 to 450 kg) of tobacco.



not a sideline of legitimate commerce but the work of specialists using small boats to convey cargo to organized networks ashore. In the Mediterranean domestic grown tobacco from the southwest was routinely exported and then re-landed on the Provençal coast. Smuggling was particularly rife in Brittany at the turn of the eighteenth century, where lesser landed gentleman, supported by complacent local magistrates and clergy, maintained armed bands to run in cargoes from the Channel Islands.

Yet, the massive land smuggling of tobacco grown in the exempt eastern border provinces was much more difficult to control. That traffic tended to be carried by gangs formed from the extended families of the rural poor. Soldiers in frontier garrisons also sold contraband tobacco to civilians to supplement their pay. Officers of the monopoly found it impossible to control the thousands of small retailers who would mix smuggled and legal tobacco. In order to protect its revenues the French Crown increasingly encouraged the import of foreign tobacco and strictly curtailed domestic cultivation.

SPAIN AND PORTUGAL. Tobacco imported into Spain moved from free exchange subject to excise taxes in the sixteenth century, to an exclusive monopoly of licensed private contractors in the seventeenth century to a state-administered monopoly in 1701. Government records indicate that the Crown was especially preoccupied by the need to eradicate tobacco contraband in Spain during the period from 1654 to 1786. In the second half of the eighteenth century lax authorities in French Catalonia harbored roving bands of smugglers who regularly ran tobacco down to Spain. Portugal offered another source of contraband tobacco. Tobacco was commercially grown in Portugal from 1570s. The first monopoly contract for the sale of tobacco there was probably granted in the early 1630s and within ten years it was clear that early efforts at regulation were already being undermined by expanding contraband. Desperate for revenue and anxious to protect the Brazilian plantations, the newly restored Portuguese monarchy continued to sell regional monopoly contracts for Portugal and the Atlantic islands, overseen after 1674 by the Junta da Administração do Tabaco.

In spite of these efforts, large quantities of tobacco legally shipped from Brazil were surreptitiously unloaded from the Brazil fleets before they were inspected, or filched from state or private warehouses. Sailors on the fleets also smuggled tobacco ashore to sell on the black market. Others on the India fleets furtively carried it out to Goa where its sale undercut the monopoly that had been in existence since 1624. Foreigners who had purchased Brazilian tobacco off West Africa quietly slipped it into Lisbon and other ports. Although no tobacco could be grown domestically without licence, both male and female religious houses became notorious centers of production and sale, dispatching large quantities of it over the land border into Spain. Smuggling was particularly active between the Algarve and Andalucía and efforts to control it led to riots in which local officials as well as ordinary citizens participated.

See Also State Tobacco Monopolies; Taxation; Trade.

■ JOYCE LORIMER

BIBLIOGRAPHY

- Andrews, Kenneth R. *The Spanish Caribbean: Trade and Plunder 1530–1630*. New Haven, Conn.: Yale University Press, 1978.
- Calendar of State Papers, Domestic Series, of the Reign of Charles I, 162–6*. London: HMSO, 1897.
- Goslinga, Cornelis Christiaan. *The Dutch in the Caribbean and on the Wild Coast, 1580–1680*. Gainesville: University of Florida Press, 1971.
- Hanson, Carl A. "Monopoly and Contraband in the Portuguese Tobacco Trade, 1624–1702." *Luso-Brazilian Review* XIX 2 (1982): 149–168.
- Klooster, Wim. *Illicit Riches: Dutch Trade in the Caribbean, 1648–1795*. Leiden, the Netherlands: KITLV Press, 1998.
- Kupp, Jan "Dutch Notarial Acts Relating to the Tobacco Trade of Virginia, 1608–1653." *William and Mary Quarterly* 30, no. 4 (1973): 653–655.
- Lorimer, Joyce. "The English Contraband Tobacco Trade from Trinidad and Guiana, 1590–1617." In *The Westward Enterprise: English Activities in Ireland, the Atlantic, and America 1480–1650*. Edited by Kenneth R. Andrews, Nicholas P. Canny, and P. E. H. Hair. Liverpool, England: Liverpool University Press, 1978.
- MacInnes, Charles M. *The Early English Tobacco Trade*. London: Kegan Paul, Trench, Trubner, 1926.
- Menard, Russell R. "The Tobacco Industry in the Chesapeake Colonies, 1617–1730." *Research in Economic History* 5 (1980): 109–177.
- Nash, Robert C. "The English and Scottish Tobacco Trades in the Seventeenth and Eighteenth Centuries: Legal and Illegal Trade." *Economic History Review* 35, no. 3 (1982): 354–372.
- Price, Jacob M. *France and the Chesapeake: A History of the French Tobacco Monopoly, 1674–1791, and of its Relationship to the British and American Tobacco Trades*. Ann Arbor: University of Michigan Press, 1973.
- Rive, Alfred. "A Short History of Tobacco Smuggling." *Economic Journal* 4 (1929): 554–569.
- Sluiter, Engel. "Dutch-Spanish Rivalry in the Caribbean Area, 1594–1609." *Hispanic American Historical Review* 28 (1948): 165–196.
- Van der Zee, Henri. *A Sweet and Alien Land: The Story of Dutch New York*. New York: Viking, 1978.
- Williams, Neville. "England's Tobacco Trade in the Reign of Charles I." *Virginia Magazine of History and Biography* 65, no. 4 (1957): 403–449.



Snuff

Rather than constituting a short-lived historical anomaly, as it is often portrayed, snuff-taking was the most popular mode of consuming tobacco in European societies of the eighteenth and early-to-mid-nineteenth centuries, and in some countries it maintained this position well into the twentieth century. In fact, nasal snuff—a dry, powdered form of tobacco—was present from the very earliest introduction of the plant into Europe (Rogozinski 1990). Snuff was also widely used by Native American peoples for millennia in the pre-Columbian era, and the practice of snuffing was mentioned in some of the earliest accounts of Amerindian tobacco use by European explorers of the New World.

A native wagon driver takes snuff by rubbing it on his teeth. In the 1840s and 1850s, many Dutch farmers immigrated to the Cape of Good Hope, Africa, and hired native laborers to help with the journey.

© CORBIS



Somewhat paradoxically however, at its zenith in eighteenth-century, Europe snuff was understood to be a distinctively aristocratic, refined mode of consuming tobacco, one which had its origins within the French court. While the spread of the practice did gain impetus from its esteem among the French aristocracy, it was in fact Spain that was the first Old World nation to make widespread use of tobacco in this form (Rogozinski).

Nonetheless, following from its purported French courtly origins, the practice of snuffing by the European elite developed into a civilized art involving highly elaborate rituals and codes of etiquette. Even the seminal manners text of the time, Antoine de Courtin's *Rules of Civility*, contains an entry on its use: "If you see Tobacco, either in Snuff or cut, you must not run presently to his Box, and either chew or thrust it up into your Nose; you must rather expect till he offers it, and in that case 'tis civil to pretend to take it, though of your self you have no inclination" (Courtin 1703).

Offering snuff involved a courtly dandy adopting the correct stance, holding the snuffbox appropriately, and presenting it to others such that his wrist cuffs and jewelry were displayed to their best advantage. If accepted, the recipient would take a pinch in a manner which again allowed for a similar display of refinement. Snuff would be administered into the nostrils, sometimes with a specially designed ladle, and snorted so as to induce a sneeze or a series of sneezes. The manner in which one took a pinch announced one's pedigree through displaying awareness of the etiquette surrounding taking snuff and, to a degree, one's individuality, through the addition of discretionary personal touches to the rituals involved. There were even snuff schools in the early eighteenth century established for the sole purpose of teaching the fashionable the socially correct ways to use snuff.



Snuff Accoutrements

The ritualized ostentation of aristocratic snuffing was by no means simply confined to the practices involved. Snuffing at this time also involved equipment which itself was ornate and elaborately adorned. Before snuff was widely manufactured it was created by hand-grating tobacco (freshly grated snuff was known as *rappee*) from rolled blocks known as *carrots* by rasps made of ivory, wood, or metal which were highly ornamented, painted, or engraved. By the middle of the eighteenth century, snuff was more commonly bought in a pulverized form, and accordingly such equipment became less necessary. Snuff-boxes, nonetheless, maintained their position as the snuffer's essential fashion accessory and were so lavishly produced—often made from gold and silver and inset with precious stones—that they were considered items of jewelry and exchanged as gifts among the aristocracy.

Snuff concoctions were made from a broad array of substances in addition to different varieties of tobacco and tailored to individual tastes and constitutions. Snuff was regarded in a similar manner to fine wines today, with connoisseurs well-versed in the multitude of types available and their relative costs and origins. It was often perfumed and flavored by substances such as orange oil, rose leaves, musk, ginger, and even

The Pinch of Snuff. Lithography by John James Chalon. © STAPLETON COLLECTION/CORBIS



opium an addictive narcotic drug produced from poppies. Derivatives include heroin, morphine, and codeine.

gallant a well-dressed, well-spoken gentleman, attentive to the needs and concerns of ladies, but in a proper way. Rhett Butler is a gallant.

Further Reading

For an excellent all-round discussion of snuff and other forms of smokeless tobacco, see Jan Rogozinski's *Smokeless Tobacco in the Western World, 1550–1950* (1990). See also Jordan Goodman's *Tobacco in History: The Cultures of Dependence* (1993), particularly pages 69–89; Jason Hughes's *Learning to Smoke: Tobacco Use in the West* (2003), particularly pages 66–75; James Walton's *The Faber Book of Smoking* (2000), particularly pages 49–57; and Iain Gately's *La Diva Nicotina: The Story of How Tobacco Seduced the World* (2001), particularly chapter 6.

pepper and mustard. Snuff was also spiked with a range of substances to enhance its properties. Some historical sources suggest that the adulteration of snuff extended to highly toxic and psychotropic substances. Włodzimierz Koskowski, in his *The Habit of Tobacco Smoking* (1955), for example, provides a list that includes lead, arsenic, hydrogen cyanide, cocaine, hashish, and **opium**.

Societal Aspects

The excesses of the snuffing **gallant** invited lampoon from antitobacco writers of the day. Many seized upon the potentially slovenly aspects of snuff-taking. In his 1720 publication *Lust of the Longing Nose* Johann Heinrich Cohausen, for example, remarked that snuffers had “dust heaps” for noses. Other satirists referred to pretty young ladies wearing moustaches of scented powder (Brooks 1952). Indeed, such writings highlight the inherent contradiction of snuff-taking: on the one hand, it was considered to mark the height of refinement, a mode of tobacco use a world away from plebeian pipe smoking, yet on the other, snuffing involved the transgression of conventional manners and mores through the public expulsion of mucus and saliva, the insertion of fingers into orifices, and so forth.

As suggested above, however, the practice of snuffing was not confined to the European aristocracy. Historical evidence suggests that it was used by all levels of society and both genders by the middle of the eighteenth century. Snuffing by members of the working classes was not necessarily undertaken simply in imitation of courtly and aristocratic figures, but also because it was an economical means of consuming ground tobacco stalks and low grade leaves; though, even at the height of snuff-taking, smoking remained an important mode of consumption by this social group. Snuffing was also practiced in the Indian subcontinent, Tibet, Africa, and Japan. In China, where tobacco smoking had been forbidden soon after the beginning of the Qing Dynasty (in 1644), the use of Snuff gained rapid popularity—snuff was deemed acceptable as it was considered to be an effective medicinal remedy for a range of ailments. Partly because of Climatic conditions, the Chinese stored snuff in sealable bottles which were often crafted from precious materials and were intricately decorated—the technique for painting the inside of snuff bottles became an art form in itself. Like European snuff boxes, these snuff bottles came to be highly prized, such that by the nineteenth century they were used as currency within Chinese society for the purchase of favors, and as a source of leverage to social positioning.

In Sweden, Denmark, and Norway wet oral snuff—a moister, coarse- or ribbon-cut form of tobacco placed between the lip and the gums—became one of the most popular forms of tobacco from the mid-nineteenth to around the mid-twentieth century. Oral snuff still constitutes a significant proportion of tobacco sales in these countries, particularly in Sweden.

North Americans have shown a historical preference for chewing tobacco, but they too came to use wet snuff—which was applied to the gums, sometimes by dipping with a stick, or held in the cheek and sucked, and also chewed—by the end of the nineteenth century. Today, remnants of the golden age of snuff can still be seen. For example,

there are filled snuffboxes in both the House of Commons in the United Kingdom and in the U.S. Senate Chamber.

See Also China; Native Americans; Social and Cultural Uses.

■ JASON HUGHES

BIBLIOGRAPHY

- Arents, George, Jr. *Tobacco, Its History Illustrated by the Books, Manuscripts, and Engravings in the Library of George Arents, Jr.* 5 vols. New York: Rosenbach Company, 1937–1952.
- Brooks, Jerome E. *The Library Relating to Tobacco, Collected by George Arents, by Jerome E. Brooks.* New York: The New York Public Library, 1944.
- . *The Mighty Leaf: Tobacco through the Centuries.* Boston: Little, Brown, 1952.
- Cohausen, Johann Heinrich. *Lust of the Longing Nose.* Leipzig, Germany, 1720.
- Courtin, Antoine de. *The Rules of Civility; or, The Maxims of Genteel Behaviour, As They Are Practis'd and Observ'd by Persons of Quality, upon Several Occasions,* 12th ed. London: Printed for Robert Clavell and Jonathon Robinson in St. Paul's Church-Yard, and Awnsham and John Churchill, in Pater Noster Row, 1703.
- Curtis, Mattoon M. *The Story of Snuff and Snuff Boxes.* New York: Liveright Publishing Corporation, 1935.
- Fairholt, Frederick William. *Tobacco: Its History and Associations.* London: Chapman & Hall, 1859.
- Gately, Iain. *La Diva Nicotina: The Story of How Tobacco Seduced the World.* London: Simon & Schuster, 2001.
- Goodman, Jordan. *Tobacco in History: The Cultures of Dependence.* London: Routledge, 1993.
- Hughes, Jason. *Learning to Smoke: Tobacco Use in the West.* Chicago: University of Chicago Press, 2003.
- Koskowski, Wlodzimierz. *The Habit of Tobacco Smoking.* London: Staples Press, 1955.
- Mack, Peter Hughes. *The Golden Weed: A History of Tobacco and of the House of Andrew Chalmers, 1865–1965.* London: Newman Neame, 1965.
- Rogozinski, Jan. *Smokeless Tobacco in the Western World, 1550–1950.* New York: Praeger, 1990.
- Walton, James, ed. *The Faber Book of Smoking.* London: Faber, 2000.



Social and Cultural Uses

It is helpful for explanatory purposes to categorize the socio-cultural development of tobacco use according to three main stages: pre-Columbian, describing tobacco use among the indigenous peoples of the Americas prior to contact with European explorers; modern, referring broadly to tobacco use in European societies—and its spread beyond to other parts of the globe—during the sixteenth to nineteenth centuries;

and contemporary, concerning tobacco use from the late-nineteenth century to the present day. However, notwithstanding this separation into historical stages, it is also useful to understand these developments as a progressive whole. While it is impossible to provide here anything but a very general account of long-term global changes in the social and cultural uses and associations of tobacco, such a broad-brush approach serves to highlight an overall pattern to such changes, which is in itself significant.

At the most general level, this pattern can be understood as being marked by a shift from the use of tobacco to lose control—as an intoxicant—as a characteristic of pre-Columbian use, and a move toward the use of tobacco as a means of self-control, particularly within the contemporary era. That is to say, the overall direction of change can be seen to involve a move away from the use of tobacco to escape so-called normality and toward its use as an instrument to return to normality. This transformation is in turn historically premised on the consumption of progressively less potent strains, species, and varieties of tobacco, and modes of consuming these.

An associated long-term trend has been, generally speaking, a move away from the idea of tobacco use as a mark of general sociability and as a plant of great symbolic and spiritual significance, and toward the idea of tobacco as a commodity of great material significance—a drug to be consumed increasingly in an individual manner, the practice of which might only be considered sociable within the context of highly specific peer groups.

This brief and greatly simplified synopsis of the long-term development of socio-cultural uses and understandings of tobacco is intended to serve here as a framework to help introduce and contextualize the distinctive characteristics of each stage as discussed below.

Pre-Columbian Understandings and Uses

The pre-Columbian era of tobacco use was one characterized by the consumption of highly potent strains of the plant in accordance with rituals and beliefs that stressed its importance in mediating the bonds between humans and between humans and the spiritual world, as well as beliefs concerning the fundamental importance of tobacco to health and healing within Amerindian cosmology.

AMERINDIAN ORIGINS. While a few scholars suggest that tobacco may have also been known in ancient Egypt (Balabanova et al. 1993), it is widely agreed that tobacco was unknown outside of the Americas until the late-fifteenth century. Yet the plant had been in use by indigenous peoples for millennia prior to contact with Columbus and other explorers from Europe (Wilbert 1991). Prevailing present-day understandings of tobacco might lead us to believe that **snuff** and cigars, for instance, have their origins in courtly and aristocratic circles in Europe. However, these and almost every other conceivable mode of tobacco consumption—chewing; drinking (the juice of the tobacco plant); licking (rubbing tobacco resin against gums and teeth); topical application (to wounds, bites, and stings); ocular absorption; anal injection; and, of course, smoking—had been developed by Native American peoples long before Columbus first encountered tobacco on his voyage to San Salvador.



snuff a form of powdered tobacco, usually flavored, either sniffed into the nose or “dipped,” packed between cheek and gum. Snuff was popular in the eighteenth century but had faded to obscurity by the twentieth century.



An engraving of a tattooed Iroquois Indian holding a snake and smoking a peace pipe, c. 1701. © CORBIS


SPIRITUAL ALLIANCES. The use of tobacco by different Native American peoples varied enormously. What follows is a generalized account, one which focuses as far as possible on relatively widespread practices and understandings.

Tobacco had enormous spiritual significance within Amerindian belief systems: it was understood as a plant that had supernatural origins as a substance that could facilitate transportation into and within the spiritual world, as the locus of certain spiritual beings, and as an offering to appease the spirits. Tobacco was characteristically offered as part of what was understood to be a reciprocal exchange: Spirits themselves were seen to have an insatiable hunger for tobacco, which, since they could not grow the plant for themselves, made them dependent on humans; in return for tobacco, spirits could bestow good favor and

fortune upon their providers. Both material tobacco and tobacco smoke were used to this end.


In ritual offerings, tobacco leaves would be tossed into the air or blown from the hand and accompanied by appropriate words of bequest and request. The Huron, for example, would throw tobacco into fires to implore health; over rocks to ensure the safety of their villages; or into lakes to request safe passage (Tooker 1964). Tobacco was smoked on almost every formal occasion; the rising tobacco smoke itself held great symbolic value—as akin to an ascending petition or prayer to those spirits believed to have resided in the sky.

Tobacco was of equal importance in cementing alliances between humans and was often used as a peace offering. Among many Amerindian peoples, any bond, treaty, or agreement was not considered binding unless it was undertaken in conjunction with tobacco consumption, particularly through the passing of a pipe. Indeed, the ceremonial sharing of the **calumet pipe** on important socio-political occasions is perhaps one of the most celebrated (in film and literature) and widely known aspects of Native American tobacco use. Less widely known, however, is the broader cosmology of which this distinctive ritual formed part. While tobacco played a significant role in maintaining the bonds between men (in general, it was much less common for women to smoke), its social importance and value went far beyond this.



calumet pipe a highly ornamented ceremonial pipe used by American Indians.

TOBACCO AND NATIVE AMERICAN COSMOLOGY. Even peoples who grew no other crops cultivated the tobacco plant. Indeed, among some Amerindians, those who planted and grew tobacco were held in the highest regard. It was understood by the Crow peoples, for example, that the plant was crucial to their nation's survival. Thus, the role of Tobacco Planter was not to be undertaken lightly; in fact, an extensive ordeal was involved in attaining the position. Applicants had to endure an arduous ceremony in which they would be extensively and severely burned and cut, forced to go without food and water for a number of days, and then, if they had survived the ordeal, would exchange their every worldly possession for some tobacco seeds. Those who continued the Crow's tradition of tobacco planting were understood to be endowed with a broad array of supernatural powers, including the capacity to control the weather (especially the wind and rain); to bring buffalo and other game near their settlements; and, most importantly, to prevent and to heal a range of diseases (Denig 1953). Indeed, it is in this last respect—in relation to the link between tobacco and healing—that the Crow's beliefs are typical of Native American understandings of tobacco use.



shamanism an ancient religion based on commune with animal spirits and characterized by magic, healing, and out of body experiences. Shamanism was widely practice American Indians.

Within Native American cosmology, the spiritual and social importance of tobacco were intimately bound up with the plant's role in relation to medicine and healing within **shamanistic** ritual. According to the understandings and practices of shamanism, illness and disease could be caused by spiritual forces. For example, a malevolent spirit might cause illness by introjecting itself or a magical object into the body, or by drawing a sick person's soul into the spirit world. In order to cure such illness and disease, therefore, the shaman's task was to enter the spirit world to either remove the offending object or retrieve the ill person's soul (Goodman 1993).



The use of hallucinogenic plants was central to the shaman's task, since only these, it was understood, would facilitate altered states of consciousness, allowing access to the world of the spirits. Perhaps surprisingly, the one plant used more than any other for this end was tobacco. That this fact might be surprising reveals a great deal about the long-term development of tobacco use. If we consider, for example, the present-day western smoker's experience of a cigarette, it seems impossible that tobacco could produce a strong enough effect to significantly alter consciousness.

However, there is a wealth of evidence to suggest that the tobacco used by Native Americans, particularly the *Nicotiana rustica* strains, were fully capable of producing hallucinations. In order to produce the consciousness-altering effects required, shamanistic practice demanded the consumption of tobacco on a scale considerably larger than that of recreational use. According to Johannes Wilbert in *Tobacco and Shamanism in South America* (1987), a central tenet of shamanistic belief is that it is only by overcoming death that one is capable of curing others, and thus a common theme throughout ethnographic accounts of Native American tobacco use is that of shamans taking themselves to the verge of death by acute nicotine poisoning.

RECREATIONAL USE. Recreational use of tobacco by Native American peoples, while considerably less dramatic than that of shamanistic use,

One of ten sixteenth-century engravings by Theodor de Bry that provided the first visual impressions of life in the immense wilderness across the sea. Dried "tapaco" leaves will be smoked from a pipe by the men on the benches to cure their infections. © BETTMANN/CORBIS



nonetheless frequently involved considerably stronger, more pronounced effects than those which are commonly associated with the drug in present-day western societies. Even within recreational use, tobacco use was on the whole a highly ritualized activity, one which required an extensive process of habituation and one which followed very different patterns of consumption from those of the present day. John P. Harrington's excellent 1932 study of tobacco use among the Karuk provides one of the few direct translations of a Native American account of tobacco smoking. While the account was documented in the twentieth century, it describes a tradition of smoking that stretches back into the antiquity of the Karuk people:

He sucks in . . . then quickly he shuts his mouth. For a moment he holds the smoke inside his mouth. He wants it to go in. For a moment he remains motionless holding his pipe. He shakes, he feels like he is going to faint, holding his mouth shut. It is as if he could not get enough. . . . He shuts his eyes, he looks kind of sleepy-like. His hand trembles, as he puts the pipe to his mouth again. Then again he [inhales]. . . . He just fills up the pipe once, that is enough, one pipeful. He rests every once in a while when smoking. . . . He feels good over all his meat when he takes it into his lungs. Sometimes he rolls up his eyes. And sometimes he falls over backward.

HARRINGTON 1932

As can be observed from this account, even a seasoned habituated Karuk user would frequently faint after smoking just one pipeful of tobacco. Indeed, the Karuk actively sought out intoxication, both through the technique of smoking and through the continued cultivation of the highly potent strains of tobacco. The extract also serves to illustrate that tobacco use among the Karuk involved, on a day-to-day basis, the relatively infrequent consumption of highly potent tobacco (smoked over a long period), a pattern which contrasts starkly with that of the present-day western cigarette smoker, who smokes much milder tobacco, generally more frequently and more quickly.

POSTCONTACT CHANGES. It is significant to note that, in accordance with the overall direction summarized above, during the post-contact era Native American tobacco use developed in a number of respects: there is evidence to suggest that the socio-cultural associations of tobacco increasingly shifted from the spiritual to the profane; it became far more common for Amerindian women to smoke; and finally, tobacco use became more hedonistic, involving more frequent consumption outside of ritual and ceremony of generally less potent tobaccos.

Modern Understandings and Uses

The modern era in the development of tobacco use can be understood as characterized by both an extension of Native American social and cultural uses of tobacco—in, for example, the initial adoption of smoking as a symbol of sociability and the use of the plant as a medicinal remedy—and an increasing move away from these in the ever-developing quest to find a sophisticated and refined means of tobacco consumption that could help



elite groups distinguish their smoking from its plebeian commonality and Amerindian origins. This stage was also marked by a move toward an increasing preoccupation with the effects of tobacco on the senses and the brain—snuff, administered through the nose, was considered the most direct route to the seat of consciousness—and a move away from, but by no means an absence of, understandings and uses of tobacco as a medicinal remedy for the body more generally. Finally, the modern period can be seen as characterized by a gradual move away from the understanding and use of tobacco as an intoxicating agent. Where, for example, in the seventeenth century both tobacco and alcohol were said to cause drunkenness, toward the end of the eighteenth century it was understood that the chief danger of intoxication in relation to tobacco use (through both smoking and snuffing) was that the practice would make one “too dry” and thus more likely to consume alcohol.

Satirical print, *A Smoking Club*, late eighteenth century. © HULTON-DEUTSCH COLLECTION/CORBIS

THE TRANSFER OF TOBACCO. When one considers the great spiritual and medicinal significance of tobacco to Amerindian peoples, it is hardly surprising that the plant was the focus of much attention from the first New World explorers, particularly given that, at the time of first contact, there was a widespread belief in the existence of a universal panacea—a substance that could cure any condition or ailment—one which merely awaited discovery. Indeed, by 1571, the leading Spanish

physician Nicolas Monardes had published a detailed study of all the plants brought back from the Americas to that date titled *Joyfull Newes Out of the Newe Founde Worlde* in which he prescribed tobacco for almost every common ailment of the time, including toothache, carbuncles, flesh wounds, chilblains, “evill” breath, headaches, and even “cancers” (Monardes 1925), and so provided all the medical justification needed to suggest that the search for the miracle cure-all was over. Thus, in the early stages of the modern era, tobacco was widely understood to be a “divine sent” medicinal remedy (Pego et al. 1995).

It was not until the end of the sixteenth century—some fifty or more years after tobacco’s first appearance in European courts—that its more recreational use became widespread. However, while the usage of tobacco may have become more diverse and hedonistic, during this period there was no clear cut dividing line, as there is today, between the consumption of substances for leisure and for medicinal purposes.

In considering the global spread of, and regional variations in, tobacco, a focus on European usage is revealing since it was Europeans who were central to the diffusion of tobacco; to establishing the plant as an important medicinal remedy (an understanding that spread alongside material tobacco); and in establishing practices and modes of consumption that were copied and ultimately adapted elsewhere (Goodman). European nations adopted their modes of consuming tobacco from those of the Amerindians they encountered in the New World. For example, the English, like the majority of European nations, generally smoked pipes after encountering this mode among the indigenous peoples of North America, whereas the Spanish more commonly smoked cigars, chewed, and snuffed tobacco after the Amerindians of Central and South America.

EARLY EUROPEAN USES AND UNDERSTANDINGS. Explorers of the New World had returned to Europe with only the mildest, and to their tastes (and constitutions), most palatable species and varieties of tobacco. Yet even these were still considerably more potent and more capable of producing intoxication than those widely consumed within the present-day west. Smokers of the time were known as tobacco “drinkers” and “dry drunks,” not just because no other model was available to make sense of the practice, but possibly because the effect of the tobacco consumed at this time more closely approximated that of alcohol in terms of its narcotic capacity.

To some degree, Europeans also adopted from Amerindian cultures the idea that tobacco was a mark of sociability. Historical accounts documenting the early stages of the development of tobacco use in Europe describe an era in which smokers would meet and share pipes in tobacco sellers’ shops, taverns, apothecaries, and (later in the seventeenth century) in coffee houses. Other sources point toward smokers across the social spectrum smoking almost constantly with only factors such as price and availability containing the practice, though there remains some controversy as to whether certain social proscriptions over, for example, age and gender existed.

But this widespread popularity of smoking presented a problem for those smokers belonging to elite groups within society. Tobacco use had

become common, a fact that only served to compound the more general problem that smoking had its origins amongst Native American peoples who were seen to be uncivilized heathens—to whom King James I in his famous *Counterblaste to Tobacco* referred as “godlesse Indians” (James I 1954). There emerged within this period a growing need for members of such elite groups to distinguish their use of tobacco from that of, whom they considered to be, their inferiors’ within plebeian society, or worse, that of the peoples of the New World.

SMOKING GALLANTS. In this historical context, the practice of smoking by some social groups became increasingly elaborate and sophisticated. In his *Social History of Smoking* (1914) G. L. Apperson, the social historian of tobacco, describes at length the ornate apparatus required by the smoking **gallant** or dandy of the seventeenth century, which included, along with a range of clay pipes, precious tobacco boxes made of silver and gold; a pipe case; a pipe pick (for cleaning); a knife to shred tobacco; and tongs to lift coals from a fire (needed to light a pipe).

Equally elaborate were the practices that came to be adopted by these smokers: all manner of techniques involving the inhalation and exhalation of tobacco smoke, complex sets of practices concerning filling and lighting the pipe, and so forth. Moreover, in parallel there emerged professional tutors, professors, and even schools devoted to teaching such techniques and practices, along with an extensive body of knowledge concerning species and varieties of tobacco, their botanical features, their prices, their regional sources, and more.

SNUFFING AS REFINEMENT. By the beginning of the eighteenth century, however, snuffing had begun to replace pipe smoking as an important means of tobacco consumption across Europe. The practice of snuffing, which had its European origins in Spain, spread to other parts of Europe, most notably France, where it had come into vogue within courtly society comparatively early. During the seventeenth and eighteenth centuries, the French court became established as a model-setting center for the European upper classes as a whole. Elite groups looked to France for standards of behavior and etiquette, and soon adopted snuffing in favor of smoking. Snuffing, in turn, involved even more elaborate practices and codes of etiquette surrounding its use than those of the smoking gallants.

The practice of snuff taking also marked a move toward more private and individualized use. Individuals would prepare their own particular and distinctive snuff concoctions, which they would consume both alone and within the context of highly specific social groups. A bewildering array of snuffs became available, which, even at the point of source, were often highly doctored and adulterated (sometimes with decidedly toxic substances), often as part of what were understood to be attempts to refine them.

With snuffing came a growing shift in socio-cultural uses and understandings of tobacco. From being considered a mark of general sociability, snuff increasingly marked individuality (both in terms of how one “took the pinch” and in the preparation of highly individualized snuff mixtures) and refinement (in terms of showing reflexive awareness of socially distinctive codes of etiquette). While there were



gallant a well-dressed, well-spoken gentleman, attentive to the needs and concerns of ladies, but in a proper way. Rhett Butler is a gallant.



This undated image from the *Fondation Napoleon* and released by the New Orleans Museum Art shows a gold and ivory tobacco box with a portrait of French Emperor Napoleon Bonaparte.
© AFP/CORBIS

many treatises for and against the therapeutic value of snuff (particularly concerning its effects on sight and on the brain), the increasing use of snuff can be viewed, generally speaking, as a move away from the understanding of tobacco solely as a self-administered medicinal remedy—which itself was becoming increasingly contested in relation to smoking—and a move toward the use of tobacco as at once a marker to others and a marker of oneself.

Following a pattern that is repeated throughout the history of tobacco use, the popularity of snuff began to precipitate through the social strata such that by the end of the eighteenth century, and well into the nineteenth century, it had become the most popular form of tobacco in Europe, and no longer the exclusive preserve of a fashionable elite. The rise of snuff, however, definitely did not lead to the total demise of the pipe. Amongst the common people, and within specific occupational sectors, such as academia and the military, the pipe remained relatively popular throughout the zenith of snuff.

Indeed, the pipe began rapidly to gain broader popularity once again during the nineteenth century: This happened alongside a more general resurgence of smoking that included the rise of cigars as a popular mode of consumption, and ultimately cigarettes toward the very end of the century, so marking the beginning of the contemporary era of smoking, as discussed below. In some countries, Sweden in particular, snuffing remained popular well into the twentieth century;

in other countries, other modes of consumption prevailed before being replaced by smoking. For example, in the United States, chewing tobacco was the most popular mode of consumption from the early nineteenth century until World War I.

Contemporary Understandings and Uses

The contemporary era of tobacco use has been characterized by a shift toward the increasing, but by no means exclusive, use of tobacco as an instrument of self-control and an associated move toward progressively milder forms of tobacco. The development of cigarettes themselves continued in this direction with the twentieth-century emergence of filter cigarettes, “light” (or lower **tar** and lower nicotine) cigarettes, and more recently the advent of “super low” and “ultra low” alternatives. It is important to note, however, that the move toward “milder” and “lighter” cigarettes has involved changing the public perception of cigarettes as apparently more healthy, less dangerous products as much as—some would say more than—changing their pharmacological yield.

Such developments, while intimately related to changing medical understandings of tobacco and increasing regulation of the tobacco commodity, can also be understood to relate to shifts in the socio-cultural uses of tobacco, specifically toward the increasing use of tobacco to return to, rather than escape from, normality—requiring tobacco which was in some ways significantly different from the highly potent, narcosis-inducing varieties consumed by, for instance, Amerindian tobacco shamans. Smoking also became an increasingly symbolic and discursive act within the contemporary era—a means of individual self-expression and a source of personal identity and a practice that has retained its associations with sociability but now more exclusively within the context of a defiant community of smokers.

THE RETURN TO SMOKING. The resurgence of smoking in the nineteenth and twentieth centuries related to a broad range of social processes. In Britain the Revolutionary and Napoleonic wars had made the ways of the French (including their penchant for snuff taking) considerably less appealing. European soldiers fighting in the Peninsula War (1808–1814) encountered cigars from the Spanish and brought these home, and cigars ultimately replaced snuff as the choice of the aristocracy. Changes in the apparatus of tobacco consumption also facilitated the return to smoking—including the development of more practical **briar** and meerschaum pipes; the invention of safety matches; and, ultimately, the growing availability of the cigarette. While by no means an invention of the nineteenth century west, the cigarette was now being produced in a form bearing many of the hallmarks (the use of milder tobaccos and a paper wrapper) of a novel mode of consumption—one which would eventually come to be central to the rise of smoking in the contemporary era.

SMOKING AS A SUPPLEMENTARY TOOL. Writers of this period, and many subsequent authors, partly explain the rise of new modes of consumption—the briar pipe, cigars, and early cigarettes—in terms of their convenience, their practical advantages. For example, the briar pipe was



tar a residue of tobacco smoke, composed of many chemical substances that are collectively known by this term.



briar a hardwood tree native to southern Europe. The bowls of fine pipes are carved from the burl, or roots, of briar trees.

more durable than the clay pipe; cigars required hardly any of the paraphernalia of the pipe, and the invention of matches meant that one could now smoke on the move; and the cigarette had the additional advantage of only requiring a fraction of the time to consume than that needed for a cigar or pipe. However, that these characteristics were seen as advantageous can also be seen as fundamentally interrelated to a broader transformation in uses and understandings of tobacco during this period: a move away from the understanding of smoking solely as an activity in and of itself and a move toward the understanding of smoking as having a supplementary and enhancing function.

The cigarette in particular marked not just a move toward greater mobility and convenience for the smoker but arguably toward a milder and less potent mode of consumption that generated effects that were potentially less dramatic and more ambiguous than those of previous eras. Such a change was a prerequisite for the practice to become undertaken in conjunction with a range of other tasks and activities as a means of augmenting these. Smoking was increasingly being understood and used as an aid to concentration while working. Its associations with the practice of writing, for example, appear frequently in the historical literature. The Russian writer Leo Tolstoy, writing in 1890, attests to the widespread understanding that “smoking facilitates mental work” and to the common belief that “If I do not smoke I cannot write. I cannot get on; I begin and cannot continue” (quoted in Walton 2000). Smoking was also increasingly coming to be understood as a source of stimulation to counter monotonous activities, a boredom breaker, and as a **nervine** to counter stressful situations. The latter use was particularly important to soldiers fighting in World War I.

In combination with this broader change, and following from increasing medical and popular interest in the effect of tobacco on the brain, tobacco became widely understood as a psychological tool, one which could counter the ills of civilization—a drug which could return one to normal from a range of **dysphoric** states relating to both emotional arousal and under-arousal. Thus a defining characteristic of the contemporary era, in relative contrast to the pre-Columbian and, to a lesser degree, modern stages, was the increasing move toward understandings and uses of tobacco as a means of self-control and the further move away from the use of tobacco to lose control. This move can also be understood as marking a further development in the individualization of tobacco use. Whereas snuffers of the eighteenth and early-nineteenth centuries individualized their snuff concoctions, cigarette smokers of the twentieth century (and those of the present-day) increasingly came to individually tailor the effects and functions of tobacco.

The rise of the cigarette as a popular mode of consumption, in fact as a mass commodity, is a complex phenomenon involving a combination of social, economic, and technological changes. Significant geographical variations in the rate at which, and the degree to which, cigarette smoking replaced other modes of consumption make generalization concerning the practice difficult. Nonetheless, the cigarette was central to major transformations in the socio-cultural uses and associations of tobacco within the contemporary era.

CIGARETTES AND FEMININITY. Understandings of the cigarette itself changed dramatically from the time of its first introduction. In England,



nervine a plant remedy that has a beneficial effect upon the nervous system in some way. Some herbal compounds have been used successfully in smoking cessation programs.

dysphoria a feeling of unhappiness and discomfort; being ill at ease. Cigarette smokers can experience dysphoria when deprived of cigarettes.



World War I-era advertisement for Helmar Turkish cigarettes featuring servicemen in the design. © BETTMANN/CORBIS

as an archetypal example, it was initially almost exclusively men who smoked cigarettes. However, by the end of the nineteenth century, the cigarette had become known as a feminine mode of smoking—the “female cigar” and a “weaker vessel” of tobacco (Odhner 1894). This development, in part, related to a broader transition in the gender associations of tobacco and a related rise in women smoking. Tobacco, at one stage viewed as a female commodity to be bought by men—Rudyard Kipling, for example, was known to refer to his cigars as a “harem of dusky beauties tied fifty to a string” (quoted in Mitchell 1992)—was increasingly coming to be understood as means to become like a man. Indeed, by the 1920s, cigarettes began to emerge as an emblem of women’s emancipation—as a symbol of women’s equality to men (Greaves 1996).

Tobacco companies of the time gradually came to exploit and harness such associations as they realized the potential of what was then a

relatively untapped market. For example, in 1929 one such company organized a publicity march in New York City in which a group of women smoked “torches of freedom” as a protest against their inequality (Greaves).

TOBACCO AS A COMMODITY: MASS CONSUMERISM AND BRANDING. The eventual mass production of cigarettes brought with it advertising and mass marketing campaigns that both utilized and informed contemporary understandings and uses of tobacco. For example, the manufacturers of Lucky Strike targeted women smokers with the slogan “Reach for a Lucky Instead of a Sweet” (Goodman), thus drawing upon and reinforcing the associations between smoking and weight control.

The use of branding, especially in the early stages of the contemporary era, also became a widely popular practice. Brands presented not just the type of cigarette, but also its image and broader associations: tobacco users were more and more able just to choose a form of tobacco which suited their taste but one which expressed who they were—their individuality, their identity. Indeed, the image of any given brand might transform over time as manufacturers both engineered and responded to consumer associations with their product: Marlboro, for example, was initially a brand which signaled luxury, then femininity, and later masculinity under the guise of the Marlboro Man.

SMOKING AND GLAMOUR. As the example of Marlboro also serves to demonstrate, particularly after World War II, such brands increasingly became gendered: names such as Virginia Slims, and later, Eve Lights, were distinctively female and again evoked the notional relationship between smoking and slimness or lightness. Such brands are also indicative of a further shift in the gender associations of tobacco—a shift toward the understanding of smoking as something women do to attract men, not just through becoming thinner, but through the use of the cigarette as an expressive erotic prop (Greaves). This link between smoking, glamour, and self-expression was widely reinforced in Hollywood. Stars such as Marlene Dietrich and Bette Davis evoke a golden age of smoking when many onscreen actors and actresses appeared to breathe little else. In the era of silent movies in particular, the cigarette was widely used as an allegorical subtext to films, often to depict forbidden sexual activity (Gately 2001).



epidemiological pertaining to epidemiology, that is, to seeking the causes of disease.

TOBACCO, DEATH, AND DEFIANCE. Associations between smoking and glamour, however, were to become eclipsed by developments in medical understandings of the practice. The publication of findings from a series of **epidemiological** studies in the 1950s and 1960s that linked tobacco smoking to fatal diseases provided the impetus behind a series of dramatic shifts in popular perceptions of tobacco. From at one stage being understood as a panacea, tobacco increasingly came to be understood as in itself a pandemic—an addictive, fatal, disease that spanned the globe.

Epidemiological studies marked not just new knowledge about the long-term effects of smoking but also the predominance of a new



medical orthodoxy in which statistical associations rather than biological mechanisms were taken as evidence of cause and effect, and with it a new way of understanding tobacco use. Partly in relation to the rise of this new medical paradigm, prevailing associations of tobacco as a source of personal control became almost inverted, and smokers came to be understood as helpless addicts enslaved to a set of biological processes over which they had little choice. That is to say, a central feature of the contemporary era is the understanding that people smoke because they are addicted. Following the more recent era of debates about passive smokers, they are, not for the first time in the history of tobacco, also prohibited from conducting the practice in an increasing number of public spaces. Thus where smoking was once a highly social activity, it is now, particularly within North America, increasingly a **marginalized** practice, one which would only be sociable within the context of specific peer groups.

However, not all present-day smokers have internalized the notion that they are powerless addicts and social outcasts. As a matter of fact, within the context of increasing opposition (on both medical and moral grounds) to the practice, smoking has increasingly come to signal an act of defiance, an idea more than complimentary to contemporary associations between smoking, freedom, and individual self-expression. Such associations form central themes within the advertising campaigns of present-day tobacco corporations. For example, the slogan “come to Marlboro country,” invariably accompanied by images of an open landscape, invokes the visual metaphors of freedom and rugged **individualism**. Similarly, while the association between glamour and smoking has become considerably more equivocal and complex in Hollywood film, its

Cartoon showing the influence of smoking on British society, c. 1827. The cartoon is entitled “Puff, Puff. It is an Age of Puffing, Puff, Puff, Puff.” © HISTORICAL PICTURE ARCHIVE/CORBIS

marginalization the act of shunning or ignoring certain ideas or behavior that results in it being pushed outside the mainstream of the peer group.

individualism an independence of spirit; the belief that self-interest is (or should be) the goal of all human actions.

use as a symbol of defiant personal power can be seen, for instance, in films such as *Basic Instinct*, where the leading female character coolly smokes a cigarette in the face of police interrogation.

Somewhat paradoxically, associations between cigarettes, risk, and defiance may well hold particular appeal to younger smokers. Crucially, the risk from smoking is a long-term invisible one: for a teenager the risk is apparently safe as it stands at a significant temporal distance from youth, with most tobacco-related diseases taking effect only much later in life.

See Also Addiction; Calumets; Chewing Tobacco; Cigarettes; Cigars; Class; Connoisseurship; Film; Hallucinogens; "Light" and Filtered Cigarettes; Literature; Medical Evidence (Cause and Effect); Native Americans; Pipes; "Safer" Cigarettes; Shamanism; Smoking Restrictions; Snuff; Soldiers; Therapeutic Uses; Visual Arts; Women; Youth Tobacco Use.

■ JASON HUGHES

Further Reading

For a more general discussion of the socio-cultural uses of tobacco and a sociological exploration of how these changed over time, see Hughes (2003). For an authoritative social, cultural, and economic history of tobacco, see Goodman (1993). Wilbert (1987) provides an extensive ethnopharmacological discussion of tobacco use in the pre-Columbian era, particularly its relationship to shamanism. Finally, Walton (2000) provides an interesting and lively collection of historical writings on tobacco from the first European encounters to the present day.

BIBLIOGRAPHY

- Adams, K. R. "Prehistoric Reedgrass (Phragmites) 'Cigarettes' with Tobacco (Nicotiana) Contents: A Case Study from Red Bow Cliff Dwelling, Arizona." *Journal of Ethnobiology* 10, no. 2 (Winter 1990): 123–139.
- Apperson, G. L. *The Social History of Smoking*. London: Ballantyne Press, 1914.
- Balabanova, S., et al. "Was Nicotine Known in Ancient Egypt?" *Homo: The Journal of Comparative Human Biology* 44, no. 1 (June 1993): 92–94.
- Bean, Lowell John, and Sylvia Brakke Vane. "Cults and Their Transformations." In *Handbook of North American Indians*. Vol. 8, *California*. Edited by Robert F. Heizer. Washington, D.C.: Smithsonian Institution, 1978. Pp. 662–672.
- Brandt, Allan. "The Cigarette, Risk, and American Culture." *Daedalus* 119, no. 4 (fall 1990): 155–176.
- Brooks, Jerome E, ed. *Tobacco: Its History Illustrated by the Books, Manuscripts and Engravings in the Collection of George Arents, Jr.* 5 vols. New York: The Rosenbach Company, 1937–1952.
- Denig, Edwin Thompson. *Of the Crow Nation*. Edited by John C. Ewers. 1953. Reprint, New York: AMS Press, 1980.
- Elferink, Jan G. R. "The Narcotic and Hallucinogenic Use of Tobacco in Pre-Columbian Central America." *Journal of Ethnopharmacology* 7 (1983): 111–122.
- Fairholt, F. W. *Tobacco: Its History and Associations*. London: Chapman and Hall, 1859.
- Gately, Iain. *La Diva Nicotina: The Story of How Tobacco Seduced the World*. London: Simon & Schuster, 2001.
- Goodin, R. E. "The Ethics of Smoking." *Ethics* 99 (1989): 574–624.
- Goodman, Jordan. *Tobacco in History: The Cultures of Dependence*. London: Routledge, 1993.
- Greaves, Lorraine. *Smoke Screen: Women's Smoking and Social Control*. London: Scarlet Press, 1996.
- Gusfield, Joseph R. "The Social Symbolism of Smoking and Health." In *Smoking Policy: Law, Politics, and Culture*. Edited by Robert L. Rabin and Stephen D. Sugarman. New York: Oxford University Press, 1993. Pp. 49–68.
- Haberman, Thomas W. "Evidence for Aboriginal Tobaccos in Eastern North America." *American Antiquity* 49, no. 2 (1984): 269–287.

- Hackwood, Frederick William. *Inns, Ales, and Drinking Customs of Old England*. London: T. Fisher Unwin, 1909.
- Harrington, John P. *Tobacco among the Karuk Indians of California*. Washington, D.C.: U.S. Government Printing Office, 1932.
- Hughes, Jason. *Learning to Smoke: Tobacco Use in the West*. Chicago: University of Chicago Press, 2003.
- James I. *A Counterblaste to Tobacco*. 1604. Reprint, London: Rodale Press, 1954.
- Janiger, Oscar, and Mariene Dobkin de Rios. "Suggestive Hallucinogenic Properties of Tobacco." *Medical Anthropology Newsletter* 4 (1973): 6–11.
- . "Nicotiana an Hallucinogen?" *Economic Botany* 30 (April–June 1976): 149–151.
- Kiernan, V. G. *Tobacco: A History*. London: Hutchinson Radius, 1991.
- Klein, Richard. *Cigarettes Are Sublime*. Durham, N.C.: Duke University Press, 1993.
- Koskowski, Wlodzimierz. *The Habit of Tobacco Smoking*. London: Staples Press, 1955.
- Kroeber, Alfred L. "Culture Element Distributions: XV. Salt, Dogs, Tobacco." *Anthropological Records* 6, no. 1 (1941): 1–20.
- Krogh, David. *Smoking: The Artificial Passion*. New York: W. H. Freeman, 1991.
- Lohof, Bruce A. "The Higher Meaning of Marlboro Cigarettes." *Journal of Popular Culture* 3 (1969): 441–450.
- Mackenzie, Compton. *Sublime Tobacco*. London: Chatto and Windus, 1957.
- McCracken, Grant. *Culture and Consumption: New Approaches to the Symbolic Character of Consumer Goods and Activities*. Bloomington: Indiana University Press, 1988.
- Mitchell, Dolores. "Images of Exotic Women in Turn-of-the-Century Tobacco Art." *Feminist Studies* 18, no. 2 (summer 1992): 327–350.
- Monardes, Nicolás. *Joyfull Newes Out of the Newe Founde Worlde*. Translated by John Frampton. London: Constable, 1925.
- Morgan, Lewis H. *League of the Ho-dé-no-sau-nee or Iroquois*. New York: Dodd, Mead and Company, 1901.
- Odhner, Carl Theophilus. *Tobacco Talk by an Old Smoker, Giving the Science of Tobacco*. Philadelphia: The Nicot Publishing Company, 1894.
- Pego, Christina M, et al. "Tobacco, Culture, and Health among American Indians: A Historical Review." *American Indian Culture and Research Journal* 19, no. 2 (1995): 143–164.
- Penn, W. A. *The Soverane Herbe: A History of Tobacco*. London: Grant Richards, 1901.
- Porter, Cecil. *Not Without a Chaperone: Modes and Manners from 1897 to 1914*. London: New English Library, 1972.
- Robert, Joseph C. *The Story of Tobacco in America*. New York: Alfred A. Knopf, 1949.
- Rogozinski, Jan. *Smokeless Tobacco in the Western World, 1550–1950*. New York: Praeger, 1990.
- Schivelbusch, Wolfgang. *Tastes of Paradise: A Social History of Spices, Stimulants, and Intoxicants*. Translated by David Jacobson. New York: Pantheon Books, 1992.
- Schleiffer, Hedwig. *Narcotic Plants of the Old World Used in Rituals and Everyday Life: An Anthology of Texts from Ancient Times to the Present*. Monticello, New York: Lubrecht & Cramer, 1979.
- Springer, J. W. "An Ethnohistory Study of the Smoking Complex in Eastern North America." *Ethnohistory* 28 (1981): 217–235.
- Tate, Cassandra. *Cigarette Wars: The Triumph of "the Little White Slaver"*. New York: Oxford University Press, 1999.



- Tooker, Elisabeth. *An Ethnography of the Huron Indians, 1615–1649*. Washington, D.C.: U.S. Government Printing Office, 1964.
- von Gernet, A. "Hallucinogens and the Origins of the Iroquoian Pipe/Tobacco/Smoking Complex." In *Proceedings of the 1989 Smoking Pipe Conference*. Research Records No. 22. Edited by Charles F. Hayes III. Rochester, New York: Research Division of the Rochester Museum and Science Service, 1992. Pp. 171–185.
- Walton, James, ed. *The Faber Book of Smoking*. London: Faber and Faber, 2000.
- Wilbert, Johannes. "Tobacco and Shamanistic Ecstasy among the Warao Indians of Venezuela." In *Flesh of the Gods: The Ritual Use of Hallucinogens*. Edited by Peter T. Furst. New York: Praeger, 1972. Pp. 55–83.
- . *Tobacco and Shamanism in South America*. New Haven, Conn.: Yale University Press, 1987.
- . "Does Pharmacology Corroborate the Nicotine Therapy and Practices of South American Shamanism?" *Journal of Ethnopharmacology* 32, no. 1–3 (April 1991): 179–186.



physiology the study of the functions and processes of the body.



Soldiers

Soldiers have been a major force in the diffusion of tobacco use globally. This is partly because the **physiological** properties of tobacco lend it to use in wartime and partly because travel to different countries offers soldiers the opportunity to trade goods. Scholars have attributed the introduction of the cigar into Britain to a mixing of soldiers from different countries—primarily Spain, Portugal, and England—during the Peninsular War (1808–1814). The Crimean War (1853–1856) served a similar purpose for cigarettes. In the United States, soldiers fighting in Mexico in 1848 brought back cigars, while soldiers brought back cigarettes from lands gained through the Spanish–American War of 1898. During the Boer War (1899–1902), superstitions about smoking practice developed among the soldiers. It was considered unlucky to light three cigarettes from the same match, as this gave the enemy time to spot, target, and shoot the third smoker.

However, it was World War I (1914–1918) that was pivotal to the expansion of cigarette smoking, as cigarettes came to be seen as an essential rather than a luxury item. For the troops, smoking was an escape from the reality of war, and a way of establishing a rapport with fellow soldiers, regardless of rank. Smoking was also thought to calm nerves and cigarettes were more convenient to smoke than pipes or cigars. As an article in the *Tobacco Trade Review* noted in 1915, "[the cigarette] requires no pipe, there is nothing to lose except the match." The packets and tins in which cigarettes came also played a role at the front—backs of cigarette packets were stuck to torn banknotes to hold them together. Player's, a British firm, received a number of letters from soldiers claiming to owe their lives to cigarette and tobacco tins in their breast pockets. The tins stopped shrapnel from hitting their flesh, and they enclosed the bullet-pierced tins with their letters to prove it.

For those back home, sending cigarettes became a way of showing support for the troops and the war effort. In December 1914 in Britain, for example, the people of Glasgow held a Tobacco Day with a fancy dress



This woman is packing cigarettes at a London tobacco factory in 1939. Parcels of duty-free cigarettes were sent to the British field forces free through the Customs daily and were admitted into France free of French duty. All the best-known cigarette manufacturers were accepting orders on this basis. © HULTON-DEUTSCH COLLECTION/CORBIS

parade and torchlight procession, collecting money to buy cigarettes for the troops. Cigarette funds were established across the country, and women bought and sent cigarettes to loved ones. Advertising drew on military imagery and the cigarette became a symbol of patriotism and unity, linking the civilian population and the armed forces. The cigarette manufacturer British American Tobacco started up a weekly bulletin to keep troops in touch with families and colleagues back home. In Britain by 1915, the cigarette trade had doubled, mostly through exports to the front. In 1916, the British government took on the task of supplying **duty**-free tobaccos and cigarettes directly to the troops. By the end of World War I the cigarette had overtaken pipe tobaccos and cigars in popularity.

World War I had a similar effect on smoking in the United States. When the United States entered the war in 1917, cigarettes were included in soldiers' rations and subsidized in post exchange stores at home. Cigarette manufacturing was deemed an essential industry, and civilians and charitable organizations collected cigarettes to augment government supplies to soldiers abroad. Recruiting posters carried images of men with cigarettes. Through these associations with patriotism, cigarette smoking gained respectability and became the most popular way of consuming tobacco.

Cigarette consumption among soldiers was also criticized, however. In Britain, there was concern that valuable shipping space was being taken up by tobacco rather than food, while in the United States concerns were raised over the effects of tobacco on the health of servicemen. Such concerns were not new: In 1845, the Duke of Wellington tried to dissuade troops from smoking, and in the aftermath of the British defeat in the Boer War juvenile smoking was one reason suggested for the poor physical health of recruits.

Smoking rates continued to rise in the decades following World War I, and for many men service in the armed forces provided the introduction. During World War II (1939–1945), steps were taken to secure the supply of cigarettes to the front immediately. In Britain, the industry was



duty a tax, usually a tax on certain products by type or origin. A tariff.



opium an addictive narcotic drug produced from poppies. Derivatives include heroin, morphine, and codeine.

brought under government control, a tobacco controller was appointed, and home supplies were cut in order to meet demand for the troops. Even in Germany, where the Nazi regime was antismoking, soldiers were provided with tobacco rations during the war. But it was the American soldier, with his generous supply of cigarettes, who was most strongly associated with cigarettes in Europe. Girls dating GIs received gifts of nylons, cigarettes, and lipstick, while in Germany after the war American brands fetched the highest value on the black market and nurtured the taste for American-blended cigarettes that prevails in the 2000s.

Cigarettes remained an essential part of soldiers' kits during later wars of the twentieth century, although during the Vietnam War marijuana, **opium**, and heroin often replaced tobacco as the drugs of choice. However, the close association of cigarettes and soldiers has left a long-term mark on the health of both the veterans of conflict and the countries they saw service in. Successive mortality studies by the Australian government's Department of Veteran's Affairs have found elevated mortality from smoking-related cancers among Korean and Vietnam War veterans. In the 2000s, the reunified German government is implementing public health programs to tackle the problem of smoking among the population.

See Also Intellectuals; Missionaries; Sailors.

■ ROSEMARY ELLIOT

BIBLIOGRAPHY

- Elliot, Rosemary. "Destructive, but Sweet: Smoking among Women in Britain, 1890–1990." Ph.D. diss., University of Glasgow, 2001.
- Tate, Cassandra. *Cigarette Wars: The Triumph of "the Little White Slaver."* New York: Oxford University Press, 1999.
- Times* (London), 4 October 1939, pp. 3, 5.
- Tobacco Trade Review* (London), 1 January 1915, p. 7.



South and Central America

Tobacco was cultivated throughout Latin America prior to colonization, and during the colonial (1500–1800) and postcolonial periods (from 1800 onward). Small-scale farming of the crop in rural areas occurred in countries as diverse as Honduras, Ecuador, Argentina, and Colombia. Gradually, as demand for tobacco abroad increased, commercial cultivation of tobacco took place.

Colonial Beginnings

Commercial tobacco farming started in the late eighteenth century when tobacco cultivation became an important component of the economy in countries such as Mexico, Colombia, and Cuba. In an effort to



maintain control over commercial tobacco production in the New World, the Spanish Crown designated specific zones in which tobacco farming was permitted. It established tobacco monopolies in the larger countries by which tobacco trade was the exclusive monopoly of the Spanish government. This often implied the building of large warehouses in which the tobacco was processed before being exported to Europe.

In Brazil tobacco production was strongly controlled by the Portuguese Crown. At the same time, tobacco was an important component in the illegal trade that started to flourish in the more remote parts of the Spanish Empire in the eighteenth century. Everywhere in the Spanish territories around the Caribbean small farmers had started to cultivate tobacco from the late sixteenth century onward. British and Dutch buccaneers avidly bought this tobacco. The Spanish Crown depopulated whole tobacco producing regions in present-day Venezuela and the island Hispaniola in a fruitless effort to counter these incursions on its territory. Illegal tobacco trade was in this way instrumental in the undermining of Spanish colonialism and eventually played an important role in its end.

After Latin American independence at the beginning of the nineteenth century northwestern Europe—particularly London, Amsterdam, and the independent Hanseatic towns in northern Germany, Hamburg, and Bremen—became the most important consumers of Latin American tobacco. The urban markets for cigars and later cigarettes were instrumental in the rapid expansion of the tobacco trade in the nineteenth

Guatemalan Mayan gives a cigar to pagan saint Maximon during a ceremony in Santiago Atitlan, 2000. Once a year Mayans celebrate this pagan saint, who represents a mixture of Catholic and Mayan beliefs. During the celebration, the people who visit Maximon must make offerings of alcoholic beverages, tobacco, and money.
© REUTERS NEWMEDIA INC./CORBIS



Latin American countries like Chile and Brazil have implemented antismoking legislation since the late 1990s. However, tobacco consumption in Latin America is still growing. Here, a Brazilian warrior chews tobacco, 1990. © CORBIS SYGMA



sharecropping a form of agricultural labor that gained popularity after the Civil War. Laborers, usually families, lived and worked on land belonging to a proprietor. They grew staple crops like tobacco and cotton. Rather than regular cash wages, they were paid with shares of the crop at harvest time.

and twentieth centuries, making tobacco an important international commodity. The European traders had offered moral and material support to the Latin American cause of independence and helped them to break the Spanish commercial monopoly. Now they benefited greatly when the new Latin American republics opened their commercial borders.

Black Tobacco Cultivation

Prior to the turn of the twentieth century, tobacco cultivation in Latin America was limited to a great variety of local types of dark (or black) tobacco, which was used for cigars and, later, for the dark cigarettes smoked by the proletarian masses of the industrialized world. Farming dark tobacco was an undertaking well suited to the subsistence-based peasant agriculture prevalent in most Latin American countries at the time, for the rural families were easily able to integrate the cultivation of tobacco into their subsistence agriculture. Planters in Cuba and in parts of Brazil and Argentina produced better quality tobacco, but tobacco cultivation in these regions also remained a small-scale operation.

Until well into the twentieth century, dark tobacco was usually produced on small family farms, which managed the cultivation and most of the processing. In regions with open land tobacco was often produced through slash-and-burn agriculture, but in regions where access to land was limited, tobacco farmers often engaged in various kinds of **sharecropping** called *aparcería*. According to this system, farmers had to give part of their harvest to the landowner.

Tobacco leaves were dried in primitive sheds, sometimes in and around the rural dwellings, before being piled up, fermented, and sold to local middlemen. These *corredores*, as they were called in the Dominican Republic, were usually small traders with good relationships among the rural population. They offered the peasant families access to goods and small loans in exchange for their tobacco harvest. They later tried to sell the tobacco they accumulated in this way to large export houses called *especuladores*. On all levels of this commercial chain, tobacco was exchanged for money in an intricate and often complex set of negotiations in which personal trust and loyalty, profit, and expectations were inextricably intertwined.

Rural Industries

A portion of the peasant-grown tobacco was always intended for local consumption. This often led to artisanal ways of processing the tobacco. Primitive cigars, crumbed tobacco (*polvo*), or tobacco leaves pressed and processed in tight rolls for smoking in rural pipes were some of the ways by which tobacco was consumed locally. Most of the tobacco was destined for the international market, however. Apart from Cuba, which acquired fame for its fine tobacco and well-manufactured cigars, the primary Latin American exporters of tobacco leaves (Brazil, Colombia, and the Dominican Republic) generally produced low-quality, relatively cheap bulk tobacco leaves (*tabaco en rama*) in the late nineteenth and twentieth centuries. The tobacco was avidly sought for in the late nineteenth and twentieth centuries because it was well suited to mix with more expensive tobacco from the Dutch East Indies.


The European cigar industry required different types of tobacco, which were mixed to give a specific taste to each brand of cigars. After the 1860s, the Netherlands Indies (now Indonesia) became the most important producer of cigar tobacco, but European cigar manufacturers continued to seek out other varieties to combine with the tobacco from Sumatra or Java and soon found what they required in the Latin American countries of Colombia, the Dominican Republic, and Brazil. The Dominican Republic exported some 10 million kilograms in 1920. Exportation from Bahia, a region in northeastern Brazil, normally oscillated between 20 and 30 million kilograms in the same period. The income these exports generated had significant economic effects for the regional and national economy of the tobacco producing countries. It provided work for men and women in the region and brought in much-needed cash. In this way, entire tobacco producing region breathed on the rhythm of the tobacco trade.

Because of the segmented nature of the tobacco market, in which each variety of tobacco had its own niche, Latin American tobacco was normally easily sold on the international market in spite of increasing competition from other parts of the world. The market for dark tobacco changed in the twentieth century when the consumption of cigarettes overtook that of cigars. The cigar industry became more sophisticated in this period, and there was increased demand for better quality leaves. In an effort to improve the quality of the tobacco, governments and tobacco exporters attempted to curtail the autonomy of the peasant producers and to implement changes in the cultivation and processing of the tobacco leaf. Everywhere state institutions for tobacco were established. Moreover, European and U.S. importers began moving into the producing regions.

Tobacco Industry

Beginning in the nineteenth century, tobacco producing Latin American countries began manufacturing tobacco for local consumption in small cigar factories that often employed only a handful of cigar makers. In the late nineteenth and twentieth centuries some of these small enterprises expanded their operations and evolved into large businesses that produced both cigars and cigarettes. Just as the Cuban author Fernando Ortiz tried to point out in his famous study *Cuban Counterpoint*, (first published in 1940) many Latin Americans remember the early tobacco industry as a sane, human, and truly national economic sector.

Cigar makers at this time were often relatively well-educated individuals with good knowledge of the world and high professional standards. The quiet environment of the traditional workplaces often allowed for a reader (*lector*), who was paid by the workers, to read aloud newspapers or popular novels. This romantic image of the early tobacco industry acquired force in the second half of the twentieth century when cigarettes began replacing cigars, and the cultivation and consumption of tobacco radically changed. In countries like Brazil, Argentina, Mexico, Colombia, and the Dominican Republic large industrial enterprises came into existence, which often under the license of big companies such as Phillip Morris or the British-American Tobacco Company (BAT) started to produce cigarettes on a large scale.



La Información, a newspaper published in the Dominican Republic, described the local tobacco scene in 1917 this way: "Daily teams of mules (*recuas*) enter the city loaded with the aromatic leaf. The storehouses are being filled and the large halls of the storehouses are busy and animated by the presence of the women who select, store and classify the tobacco. The female workers arrive in the early morning to take their places and sweeten the monotonous atmosphere of the trade with their happy songs. Similarly, the men who classify the tobacco and the sweaty and content porters shout the *to le lá* which, rhythmical and melodious, incites them to the work which they do happily because they know it guarantees them their daily bread."



flue-cured tobacco also called Bright Leaf, a variety of leaf tobacco dried (or cured) in air-tight barns using artificial heat. Heat is distributed through a network of pipes, or flues, near the barn floor.

Modern Developments

In the latter half of the twentieth century, increasing cigarette consumption led to greater demand for blond tobaccos such as Burley or Kentucky, locally designated as *tabaco rubio*. Initially, Latin American nations did not produce blond tobacco and had to import it from the United States. In an effort to end this dependence, Latin American governments began to stimulate the cultivation of blond tobacco by introducing new seeds and giving technical advice to the farmers. By the 1940s Latin American production of Burley and **flue-cured tobaccos** was more than 45 million kilograms, which was mostly consumed in Latin America.

Blond tobacco cultivation required closed drying sheds and more sophisticated technology that was beyond the means of the traditional small producers, and this sector therefore became dominated by large-scale capitalist producers, usually companies that were financed partly by foreign capital. Over time, cigarette production in Latin America fell under the control of a small group of large multinational firms such as Philip Morris and British American Tobacco. Often these firms bought existing local companies, maintaining their names. In the 2000s, these two companies control a large part of the cigarette industry in Latin America.

Efforts to ban or restrict smoking have surfaced in Latin America since the late 1990s and countries like Chile and Brazil have implemented antismoking legislation. However, they have not been as effective as similar campaigns in the United States or Europe. Indeed, tobacco consumption in Latin America is still growing and therefore offers interesting opportunities for these multinational companies. At the start of the twenty-first century, Brazil and Argentina were the largest producers of tobacco in Latin America, and Guatemala, despite the fact that its largely indigenous population has a low smoking rate, was the largest producer of tobacco in Central America.

In the shadow of Latin America's multinational cigarette industry, peasant cultivation of dark tobacco continues to be important in many countries. In some areas, local entrepreneurs have succeeded in taking advantage of the restructuring of the global cigar market after the 1959 Cuban Revolution. Because the United States no longer imports Cuba's high-quality cigars, a new, thriving cigar industry has developed in the Dominican Republic. Brazilian companies also successfully captured a larger share of the internal cigar market in the latter part of the twentieth century.

See Also Brazil; British American Tobacco; Cigars; Cuba; Mexico; Philip Morris; Portuguese Empire; Spanish Empire.

■ MICHIEL BAUD

BIBLIOGRAPHY

- Baud, Michiel. *Peasants and Tobacco in the Dominican Republic, 1870–1930*. Knoxville: University of Tennessee Press, 1995.
- . "A Colonial Counter Economy: Tobacco Production On Española, 1500–1870." *Nieuwe West-Indische Gids* (New West Indian Guide) 65, no. 1–2 (1991): 27–49.
- Deans-Smith, Susan. *Bureaucrats, Planters, and Workers: The Making of the Tobacco Monopoly in Bourbon Mexico*. Austin: University of Texas Press, 1992.

Harrison, John Parker. "The Colombian Tobacco Industry, from Government Monopoly to Free Trade: 1778–1876." Ph.D. diss., University of California at Berkeley, 1951.

Ortiz, Fernando. *Cuban Counterpoint: Tobacco and Sugar*. Translated by Harriet de Onis. Durham, N.C.: Duke University Press, 1995.

Stubbs, Jean. *Tobacco on the Periphery: A Case Study in Cuban Labour History, 1860–1958*. New York: Cambridge University Press, 1985.



South Asia

Tobacco was first brought to the South Asian region in the early 1600s by the Portuguese, who had a colony in the port of Goa in southern India. The Mughals, powerful Central Asian Turks who ruled India at this time, also used tobacco. When one of the great Mughal leaders of South Asia, Akbar, received a gift of tobacco and a pipe, his physician forbade him to inhale the smoke of tobacco, which was an unknown, potentially harmful substance. He suggested it would be safer if Akbar passed the tobacco through water, and thus the *hookah*, or water pipe, was created. Smoking tobacco through a *hookah* became popular at social and religious functions under the Mughal courts and among the aristocratic and elite classes in the region. The sharing of a *hookah* was viewed as a form of friendship and as a measure of social acceptance.

Tobacco became a popular commodity in South Asia. Persian and South Asian traders carried tobacco and other goods along the Silk Road for distribution among the courts of the Persian, Mughal, and Chinese rulers. Initially, only the Mughal rulers and the wealthy upper classes, predominantly men, smoked tobacco. However, within a century, tobacco was incorporated into the existing habit of chewing areca nut (*Areca catechu*) and was enjoyed by both men and women across socioeconomic classes. Tobacco was generally used to stave off hunger during travel, to suppress pain from toothaches, and to sustain long hours of difficult work.

The Portuguese introduced tobacco cultivation into India on a small scale in the seventeenth century, but it was not until the British colonial period that the crop began to be cultivated extensively. As tobacco growing in North America became disrupted by the American Revolution (1776), British colonies around the globe began to take over the production and growing of tobacco. By the 1800s, South Asia had its own tobacco **plantations** growing Virginia tobacco and the product was cheaply available. Between 1890 and 1920, the area under tobacco cultivation in British India tripled, and it continued to grow into the next decades. By 1930, India had begun to flue-cure tobacco and had established itself as a major global producer of tobacco. In fact, in 1938, the area known as British India (which in the twenty-first century comprises Pakistan, Bangladesh, Sri Lanka, and Burma) ranked third in world tobacco production.

During the Indian Independence movement, Mahatma Gandhi was a staunch critic of British rule. He preached that the values and agricultural practices of the British had to be done away with and replaced by a simpler, more spiritual lifestyle. In his writings and speeches, Gandhi



plantation historically, a large agricultural estate dedicated to producing a cash crop worked by laborers living on the property. Before 1865, plantations in the American South were usually worked by slaves.



Bidis, small hand-rolled cigarettes, are the most popular tobacco product on the Indian market. They are the cigarette of choice among agricultural laborers because they are inexpensive. Men often smoke them as a form of relaxation and to pass time. This photograph shows packs of bidis displayed at a New Delhi sidewalk stall, 2002. © AFP/CORBIS

criticized the growing of cash crops like tobacco, which had been introduced by the British and did not provide food for India's people. He urged that tobacco be replaced by food crops and cotton, which would directly feed and clothe the people of India.

Modern Cultivation and Production of Tobacco

After India gained independence from Britain in 1947, tobacco continued to be an important crop. In the 2000s, India is the third largest producer of tobacco in the world, following China and the United States, and the eighth largest exporter of tobacco and tobacco products. India produces 600 million kilograms of tobacco annually, which fall under two botanical species, *Nicotiana tabacum* and *Nicotiana rustica*. Two-thirds of the tobacco grown in India is the variety used for making bidis (a hand-rolled cigarette), for making chew products, and for use in a *hookah*. One-third of the tobacco grown in India is **flue-cured** Virginia tobacco, used in the making of commercial cigarettes.



flue-cured tobacco also called Bright Leaf, a variety of leaf tobacco dried (or cured) in air-tight barns using artificial heat. Heat is distributed through a network of pipes, or flues, near the barn floor.

Approximately 3 percent of agricultural land in India is devoted to tobacco growing. The major tobacco growing regions of India are the states of Andhra Pradesh, Gujarat, and Karnataka. Over 3.5 million people are estimated to be engaged full time in tobacco manufacturing, which accounts for almost 12 percent of all manufacturing work in the country. Almost 1 million people work in growing and curing tobacco.

Tobacco Consumption

India and more generally, South Asia, is a region in which tobacco is consumed in a multitude of ways.

BIDIS. Bidis are small cigarettes that consist of indigenously grown tobacco wrapped in a dried leaf (*Diospyros melanoxylon*) and tied with a thread. They are hand rolled by women at home as a cottage industry and sold in packets of twenty to thirty bidis. Bidis account for about 50 percent of tobacco consumption in the region.

Although smaller than cigarettes, bidis yield more than three times as much carbon monoxide and more than five times as much nicotine and **tar** as cigarettes. Since the leaf is not porous, the bidi smoker has to inhale often and deeply to keep it lit. A bidi smoker must take three to four times as many puffs as one does with a cigarette.

Bidis are the most popular tobacco product in India, Pakistan, Nepal, and Bangladesh, particularly among agricultural laborers. They are also widely smoked in Sri Lanka. Bidis are exported all over the world. In Western countries, flavored and filtered bidis have become popular among youth.

CIGARETTES. In India, about 20 percent of the total tobacco consumed is in the form of cigarettes and more than 65 percent of cigarette sales in India are for single sticks. The cost of a single cigarette ranges from 4 to 6 cents, depending on the brand. Although cigarettes are relatively inexpensive, they are eight to ten times more expensive than bidis. Cigarettes have come to be associated with higher socioeconomic status and modern lifestyles. It is usually men with higher education who smoke cigarettes, while bidis are consumed by the uneducated. Cigarettes are distributed by a highly sophisticated marketing network which reaches even the most remote village shops.

Cigarette production has increased steadily in India. In 1970, 62,900 million sticks were produced. In 2000 and 2001, 91,400 million sticks were produced and this number exceeded 100,000 million sticks in 2001 and 2002. The consumption of cigarettes is high in India with approximately 110 billion cigarettes sold each year (the equivalent of \$2 billion in sales). Between 1990 and 1995, per capita consumption of cigarettes in India increased, a distinction it shares with only two other countries: China and Indonesia.

SMOKELESS TOBACCO. Oral use of smokeless tobacco is very common in India and other countries in South Asia, and is both prepared by the user as well as available prepackaged. *Pan*, also known as “betel quid,” is a product hand rolled at the time of consumption. It consists of one of several varieties of betel leaf (*Piper betle*), in which areca nut (*Areca catechu*) and slaked lime are added, often along with tobacco. Slaked lime is added



tar a residue of tobacco smoke, composed of many chemical substances that are collectively known by this term.



Antitobacco activists in New Delhi display a skeleton and sachets containing locally produced chewing tobacco, areca nut, lime, spices, and additives known as *gutkha*. *Gutkha* has been a source of public health concern in India because regular chewers experience a rapid progression to precancerous oral lesions. In India, more than 2,200 people are estimated to die every day from tobacco-related causes.

© AFP/CORBIS

because it increases the absorption of the betel nut and tobacco for the consumer. Condiments and sweetening agents may also be added.

Pan chewing is a widespread cultural practice engaged in at important events such as marriages, funerals, and ritual performances. In rural areas of South Asia, it is common for guests to be offered a plate containing betel leaves, areca nut, and tobacco shortly after entering a home. It is also chewed commonly as a pastime and by agricultural laborers who enjoy its mildly stimulant effects.

Gutkha, a prepackaged mixture of chewing tobacco, areca nut, lime, and aromatic spices, is sold in small packets. It is widely available in small roadside shops and costs between 4 and 11 cents per packet, depending on the size of the packet. Rapidly distributed through a network of agents, *gutkha* is popular among youth and manual laborers, who find this product fast and convenient to use, and people in urban areas who wish to chew but do not want to stain their mouth red, which occurs as a result of chewing betel quid.

Khaini, a packaged chewing preparation containing tobacco flakes, slaked lime, and aromatic spices is cheaper than *gutkha*, costing only 4 cents per packet. *Khaini* is stronger and harsher than *gutkha* and one packet contains sufficient tobacco for three chews. Consumption patterns of the many tobacco products available in India vary widely by age, geographic region, and by economic class.

OTHER TOBACCO FORMS. Other popular forms of tobacco in India are *cheroots* and *chutta*, which are small cigars made by rolling a tobacco leaf. These are popular in particular regions. Another popular product is **snuff**, which is powdered tobacco that is inhaled through the nose. There are also several smokeless tobacco preparations (*mishri*, creamy snuff, *bajjar*) which are intended primarily for cleaning one's teeth but are potentially addictive.



snuff a form of powdered tobacco, usually flavored, either sniffed into the nose or "dipped," packed between cheek and gum. Snuff was popular in the eighteenth century but had faded to obscurity by the twentieth century.

DEMOGRAPHICS. Prevalence data on tobacco consumption in India is minimal. The World Health Organization estimates that between 52 and 70 percent of males and between 3 and 38 percent of females currently use tobacco in some form in different areas of India and South Asia. In general, South Asian men smoke as well as chew tobacco, whereas the vast majority of women who use tobacco are chewers (usually hand-rolled *pan* with tobacco). Cigarette smoking among women is not widely acceptable in South Asia, although it is gaining some popularity among the elite in urban centers of India such as Mumbai, Delhi, Bangalore, and Chennai.

■ MIMI NICHTER

BIBLIOGRAPHY

- Bhonsle, R. B., P. R. Murti, and Prakash C. Gupta. "Tobacco Habits in India." In *Control of Tobacco-Related Cancer and Other Diseases: International Symposium*. Edited by Prakash C. Gupta, James E. Hamner, III and P. R. Murti. Bombay: Oxford University Press, 1992.
- Centers for Disease Control and Prevention. *Global Youth Tobacco Survey*, 2000.
- Kaufman, Nancy J., and Mimi Nichter. "The Marketing of Tobacco to Women: Global Perspectives." In *Women and the Tobacco Epidemic*. Edited by Jon M. Samet and Soon-Young Yoon. Washington, D.C.: World Health Organization, 2001.
- Kumar, S. "India Steps Up Anti-Tobacco Measures." *Lancet* 356 (2000): 1089.
- Nichter, Mimi, Mark Nichter, and David Van Sickle. "Popular Perceptions of Tobacco Products and Patterns of Use Among Male College Students in India." *Social Science and Medicine* (2004).
- Ray, Cecily Stewart, with Prakash Gupta and Joy de Beyer. *Research on Tobacco in India (Including Betel Quid and Areca Nut): An Annotated Bibliography of Research on Use, Health Effects, Economics and Control Efforts*. Washington, D.C.: World Bank Publications, 2003.
- World Bank. *Curbing the Epidemic: Governments and the Economics of Tobacco Control*. Washington, D.C.: World Bank, 1999.



South East Asia

While the per capita consumption of tobacco remains high throughout South East Asia, the industry faces many challenges in the twenty-first century, including rising excise taxes, tough antismoking legislation, increasingly competitive markets, and shrinking demand.

Two young women making cheroots. These cheroots are about eight inches in length and are composed of small pieces of pith combined with tobacco leaf, which is enclosed in a covering made of a thick, fibrous, white leaf. Traditionally, Burmese cheroots were the choice of most Burmese smokers, but conventional cigarettes have overtaken cheroots in popularity.

© BETTMANN/CORBIS



The climate and soil in many areas of South East Asia lend themselves to the cultivation of tobacco, and since its introduction as a cash crop by European colonists tobacco has played a major role in shaping the economies of the region. However, tobacco consumption, especially the smoking of cheroots (cigars cut square at both ends), predates the formal introduction and cultivation of tobacco in many Asian countries, including Sumatra (now Indonesia), the Philippines, Burma (now Myanmar), and Sarawak (Eastern Malaysia).

Sumatra

Sumatra was one of the first areas where formal tobacco cultivation was introduced. Sumatrans had known and enjoyed tobacco prior to the arrival of colonizers and were smoking hand-rolled cheroots long before the Europeans started developing a tobacco industry in the country. In 1863, the Dutch businessman Jacobus Nienhuys traveled to Sumatra to buy tobacco, but was disappointed with the cultivation and production techniques in use there. His efforts to improve Sumatran tobacco production are credited with establishing the Indonesian tobacco industry, which by the turn of the twentieth century ranked as one of the world's top producers.

Indonesia is among the top five tobacco-consuming nations in the world, and it exports various grades and types of tobacco to many countries. Indonesian cigar wrappers are widely used in many international cigar brands and are recognized as having superior qualities. Several different types of cigar filler tobaccos are also cultivated in Indonesia for export. The local consumption of cigars in Indonesia, as in the rest of South East Asia, is very small, and cigarettes dominate the region's markets.



The introduction of clove-flavored cigarettes, called *kretek* in the local tongue, toward the end of the eighteenth century in Indonesia marked a turning point in Indonesian smoking demographics, but it was not until the 1970s that *kretek* consumption became widely popular in urban areas. Previously, *kretek* use was mainly confined to poorer rural areas and white cigarettes dominated the market. Over the following decades, *kretek* sales slashed into the **market share** of conventional white cigarettes and by the end of the 1990s *kretek* sales accounted for 90 percent of all tobacco products sold throughout Indonesia. Despite the efforts of manufacturers, *kretek* still remains largely unknown in other countries.

As with all South East Asian economies, Indonesia relies heavily on its tobacco industry for both government revenues from excise taxes and employment opportunities for its people. An estimated 500,000 Indonesians are employed in the production of *kretek* cigarettes, most of them working in hand-rolling factories situated in central Java. The government mandates that any *kretek* manufacturer must produce a range of hand-rolled *kretek*, assigning lower tax brackets to these products in an effort to ensure stable employment opportunities for hand-rollers. A side effect of this policy is that tobacco regulations mandating lower **tar** and nicotine levels in cigarettes has been postponed indefinitely as manufacturers have yet to find ways to lower these values in the low-tech hand-rolling industry.

Burmese cheroot makers at work, c. 1886.
© HULTON-DEUTSCH COLLECTION/CORBIS

market share the fraction, usually expressed as a percentage, of total commerce for a given product controlled by a single brand; the consumer patronage for a given brand or style of product.

tar a residue of tobacco smoke, composed of many chemical substances that are collectively known by this term.



Relatively high taxation and regular increases in excise taxes on cigarettes, coupled with the low spending power of the population, has seen cigarette sales decline across the board throughout Indonesia. However, the country exports manufactured cigarettes as well as increasingly large amounts of tobacco leaf. There are several corporate programs working to develop and improve leaf production in Indonesia, but little government involvement in the agricultural side of the tobacco industry.

Vietnam, Thailand, and Myanmar

Some countries, such as Vietnam, Thailand, and Myanmar (formerly Burma), have followed the Chinese example of creating state monopolies to control the production and sale of tobacco. However, with increasing international pressure to ease trade barriers, in some cases mandated by entry into the World Trade Organization, and an increasingly sophisticated and affluent consumer base, most of these traditionally closed markets are being forced to open up and allow the entry of foreign brands and technologies to remain competitive.

While Myanmar remains effectively closed to most foreign products, and the quality of domestically produced Myanmar tobacco is widely regarded as inferior on the world market, there are a few international companies, such as Rothmans of Pall Mall (Myanmar), producing cigarettes for local consumption.

By contrast, Vietnam's state-owned Vinataba has made great improvements in its domestic leaf production, and has allied itself with international companies in continuing efforts to improve its crop and production technologies. Because almost half of the Vietnamese male population smokes, most tobacco companies view Vietnam as a highly desirable potential market. However, the Vietnamese government, having allowed a dozen or so international companies to gain a foothold in the economy, is, as of 2004, not allowing anymore companies to enter the market until further notice, and is instead concentrating on boosting the export potential of its leaf and cigarettes.

Thailand's leaf production remains relatively small and of relatively low quality, despite efforts to improve the crop base throughout the last three decades of the twentieth century. The Thailand Tobacco Monopoly (TTM) saw its fortunes ebb significantly during the 1990s as imported cigarettes, which were not legally permitted to be sold in Thailand until the late 1990s, found their way onto the market. Consumers started demanding higher quality products, even though locally produced TTM cigarettes sell for approximately 30 percent less than imported brands. Despite the former ban on imported cigarettes, most popular international brands were sold openly throughout Thailand, highlighting two issues that afflict the region: smuggling and counterfeiting. Porous borders and the huge amounts of money to be made in the illegal trade of cigarettes have led to an increase in illegal cross-border trade of legitimate cigarettes and the production of counterfeit brands, many of which are thought by industry insiders and government officials to emanate from China. Revenue loss to the affected governments in the region is enormous, with Malaysia announcing in 2003 that smuggled cigarettes accounted for approximately 21 percent of the total domestic market, costing the country approximately \$1.3 billion annually in lost revenues.



Malaysia, the Philippines, and South Korea

Malaysia is another country with a history of tobacco usage predating colonization, and in the 2000s it is still possible to see the occasional hookah, a middle eastern water pipe, being smoked at coffee shops throughout the country, a reminder of its Middle Eastern links. In the 2000s, Malaysians, together with their neighbors in Singapore, Vietnam, and South Korea, prefer English-style Virginia tobacco cigarettes, unlike Thailand and the Philippines, where U.S. tastes predominate.

The Philippines is one of the largest consumers of tobacco in the region, with a long history of tobacco cultivation. Filipinos, especially those in the northern provinces of the main Island Luzon, have been smoking tobacco for centuries, and Spanish colonists established tobacco cultivation in several areas of the country, including Luzon, the Visayas, and Mindanao. During the Japanese occupation of World War II, many rural women took to smoking black *negritas*, a thin, cigarillo type of cigarette. They would frequently smoke these with the burning end in their mouths, anecdotally to dissuade Japanese soldiers from forcing their attentions on them. One may still occasionally find older women in the provinces smoking *negritas* this way.

Compañie General de Tabaccos de Filipinas made cigars from local tobacco as well as leaf imported from other Spanish colonies. CGDTF was founded in 1848 and remained a Spanish monopoly until the late 1870s, when the cigar division was bought out by La Flor de Isabella, which still makes cigars in its Manila plant today. © BETTMANN/CORBIS



flue-cured tobacco also called Bright Leaf, a variety of leaf tobacco dried (or cured) in air-tight barns using artificial heat. Heat is distributed through a network of pipes, or flues, near the barn floor.



menthol a form of alcohol imparting a mint flavor to some cigarettes.

The Philippines produces some fine export quality **flue-cured** Virginia and Burley tobacco, as well as lower quality local variants such as *saplak*, a burley and native tobacco crossbreed accounting for up to 70 percent of the crop grown in some provinces such as Pangasinan. The region is one of several low-lying tobacco-producing provinces where high salinity in the soil can result in low-quality tobacco that does not burn well and has poor taste characteristics. Coupled with poor farming techniques and haphazard grading, the quality of the Philippines tobacco crop in general is regarded as inconsistent by many domestic and international buyers.

However, there are some fine tobaccos produced in the Philippines and several success stories, many of which have been brought about by the infusion of capital and technological knowledge by international companies, such as Dimon, one of the leading buyers of tobacco leaf globally; Philip Morris; and others. Filipinos are one of South East Asia's largest **menthol** cigarette smokers; several brands, local and foreign, are produced locally. The domestic trade and production of cigars in the Philippines has declined dramatically over the last few decades of the twentieth century, but Philippine cigars have carved a niche for themselves with aficionados across the world, and compare favorably with Cuban and Dominican Republic brands, although with a milder and more flavorful taste.

South Korea was until the end of the twentieth century another country that imposed a state-run monopoly on its tobacco industry, but by the beginning of the twenty-first century it had started easing restrictions on foreign companies. There is a longstanding cigarette culture in South Korea; conscripted soldiers were for many years paid partly in cigarettes, and over 50 percent of the male population of the country are smokers. In the 2000s, foreign brands are capturing increasing shares of the domestic market, but improvements in South Korean leaves and an aggressive marketing strategy have resulted in increased exports of South Korean cigarettes, especially in the Middle East.

Antitobacco Legislation

Antitobacco legislation is playing an increasingly important role in the development of the tobacco industry throughout South East Asia. While governments earn significant percentages of their annual revenues from tobacco taxes, health concerns and pressure from antismoking groups have contributed to the formulation of policies restricting the sale of cigarettes to minors, mandating lower tar and nicotine levels, requiring manufacturers to cover ever larger portions of their packaging with health warnings, and, most importantly, because of the difficulty of establishing new brands in these markets, banning tobacco companies from advertising or sponsoring sporting and cultural events. As a result, the price of cigarettes has risen throughout the region as additional excise revenues are applied, and there is an overall decrease in the number of cigarettes sold. Due to rising prices and health concerns, reportedly fewer new smokers are taking up the habit, and as international prices for tobacco continue to remain low, many farmers throughout the region are looking to other crops to replace tobacco.

■ HENEAGE MITCHELL

BIBLIOGRAPHY

- Lockwood Publications Ltd. of New York. Published the world's first tobacco journal, *Tobacco*, in 1886. Produces subscription-based tobacco trade magazines, including *Tobacco International*, *Smokeshop*, *Smoke*, and *Distribution International*. Online. Available: <<http://www.lockwoodpublications.com>>.
- Tobacco Asia* magazine. Subscription-based magazine published by Lockwood Trade Journal Co., Inc., Bangkok, Thailand. Online. Available: <<http://www.tobaccoasia.com>>.
- Tobacco Journal International*. Subscription-based magazine published by Verlagsgruppe Rhein Main, Germany. Online. Available: <<http://www.tobaccojournal.com>>.
- Tobacco Merchants Association (TMA). Online subscription-based resource for current news and economic data on tobacco worldwide. Online. Available: <<http://www.tma.org>>.
- Tobacco Reporter Magazine*. Subscription-based magazine published by Tobacco Reporter, Raleigh, N.C. Online. Available: <<http://www.tobaccoreporter.com>>.



Spanish Empire

Tobacco had been used by the pre-Columbian peoples since time immemorial, but it was unknown in Europe until its discovery by the Spaniards in 1492. Christopher Columbus made specific reference to this event in his journal entry describing the exploration carried out by Luis de Torres and Rodrigo de Jerez on 5–7 November in the area adjoining the Bay of Givara, in Cuba: “They saw women and men, the men always with a lighted stick in hand, and certain dry herbs wrapped in a certain leaf, also dried, so as to form something like a paper musket . . . and lighting it on one end, they suck or swallow from the other, taking in that smoke with their breath, which numbs their flesh and nearly makes them drunken, and they say that thus they feel no fatigue” (Fernández de Navarrete, p. 202). From this date on for the next hundred years, almost all that scholars know about tobacco are suppositions.

The Spaniards soon saw that tobacco use was common and widespread among all the indigenous communities they encountered throughout the Americas. Before long, the more daring among the Spaniards began to imitate the practice. It also became evident that Amerindians used the substance in pagan rites and ceremonies, which required a wholesale rejection on the Spaniards' part. Thus the first polemic over tobacco emerged.

Between the initial discovery of tobacco and its later “official” recognition by way of the establishment of the royal monopoly in Castile in 1636, three successive periods may be distinguished. Each period reflects a distinct change in the intensity and diversity of tobacco use. The first period, enduring some sixty or seventy years, lasted until the middle of the sixteenth century. It was a phase of first contacts and of sporadic experiences with tobacco. Previously unknown, tobacco was not a product either sought or desired in its own right. Therefore it required time for acquaintanceship and acceptance. After a few decades,

chroniclers' writings testify to the prevalence of tobacco consumption among the settlers in the new colonies, sometimes to the point of abuse. "I knew Spaniards on the island of Hispaniola," wrote Bartolomé de las Casas "who had the habit of using [tobacco], and who, on being reprimanded and told this was a vice, replied that they could not stop." (Casas). This attitude was completely different from that generally observed among the native peoples, who held it as sacred as well as enjoyable. For the Europeans, tobacco use was for pleasure, without any more transcendent goal. Thus the modern smoker emerged. Records of tobacco's appearance in the metropolis during this time are scant. Some writers mention certain shipments of leaves arriving in Seville, and even allude to significant quantities, but these are mere conjectures. What are known are attempts to adapt the plant to the Iberian peninsula, and the initial study of its properties by doctors and botanists there.

The second period of tobacco's rise took place between the middle and the end of the sixteenth century. This period was shorter—barely fifty years—but much more intense. It took place not only in Spain but also in Portugal, France, the Netherlands, and England, for now tobacco use began to take root. Although there exists no proof that tobacco was as yet used for pleasure in Spain, its growing medicinal use is evident. In the last decades of the sixteenth century, texts attest to tobacco's rise in the American colonies and the first clear indication of its acceptance in the metropolis. Nicholas Monardes, the Sevillian doctor, trader, and writer, alludes to tobacco having been "brought in the past few years to Spain" (Monardes). The regulation of tobacco cultivation in Cuba dated from 1580, and in these same years the first mills for grinding tobacco leaves (*polvomonte de Indias*) were constructed on the outskirts of Havana. All these developments seem to coincide.

The third period was briefer still—just the first third of the seventeenth century—and may be said to have ended with the establishment of the royal tobacco monopoly at the end of 1636, for such a far-reaching measure implied a spectacular growth of the tobacco habit on both sides of the Atlantic. This period saw colonists expand tobacco cultivation in the American colonies and the development of a prosperous trans-Atlantic trade. There are many testimonies to this expansion in almost all the American territory under Spanish control, including Barinas (Venezuela), Puerto Rico, Cuba, and Hispaniola. It should be noted that the first tobacco harvests of Virginia date from the second decade of the seventeenth century as well.

Some results of this initial expansion were the royal decree in 1606 prohibiting the planting of tobacco in the Caribbean islands and the continental Caribbean coast (in Puerto Rico, Hispaniola, Cuba, the Margaritas, and the provinces of Venezuela, Cumaná, and Nueva Andalucía). Angry planters and merchants lobbied successfully for the repeal of this decree some years later (1614), and even secured tax exemptions to promote cultivation in some zones (Trinidad and Guyana, 1625). During this period, there was also a failed attempt to impose a monopoly in Venezuela (1620), so as to require planters to sell their harvests to royal agents at set prices, and to stop the illegal trade with foreign merchants. A short-lived monopoly was also imposed in Puerto Rico in 1632, though with a much more limited character than that which would develop in the eighteenth century. The early seventeenth century also saw the establishment of the tobacco processing factory of



Spanish explorer Christopher Columbus (1451–1506). His journal entries in 1492 were among the first by Europeans to describe tobacco smoking by Native Americans, a practice long established in the New World but previously unknown in Europe. LIBRARY OF CONGRESS

San Pedro in Seville (1620) and the appearance of the first customs duties on American tobacco imported into the metropolis. Finally, this period ended with the creation of the Castilian monopoly, which marked a watershed between a “before” and an “after” in the Spanish tobacco realm.

At the beginning of the seventeenth century, tobacco had become an American product of great importance. As a result of tobacco’s rapidly accelerating popularity, on 28 December 1636 the Spanish Crown established a royal monopoly in Castile, the largest of Spain’s kingdoms, although in the remaining Spanish territories tobacco continued to be bought and sold freely. Spain’s tobacco monopoly was later imitated by states throughout Europe and beyond.

The monopoly gave the Spanish Crown the exclusive right to process, distribute, and sell tobacco in Castile. As such, the monopoly provided the Crown a new source of revenue, and allowed the chronically penurious royal treasury to borrow more money from international creditors guaranteed by future monopoly proceeds. Yet, the state did not directly operate the tobacco monopoly. Instead, it administered the monopoly by leasing it to private contractors, known as *arrendadores*, which was a common practice in the Spanish fiscal system of the time. Accordingly, the Crown publicly auctioned the new monopoly and gave it and its management to the highest bidder. The first lease lasted only fifteen months, rather than the ten years stipulated. Such developments were characteristic throughout the seventeenth century as competing lease holders successively outbid the previous lessees, a consequence of the extraordinary growth in demand for tobacco in Castille. The exponential increases in the value of tobacco monopoly leases attest to the spectacular expansion of demand. The first lease was valued at 23 million *maravedis*; twenty years later, it was 57 million; in 1675, it was 285.3 million, and by 1698 it was 304.5 million. Although the Spanish monetary crisis lessens the real value of these figures, the expansion and the high volume of business cannot be disputed. Nonetheless, the inflated tobacco prices set by the monopoly ensured that rampant contraband consumption co-existed with legal sales.

In practice, the monopolist, or lessee, would subcontract with other entities who would operate the monopoly in different territories and provinces. In turn, these would further subdivide their regions into smaller districts. At the lowest level were the *puestos estancos* or *estancillos*, in other words, the retail tobacconists. These vendors would contract with the monopolist (or his subfactors) to sell a minimum, predetermined amount of tobacco at a set price in a set time period. This was known as the “*tabaco de obligación*” (tobacco of obligation), though the tobacconist could also sell tobacco in excess of that amount, known as tobacco “*fuera de obligación*” (tobacco outside of obligation).

The majority of monopoly lease holders, or *arrendadores*, were Portuguese *conversos* (descended from Jews), a mercantile community who played an important role in helping the government avoid bankruptcy. Their presence in Spanish banking was largely due to the protection of the Philip IV’s Spanish prime minister, the Count-Duke of Olivares, who helped them avoid entanglements with the Inquisition. After Olivares’ fall in 1643, the Inquisition launched a persecuting campaign against the prominent monopolists, the target of popular anti-Semitism, and succeeded in prosecuting some of the most notables, such as Antonio



snuff a form of powdered tobacco, usually flavored, either sniffed into the nose or “dipped,” packed between cheek and gum. Snuff was popular in the eighteenth century but had faded to obscurity by the twentieth century.

de Soria (in 1654) and Francisco López Pereira (in 1658), bringing their monopoly contracts to an end.

Late in the seventeenth century, between 1683 and 1687, the Crown experimented with taking direct control of the tobacco monopoly, seeking to eliminate the middlemen. The state created the *Junta de Tabaco* to oversee the monopoly, named a director to manage the Seville factory (where **snuff**, and later cigars, were manufactured), adopted measures against fraud and contraband, and prepared guidelines for procuring, manufacturing, and distributing the product. The new system did not last long, and soon the monopoly returned to the method of leases, although that trial run became the precursor to the system that would prevail in the eighteenth century.

Throughout its existence, fraud and contraband beset the monopoly, from within and without. The high retail prices set by the monopoly—exponentially above the “market” price—encouraged contraband sales. Critics also blamed tobacco producers in the Spanish colonies who illegally avoided selling their tobacco to monopoly agents in favor of selling tobacco in the international market where it fetched higher prices. Moreover, they complained of the monopolists who adulterated tobacco with cheaper and illegally imported varieties, and accused them of faking bankruptcies as a way to avoid fulfilling their obligations to the Crown. Ecclesiastics were also notorious participants in contraband, cultivating tobacco clandestinely in convent fields and selling it illegally to consumers below the monopoly prices.

When Charles II produced no heir, the Habsburg dynasty ended in Spain with his death in 1700 and a Bourbon, Philip V (grandson of Louis XIV), came to the throne. Beginning with decrees in April of 1701, the royal tobacco monopoly was transformed under the Bourbon regime: The “leasing” system gave way to a system of central administration, at least partly modeled after the measures implemented between 1683 and 1687. However the War of Succession to the Spanish Crown (1702–1713) delayed the shift to direct state control to a more favorable moment.



hegemony control or superior influence over; dominion.

It took several decades before the monopoly’s transition to a system of central administration was completed. Gradually, more and more provinces and districts came under the direct control of the state treasury, and eventually the remaining Spanish territories were integrated into the monopoly: Valencia, Aragon, Catalonia, Balearic Islands, Canaries, and later Navarre. The monopoly instituted stronger safeguards against fraud; in 1725, it asserted the **hegemony** of the Sevillian tobacco manufacturing with the New Factories Project, and it strengthened the provisioning system to ensure it received the best tobacco from the Spanish colonies.

Over the course of the eighteenth century the monopoly flourished, bringing in substantial revenue for the treasury. Official consumption grew from 1.1 million pounds of tobacco to almost 4 million in 1730–1731. Then a drastic price hike resulted in a drop in legal consumption to 2.5 million pounds in 1742; by 1779 legal demand had recovered and topped 4 million pounds once again. In that same year another drastic price increase led annual consumption to drop to 3 million pounds. From 1780 until the end of the century, annual sales ranged between 2.5 and 2.7 million.

Despite the drop and stagnation in monopoly sales, monopoly profits grew throughout the century. At the beginning of the century, the state received 7 million *reales* in profit, which rose to 46.5 million by 1730–1731. Even after sales dampened, the price increases ensured that profits continued to rise, averaging 74 million *reales* in the decade between 1740 and 1749, 90 between 1750 and 1759, 99 between 1760 and 1769, 115 between 1770 and 1779, 125 between 1780 and 1789, and 123 million between 1790 and 1798.

Contraband and fraud was an even greater problem in the eighteenth century, precipitated by the great expansion in tobacco consumption and the disproportionate price hikes set by the monopoly. In response, the monopoly developed a militia, known as the *resguardo*, to diminish the illegal traffic, but did not have much success.

During the nineteenth century, the tobacco monopoly suffered the consequences of the political crises that erupted in Spain. Though the wars, coups d'état, and revolutions that devastated the entire territory made it impossible to obtain accurate output figures, it is clear that the output of the tobacco factories was deeply affected by all these vicissitudes. After recovering from the Napoleonic Invasion and the subsequent War of Independence (1808–1814), monopoly sales rebounded, only to fall again with the first Carlist War (1833–1839). After this war there was another moderate recovery that lasted until the crisis period that began with the Revolution of 1868. After 1874 the monopoly flourished again until its transformation in 1887.

Despite the recurring crises, the institutional structure of the monopoly saw few changes until the end of the century, although there were several efforts to transform it. At various times, Progressive governments tried to end the monopoly, viewing it as an anachronism, inconsistent with their liberal ideology. Progressive governments tried to eradicate the monopoly, such as when the Cortes of Cadiz repealed it (3 December 1813) and later during the Constitutional Triennial (9 November 1820), but they did not achieve the desired success and returned again to the same monopoly system (16 February 1824). Similarly, in 1855, as in 1869, plans to repeal the monopoly never were put in place. On the contrary, an 1876 law expanded the monopoly to include the three Basque provinces.

Finally, in 1887, the monopoly was reorganized with the creation of the *Compañía Arrendataria de Tabacos* (State Leasing Tobacco Company), or CAT. Formed of state and private capital, the company took over control of the monopoly's activities, including procurement, production, distribution, and sales. CAT undertook a modernization program by improving the industrial process, drastically reducing labor requirements, and creating a better system of fraud control. Because of these changes the industry started a new phase of recovery and achieved substantial growth at the beginning of the new century.

The Civil War (1936–1939) brought an end to this program, after which Tabacalera replaced CAT in 1945. Tabacalera was charged with repairing the monopoly during the critical years after the war. During the early years of the Franco regime, the monopoly struggled for survival, but the 1960s the monopoly returned to a long period of expansion. With its entrance into the European Economic Community (EEC) in 1986, Spain had to bring an end to the state tobacco monopoly.



Engraving of Philip V (1683–1746), founder of the Bourbon dynasty in Spain. In 1701, a year after he came to the throne, the royal tobacco monopoly was transformed when the “leasing” system was changed to a system of central administration. However the War of Succession to the Spanish Crown (1702–1713) delayed the shift to direct state control for several decades.
© BETTMANN/CORBIS

Tabacalera privatized and, later merged with Seita (the old French Monopoly), together constituting Altadis.

The Tobacco Monopoly in the Spanish Colonies

The establishment of the royal tobacco monopoly is one of the most noteworthy economic aspects of colonial policies governing the Spanish Empire. Despite the dramatic success of the Castilian royal tobacco monopoly and the growth of consumption in the colonies, the Crown did not extend this peninsular model to its American possessions during the seventeenth century. Only in the period between 1684 and 1687, during which the Royal Treasury administered the monopoly directly, were more rigid measures on colonial tobacco activities adopted; these included greater control over the supply sustaining the Royal Factory in Seville and a requirement that the Indies consume products manufactured in the metropolis. To these moves may be added the failed attempt to establish a tobacco monopoly in Mexico (1642) and South America (1647), as well as some other measures of more minor interest.

The policy of expanding the monopoly to Spanish America arrived in force with the Bourbons after 1700. Its implementation, however, suffered delays of almost two decades and, in most cases, more than half a century. When implementation began in Cuba after the end of the War of the Spanish Succession, it turned out to be fraught with peril. The monopoly was imposed on 11 April 1717, in the form of an exclusive royal agency (the *Factoría*) to whom planters were required to sell their tobacco at prices set by the state. However, planters mounted three successive rebellions—in 1717, 1720, and 1723—which required the Crown to moderate its decrees. After this difficult beginning, the monopoly took the form of the *Intendencia General* (1727–1734), whose function was to guarantee the supply; followed by a system of contracts with particular privileged merchants; and finally, after 1740, an exclusive arrangement with the Royal Havana Company. In 1760 this regulation too was rescinded, and the *Factoría* was restored (1760–1817), although in a less extreme form than during the first attempt.

By then, the extension of the monopoly to other colonial territories was in full swing. The changed attitude toward American commerce after 1740 (the War of Jenkins' Ear) and the need for a growing source of revenue to sustain the empire after the Treaty of Paris (1763) precipitated the monopoly's expansion throughout the Spanish colonies. The monopoly began by incorporating the viceroyalty of Peru: first in Lima and a year later in Santiago (Chile), then in 1754 in Lower Peru (Cuzco, Trujillo, Arequipa), and in 1755 in Upper Peru (La Paz, Charcas). At the end of that year, the regime was extended to Buenos Aires, although under the jurisdiction of the Junta of Chile.

In New Spain, where the rise of tobacco consumption had continued uninterrupted, the monopoly was decreed in 1764, and the resulting revenues were always spectacular: some 417,000 pesos in 1767, 1.2 million pesos in 1775, and nearly 3.5 million pesos in 1790. The provinces of Guatemala were incorporated into the monopoly in 1766. The *Intendencia* of Venezuela first became subject in mid-1777, with the monopoly's establishment in its subdivisions, including that of Caracas, Maracaibo, Cumaná, and Guyana; the definitive stage came in May 1779.

In that same year, the monopoly also spread to Paraguay, and in 1785 the Factoría of Puerto Rico was created.

In the Philippines the monopoly began in 1782 with the same goal as in other areas: to promote self-financing. At first only the capital and a group of surrounding provinces were affected (the productive zones of the provinces of Gapán, Nueva Écija, Marinduque, and Cagayán); six years later monopoly control reached Ilocos Norte, Olocos Sur, La Unión, Abra, and La Isabela.

The blueprint that was followed to extend the reach of the monopoly throughout the empire was similar, in all cases, to the metropolitan one: creation of a Supreme Council of the Royal Tobacco Monopoly (Junta Superior de la Real Renta del Tabaco) and the General Administration of the Monopoly (Dirección General de la Renta) for each province; and establishment of various *factorías* and structures for their control (based on the long experience accumulated in the Peninsula), such as general and **subsidiary** administrative bodies, exclusive tobacco warehouses, retail stores, and police forces. These were run according to successive sets of regulations and ordinances based on the *Instrucciones y Reglas Universales* imposed in Spain in 1740. Significant manufacturing developed in some areas, especially in New Spain, with factories in Mexico City, Orizaba, Puebla, Oaxaca, Guadalajara, and Querétano, but also in Cuba from quite early on, and in Peru. Only in Cuba were the resultant products shipped to the Old World; otherwise, all the local production was distributed within the colonies themselves.

The independence movements that sprang up within the Spanish Empire in the early nineteenth century put an end to the royal monopoly in most of the areas where it had held sway. Only Cuba and Puerto Rico in America and the Philippines in Asia maintained their ties with the metropolis, and only in the latter did the monopoly last until its repeal in 1881. The Factoría de Puerto Rico succumbed during the Independence War, while in Cuba the monopoly was abolished in 1817.

Tobacco and Mercantilism

Within this overview of the tobacco monopoly in the Spanish Empire, certain general themes emerge. One surprising fact is that Spain never achieved complete control over tobacco activity in its immense colonial realm. Tobacco was certainly a vital economic sector, transforming the agrarian economy and commercial circles in many parts, becoming a source of population flows and colonial expansion wherever its cultivation took root, and providing colossal sums to sustain the hegemony of the Crown. Nonetheless, both before and after the spread of the monopoly throughout these territories, the tobacco trade to a large extent escaped the policies promoted in the metropolis, in part because of the reality of colonial exploitation itself. The interests of the planters—most often medium-sized proprietors, if not simple peasant families—always tended to favor fraud or even open contraband trading of their products, because they made greater profits if the products went elsewhere other than Spain (to other European countries or other Spanish colonies). Though tobacco planters did not acquire much economic power as individuals, as a group they achieved undoubted importance in many of these regions. Thanks to this power and, in the majority of cases, to the collaboration of colonial authorities, the tobacco planters were able to



subsidiary in commerce, a branch or affiliate of a larger unit that provides components or support services.



skirt restrictive regulations issued from the metropolis, or fight them directly, even by force of arms.

Despite the high demand and profitability, tobacco cultivation was restricted for a number of reasons. Oftentimes it competed with other cash crops, such as sugar, cacao, ginger, and coffee, in many of these territories. And in many areas cattle ranchers and tobacco cultivators fought over control of the land. In addition, an important part of colonial tobacco production (in all of New Spain and Peru, but also in parts of Santo Domingo, Puerto Rico, and Cuba) remained for internal consumption, sometimes generating strong commercial interests there.

For these and other political and strategic reasons, imperial Spain never managed to acquire all its tobacco imports from its own colonies, even though it controlled many of the most important tobacco-producing regions of the time. From the beginnings of the Spanish tobacco industry at the end of the sixteenth century—during which time there existed the temporary union of Spain and Portugal—evidence may be found of the presence of rolled tobacco from Brazil and soon of Virginia tobacco as well, and later came to include supplies from Louisiana and Kentucky. The proportion of Spain's tobacco imports originating outside the empire reached very high levels at many points; at the same time, a significant proportion of the Spanish colonies' crops were diverted to other European markets. This led Spain to lose specie as it bought tobacco from its imperial rivals—and the state sought to change the situation by continually issuing new regulations and decrees, which attests to how little effect these measures actually had.

Another factor that must be taken into account is the high proportion of the colonial tobacco shipments to Spain made up by already manufactured goods. This reality completely contradicts the mercantile theories that, it has been thought, guided imperial policy. During the eighteenth century at least 25 percent of the annual supplies of snuff tobacco had already been processed in Havana (Cuba), and this figure reached more than 90 percent in some years. All told, the average was between 40 and 45 percent per year. Is it possible, in view of these figures, to keep speaking of a “colonial pact”—the mercantilist notion in which the metropolis would exclusively benefit from the import of raw materials from its colonies, and, in turn, process and export them as manufactured goods to protected American markets? On the contrary, Spain failed to monopolize economic activities in the New World, nor could it thwart the empowerment of economic groups, such as colonial tobacco producers, whose interests were in direct conflict with those of the metropolis. Certainly, the monopoly did become established throughout the empire, and it was an outstanding revenue-raising success for the state. But it could not manage to eliminate certain problems or to cure many of the ills inherent in the system of management imposed on the colonies by Spain. Its example serves as a model for a new interpretation of colonial policy.

See Also Brazil; British Empire; Caribbean; Cuba; Dutch Empire; French Empire; Portuguese Empire; Smuggling and Contraband; South and Central America; Taxation; Trade.

■ JOSE MANUEL RODRÍGUEZ GORDILLO

BIBLIOGRAPHY

- Casas, B. de las, *Historia de las Indias*. Madrid: Biblioteca de Autores Españoles, 1957.
- Comín Comín, F., and Martín Aceña, P. *Tabacalera y el estanco del tabaco en España, 1636–1998*. Madrid: Fundación Tabacalera, 1999.
- Fernández de Navarrete, M. *Colección de los viajes y descubrimientos que hicieron por mar los españoles desde fines del siglo XV*. Madrid, 1858.
- García de Torres, J. *El Tabaco: consideraciones sobre el pasado, presente y porvenir de esta Renta*. Madrid: Imprenta de Juan Noguera, 1875.
- Monardes, N. *Segunda parte del libro de las cosas que se traen de nuestras Indias Occidentales, que sirven al uso de medicina*. Sevilla, 1571.
- Ortiz, Fernando. *Cuban Counterpoint: Tobacco and Sugar*. Trans. Harriet de Onís. Durham: Duke University Press, 1995.
- Pérez Vidal, J. *España en la historia del tabaco*. Madrid: CSIC, 1959.
- Rivero Muñíz, José, *Tabaco. Su historia en Cuba*, 2 vols. La Habana: Instituto de Historia, 1965.
- Rodríguez Gordillo, J. M. *Diccionario histórico del Tabaco*. Madrid: Cetarsa, 1993.
- . *La creación del estanco del tabaco en España*. Madrid: Fundación Altadis, 2002.
- . *La difusión del tabaco en España*. Sevilla: Universidad de Sevilla/Fundación Altadis, 2002.

Spanish Tobacco Monopoly See Brazil; British Empire; Caribbean; Colonialism; Cuba; Dutch Empire; French Empire; Portuguese Empire; Smuggling and Contraband; Spanish Empire, State Tobacco Monopolies; Taxation; Trade.



Sponsorship

Tobacco industry sponsorship largely evolved once other forms of cigarette promotion were restricted or no longer permissible. Researchers Stephen Townley and Edward Grayson, in *Sponsorship of Sport, Arts and Leisure* (1984), define sponsorship as “a mutually acceptable commercial relationship between two or more parties in which one party (called the sponsor) acting in the course of a business, trade, profession or calling seeks to promote or enhance an image, product or service in association with an individual, event, happening, property or object (called the sponsee)” (Townley and Grayson 1984). Following an analysis of various industry efforts to define sponsorship, the Global Media Commission of the International Advertising Association defined commercial sponsorship as “an investment, in cash or in kind, in an activity, in return for access to the exploitable commercial potential associated with that activity” (Larson and Park 1993).

Sponsorship should not be confused with patronage. A patron makes a donation, whereas a sponsor makes an investment. Companies usually

Camel and Marlboro ads at the Macau Grand Prix gain widespread television exposure. It is estimated that 300 million television viewers watch each Formula One race. © EARL & NAZIMA KOWALL/CORBIS



make donations to support and improve their public image and to demonstrate that they are caring and good corporate citizens. Patronage implies funding and support on a noncommercial basis and such generosity is usually based on personal satisfaction and a belief in the worthiness of the cause. The sponsor's motives for making its investment, however, are commercially based rather than altruistic. The sponsor is involved in a business activity to gain benefits and meet particular objectives.

A Shift from Broadcast Advertising to Sponsorship

The early 1970s represents the defining period when sports and cultural sponsorship became an increasingly important form of promotion for American tobacco manufacturers. Virginia Slims, for example, began sponsoring women's professional tennis in 1970, while Winston Cup auto racing and Marlboro Cup horse racing started in 1971 and 1973, respectively. The shift toward sponsorship largely reflected the fact that cigarette firms were no longer permitted to advertise on radio and television. In the United States, federal legislation, the Public Health Cigarette Smoking Act, stipulated that broadcast advertising for cigarettes was banned, commencing 2 January 1971.

Tobacco manufacturers were aware that cigarette brand exposure could persist on radio and television if broadcast sporting and cultural events were sponsored. Studies have illustrated that by sponsoring sports such as auto racing, U.S. tobacco companies continue to receive millions of dollars worth of national television exposure. A videotape recording of the Marlboro Grand Prix on 16 July 1989, for example, revealed that Marlboro was seen or mentioned 5,933 times. Cigarette billboards remained present in several sports stadiums until the mid-1990s and gained considerable television exposure. During the 1992

Sugar Bowl football game, Marlboro signs located near the scoreboard gained forty-eight seconds of camera exposure, which was valued at \$144,000 in advertising time. The billboards were strategically placed to maximize the extent of their exposure. Tobacco manufacturers have used sponsorship as a means of circumventing television advertising regulations or restrictions.

Key Sponsorship Objectives

Internal tobacco industry documents, which are publicly accessible through various court proceedings, reveal that primary objectives for sponsoring sports and cultural events include increasing brand awareness (through continued brand visibility) and enhancing or reinforcing brand image. In an attempt to enhance or reinforce brand imagery, tobacco firms identify events and brands that possess complementary symbolic properties, seeking a transfer of the imagery associated with the event, participants, or sponsorship partners to the sponsoring cigarette brand. Marlboro, the most popular cigarette brand in the world, is promoted as a symbol of masculinity, ruggedness, independence, and self-reliance. Thus, the brand typically sponsors individual rather than team sports (making a link with independence), as well as activities that convey masculine overtones. According to Ellen Merlo, vice president of marketing services at Philip Morris, quoted in a 1989 Marlboro advertisement, "We perceive Formula One and Indy car racing as adding, if you will, a modern-day dimension to the Marlboro Man. The image of Marlboro is very rugged, individualistic, heroic. And so is this style of auto racing. From an image standpoint, the fit is good."

Sponsoring cultural and sports events may serve a number of additional marketing objectives for tobacco companies and their products. Through highlighting the community benefits that result from sponsorship, yet meanwhile placing a de-emphasis on the commercially based motives of the investment, sponsoring events is viewed by tobacco companies as an opportunity to be regarded as good corporate citizens. Sponsorships, it is argued, allow cultural and sports events to be staged which might otherwise be denied. Charity associations are also commonly accentuated. For example, Rick Sanders, president of Sports Marketing Enterprises at R.J. Reynolds Tobacco Company, emphasized in a 2000 letter to racing fans that more than \$1.8 million was raised for charities over a ten-year span from the NASCAR Winston Cup Preview. Furthermore, tobacco companies may gain allies for lobbying efforts by forming sponsorship-affiliated front groups and asking those sponsorship organizations that they financially support to vehemently oppose any proposals to ban sponsorship.

There are several other potential corporate motives of sponsorship. First, event sponsorship can enhance employee relations and morale. Productive employees may be rewarded with tickets to various events and feel that their employers are good corporate citizens by supporting community events. Second, political contact and support can be strengthened because politicians are frequently invited as guests to sponsored events. Third, sponsorship provides hospitality opportunities, with the events serving as a forum for customer or employee entertainment. Fourth, demographic data may be collected from target consumers that are attending sponsored events. Name databases can be established for direct marketing purposes. Fifth, event sponsorship provides sampling

opportunities so that consumers are provided with convenient opportunities to try products at no financial risk. Finally, sponsorship can provide cross-promotional opportunities, as well as options for revenue deductions or tax write-offs.

The Current Legislative Environment

Tobacco brand sponsorship has been banned in several countries, including Algeria, Bulgaria, Canada, Finland, France, Italy, Jordan, Norway, Saudi Arabia, and Sweden. Domestic tobacco sponsorships are prohibited in Australia, New Zealand, and the United Kingdom, but exemptions have been made for events of international significance. The Framework Convention on Tobacco Control (FCTC), which was negotiated through the World Health Organization, calls for countries to undertake a comprehensive ban of all tobacco promotion directed toward consumers, including brand sponsorships, in accordance with each country's respective constitution. A minimum of forty nations must ratify the treaty before its provisions take effect (the FCTC would be legally binding for only those countries that ratify the treaty).

See Also Advertising; Marketing; Public Relations; Sports.

■ TIMOTHY DEWHIRST

Distinguishing Between Brand and Corporate Sponsorships

Compared to tobacco brand sponsorship, corporate sponsorships (for example, Philip Morris is identified as the sponsor rather than Marlboro) are more often integrated with public relations strategies, with objectives such as generating positive publicity and enhancing the image of the firm. Corporate names are more commonly used than brand names for identifying the support of "issue" sponsorships, which often relate to social programs, education, health care, and environmental concerns.

BIBLIOGRAPHY

- Blum, Alan. "The Marlboro Grand Prix: Circumvention of the Television Ban on Tobacco Advertising." *The New England Journal of Medicine* 324 (1991): 913-917.
- Cornwell, T. Bettina. "The Use of Sponsorship-linked Marketing by Tobacco Firms: International Public Policy Issues." *Journal of Consumer Affairs* 31 (1997): 238-254.
- Crompton, John L. "Sponsorship of Sport by Tobacco and Alcohol Companies: A Review of the Issues." *Journal of Sport and Social Issues* 17 (1993): 148-167.
- Dewhirst, Timothy. "Smoke and Ashes: Tobacco Sponsorship of Sports and Regulatory Issues in Canada." In *Sports Marketing and the Psychology of Marketing Communication*. Edited by Lynn R. Kahle and Chris Riley. Mahwah, N.J.: Lawrence Erlbaum, 2004.
- Hoek, Janet, and Robert Sparks. "Tobacco Promotion Restrictions: An International Regulatory Impasse?" *International Marketing Review* 17 (2000): 216-230.
- Hwang, Suein L. "Some Stadiums Snuff Out Cigarette Ads." *Wall Street Journal*, 17 July 1992, p. B6.
- Larson, James F., and Heung-Soo Park. *Global Television and the Politics of the Seoul Olympics*. Boulder, Colo.: Westview Press, 1993.
- Lavack, Anne M. "An Inside View of Tobacco Sports Sponsorship: An Historical Perspective." *International Journal of Sports Marketing and Sponsorship* 5 (2003): 33-56.
- Shafey, Omar, Suzanne Dolwick, and G. Emmanuel Guindon, eds. *Tobacco Control Country Profiles 2003*. Atlanta, Ga.: American Cancer Society, 2003.
- Townley, Stephen, and Edward Grayson. *Sponsorship of Sport, Arts and Leisure: Law, Tax and Business Relationships*. London: Sweet & Maxwell, 1984.



Sports

Smoking has always had an important link with sports. In the early 1900s, and also in Nazi Germany in the 1930s, social reformers argued that children who smoked cigarettes would be unable to participate in sports. However, in the 2000s the link between smoking and sport has been increasingly fostered and exploited by advertisers around the world.

Smoking and Social Reform

In the early 1900s, part of the argument used against smoking among young people was that it would impair their ability to participate in sports. In this respect, smoking was bound up with wider debates about physical deterioration and citizenship. Writing of football in *Scouting for Boys* (first published in 1908), Robert Baden-Powell enjoyed watching the players “but my heart sickens at the reverse of the medal—thousands of boys and young men, pale, narrow-chested, hunched-up, miserable specimens, smoking endless cigarettes, numbers of them betting” (Baden-Powell). Similarly, in Nazi Germany, smoking among young people was criticized because it was seen to be sapping the strength of the German people—at work, at school, in the bedroom, in the field of battle, and on the sports field. Experiments conducted in Nazi Germany in the 1930s showed that smoking impaired the ability of a soldier to march long distances.

Smoking and Advertising

However, sports and tobacco advertising have always been closely connected. Sports is one of those common denominators in society, much like patriotism, the nation’s past, health and beauty, and optimism about the future, that has been exploited by advertisers. Sports was used as a vehicle for advertising more because of its general associations with youth, fitness, and citizenship than as part of a more deliberate attempt to combat the moral and health claims made about cigarettes.

This was certainly the case in the United States, where baseball was one of the most popular themes featured on **cigarette cards**. Some cards featuring baseball were issued as early as 1886, but it was over 1887–1888 that a series was released by the Goodwin Company of New York City. More than 2,000 cards were featured in packets of Old Judge and Gypsy Queen cigarettes. Uniformed athletes assumed a variety of poses simulating action, along with gallery poses, and these were used on the covers of giveaway scorecards for National League games. Cigar companies sponsored local baseball teams; cigar tins included such brands as Home Run; and a billboard showed a swimmer clambering out of the pool with the caption, “Now for a Chesterfield” (Petroni). Streetcar advertising for Chesterfield cigarettes associated them with tennis, while for Lucky Strike the link was with baseball. Other baseball stars testified to the superiority of particular brands: “Old Gold hits a homer for Babe Ruth in blindfold cigarette test”(Petroni).

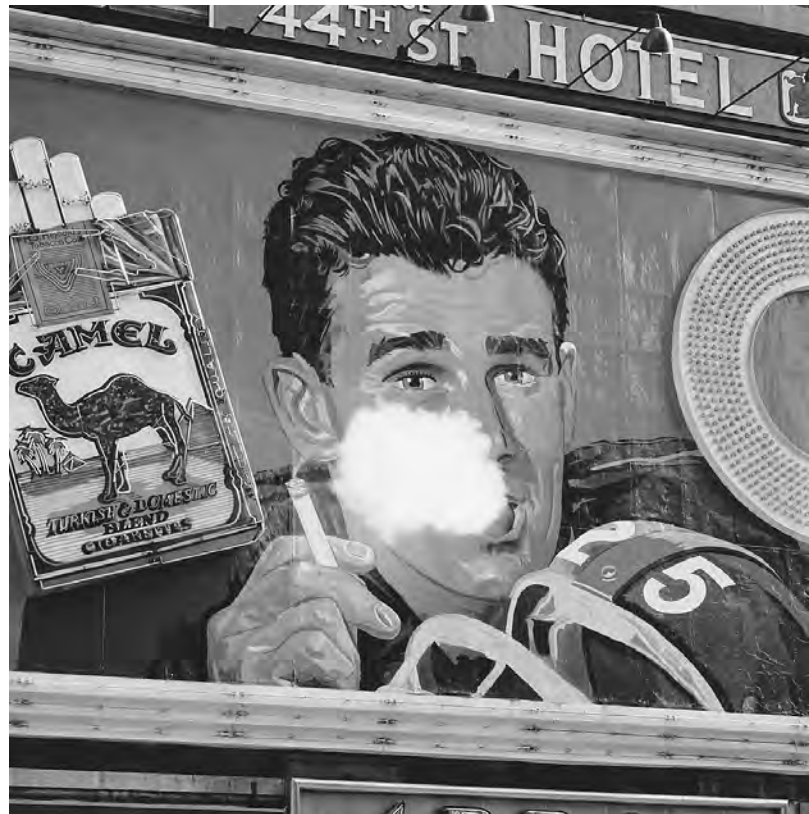
Sports and tobacco advertising have remained closely linked. In a survey of tobacco advertising in Australian newspapers and periodicals,

“Luckies do not affect my wind,” says baseball player Paul Waner, voted National League’s most valuable player in 1927. “When I first started to smoke I was anxious to find a cigarette that would give me pleasure without taxing my wind or irritating my throat. I soon discovered Lucky Strikes. I am very fond of the excellent flavour of these cigarettes and they keep my throat clear and do not affect my wind in the least” (Petroni).

“For some men things always go smoothly. Such as getting first night tickets. Getting par for the course in golf. Getting a rare piece of art. And getting the experience of a truly great smoke. Wills Filter Kings. Rich, mellow—and very, very smooth. For some men, it’s most satisfying” (Chapman 1986).



cigarette cards paper trading cards sometimes featuring sports personalities or movie stars packaged with cigarettes and offered as an incentive for purchase.



Sports and tobacco advertising have always been closely linked as shown by this billboard advertisement from 1961 of a football player exhaling smoke from a Camel cigarette. © ROGER WOOD/CORBIS

researchers found that sports made up 60 advertisements or 5.8 percent of the total. Since roughly 1970, tobacco advertising has been controlled more strictly in western Europe and America, although this has been more about restricting advertising in general than any explicit attempt to target images of sport and fitness. Moreover, in eastern Europe and developing countries, the association between tobacco and sports has continued. A brand of cigarettes called Popularne, manufactured by the Polish Tobacco Industry Combine, were formerly named Sport, and in the 1980s cigarette marketing in developing countries was shown to be directly associating its products with sports. In Indonesia, the Kreek brand Djarum lent its name to the country's badminton team, and it also sponsored boxing matches. In India, the VazirSultan Tobacco Company spent a significant part of its budget on cultural and sporting events. Rothmans Royals (Fiji) were promoted through an illustration of a cricketer; Wills Filter Kings (India) were marketed with references to golf; and Bastos Blonde (Cameroon) used tennis as its sport of association. Meanwhile, Virginia Slims sponsored tennis, and John Player Special, Marlboro, and Rothmans were involved in Grand Prix motor racing worldwide. Since the 2000s, there have been efforts internationally to restrict tobacco industry sponsorship of sporting events as a means of reducing smoking initiation among youth.

Throughout the twentieth century, tobacco has had a complex and contradictory association with sports. Throughout the century, even before smoking was linked to cancer in the 1950s, smoking has been discouraged among young people on the grounds that its effects would render them unable to participate in sports activities. But at the same time, advertisers have exploited the popularity of sport as a vehicle for

tobacco advertising through using popular sports figures in advertising or sponsoring sporting events.

See Also Advertising; Marketing; Sponsorship.

■ JOHN WELSHMAN

BIBLIOGRAPHY

- Baden-Powell, Sir Robert. *Scouting for Boys: A Handbook for Instruction in Good Citizenship*, 2nd ed. London: Arthur Pearson, 1909.
- Chapman, Simon. *Great Expectations: Advertising and the Tobacco Industry*. London: Comedia, 1986.
- Hilton, Matthew. *Smoking in British Popular Culture 1800–2000: Perfect Pleasures*. Manchester, England: Manchester University Press, 2000.
- Petrone, Gerard S. *Tobacco Advertising: The Great Seduction*. Atglen, Pa.: Schiffer Publishing Ltd., 1996.
- Proctor, Robert N. *The Nazi War on Cancer*. Princeton, N.J.: Princeton University Press, 1999.
- Welshman, John. "Images of Youth: The Issue of Juvenile Smoking 1880–1914." *Addiction* 91, no. 9 (1996): 1379–1386.

State Support of Agriculture See Chesapeake Region, Kentucky.



State Tobacco Monopolies

Until the end of the twentieth century the tobacco monopoly was a fiscal one. That is, it was not an administrative monopoly, as the Post Office might be, because its exclusive purpose was to supply revenue to the state that controlled it. The tobacco monopoly did not create new needs among consumers, but rather built upon the increasing production and sale of a product that already met widespread demand among the population; individuals were consuming tobacco products and would have gone on consuming them with or without the monopoly.

The tobacco monopoly appeared in Castile in 1636 and later in its colonies, at which time certain taxes on the product's sale (the *alcabala*) and customs duties on its importation (the *almojarifazgo*) were already in existence. The government set prices for the products offered by the tobacco monopoly. For the state monopoly to be effective, aside from prohibiting anyone else from carrying out this economic activity, state treasuries had to establish revenue-collecting procedures—either farming out or direct administration by the government—as well as specific repressive regulations to combat smuggling and other infractions,

which were already widespread even before the implementation of the monopoly. As a result, enforcement necessitated police squads employed by customs agencies, or even monopoly police in particular.

In the nineteenth century, economic and social ideas changed. As public opinion no longer found revenue generation a sufficient argument to justify maintenance of the tobacco monopoly, liberal governments had to offer more specific justifications, such as to penalize the consumption of articles considered dangerous to health. Nonetheless, like all state monopolies, the tobacco monopoly found its main justification in its usefulness to the public treasury, which had imposed both the monopoly and the tobacco taxes, and which continued to collect its share by means of the eminent power of the state.

Both historically and geographically, the tobacco monopoly has been the most prevalent and most profitable of the state monopolies, as well as the most studied. But such monopolies have been established also for other products and for other purposes in addition to revenue collection. There are state monopolies whose objective is to supply public services, like telecommunications, transportation, water, gas, and electricity. Fiscal monopolies have been established over many products, such as salt, alcohol, gunpowder, lotteries, codfish, and playing cards.

The historical success of state monopolies was based on their simplicity and efficiency (low revenue-collection costs and no need for a tax-collecting apparatus). Furthermore, the revenue obtained through state monopolies was less evident to the payers than was the burden imposed by taxes.

Fiscal monopolies are as old as the existence of the state, but as a modern fiscal instrument they were born in 1636, when the tobacco monopoly was set up in Spain. From there they spread through Europe and the American colonies during the seventeenth century. Even when the liberal revolutions of the eighteenth and nineteenth centuries overthrew the ancient regimes, liberal politicians in some countries continued to generate revenue through these monopolies even though they ran counter to the politicians' principles. Early tobacco monopolies were in Spain, France, Austria-Hungary, Italy, Portugal, the Papal States, Turkey, and the eastern European countries. Sweden created a tobacco monopoly in 1919. Outside the European continent, the outstanding tobacco monopolies of the twentieth century were in Japan, the Soviet Union, and communist China.

Generally, state monopolies covered all activity related to the monopolized product. Thus, the tobacco monopoly covered all activity from production or importation of the leaf to the manufacturing, distribution, and marketing of the finished tobacco goods. Fiscal monopolies could be exploited directly by the state, or their management could be farmed out to companies that paid for the privilege. Farming out the management has predominated from the nineteenth century into the twenty-first century. In countries such as Spain, Turkey, Portugal, and Sweden, private companies leased the tobacco monopoly from the state. In eighteenth-century Europe, direct management by the state was more the rule. In the twentieth century, direct exploitation of the tobacco monopoly was practiced in France, Italy, and the communist countries. On the other hand, in the majority of non-European countries, led by large producers like the United States, India, and Australia,

the tobacco industry has historically been characterized by free trade. Since the nineteenth century there has been no tobacco monopoly in Great Britain and Ireland, Germany, the Benelux countries, Switzerland, Greece, and some Scandinavian countries.

Fiscal monopolies have tended to be imposed on products whose consumption was strongly rooted in the habits of the population, as in the case of tobacco and its smokers. Demand has thus been relatively inelastic with respect to price, which has rendered the collection of revenue easier for the treasury. Although consumption was voluntary, the consumer's choice was limited to the products offered by the monopoly, and price levels were set unilaterally by the state. State monopolies always generated **contraband trade** in the given products and, in response, governments often established police bodies charged with combating illegal tobacco traffic. The higher the monopoly prices and the lower the quality of the goods, the greater the incentives for contraband trade, which was a crime created by the existence of the monopoly itself. In addition, high taxes and customs duties also created an incentive for contraband. Although revenue collection by state monopolies was carried out through commercial contracts, still the product or service user was "an authentic contributor" by way of both the tax passed on by the monopoly and the elevated monopoly price. Besides the costs of administration, production, and marketing, the sales price included the indirect tax on its tobacco consumption as well as the entrepreneurial profits of the company that operated the monopoly. In effect, the tobacco monopoly illustrated the four types of income that a state monopoly could include:

- The monopoly profit on tobacco, the state's net income from industrial or commercial exploitation after deducting any percentage or commission paid to leasing companies;
- The state's share (as a shareholder of the leasing corporation) on the profit of the managing company when the monopoly was farmed out;
- The income received by the state from consumption taxes imposed specifically on tobacco products;
- The sums collected by the state through the profit tax paid by the leasing company to the treasury.

Fiscal monopolies have appeared to be an efficient revenue-gathering mechanism for treasuries with limited administrative systems, systems whose resources are few and whose structures are in need of modernization. The collection of revenue from a state monopoly was simpler than collection of indirect taxes and customs duties, because the monopolist was a single passive subject. Once in the power of the state, the monopoly could be regulated either to reduce its social cost (that is, reduce the monopoly profits by selling the product in conditions more like those of perfect competition of the free marketplace), or to keep the profits high, as state profits, giving rise to a state monopoly with an exclusively income-generating goal. Logically, this last solution is the one generally adopted in modern Europe in the seventeenth and eighteenth centuries.

At the turn of the twenty-first century, state monopolies were abolished or were in retreat, given the fall of the communist regimes and the



contraband trade traffic in a banned or outlawed commodity; smuggling.

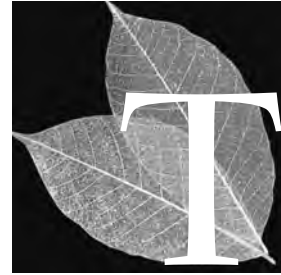
abolition of monopolies in the countries that make up the European Union. Since the 1957 Treaty of Rome, which established the Common Market, state monopolies and monopolies on public services have been viewed as running counter to the rules of competition and free trade among the member states. With the implementation of the Common Agricultural Policy in 1970, the Council of the European Economic Community (EEC) decided to regulate the disappearance of state monopolies, including that of tobacco, in their commercial aspect. The incorporation of Spain and Portugal in 1986 and Sweden in 1995 into the EEC accelerated the retreat of state monopolies within the European Union.

See Also Brazil; British Empire; Caribbean; Cuba; Dutch Empire; French Empire; Portuguese Empire; Smuggling and Contraband; Spanish Empire; Taxation; Trade.

■ FRANCISCO COMÍN

BIBLIOGRAPHY

- Aharoni, Yair. *The Evolution and Management of State-Owned Enterprises*. Cambridge, Mass.: Ballinger, 1986.
- Comín, Francisco. "Los monopolios fiscales." In *Historia de la empresa pública en España*. Edited by Francisco Comín and P. Martín Aceña. Madrid: Espasa Calpe, 1991, pp. 139–175.
- Comín, Francisco, and Pablo Martín Aceña. *Historia de la empresa pública en España*. Madrid: Espasa Calpe, 1991.
- . *Tabacalera y el estanco de tabacos (1636–1998)*. Madrid: Fundación Tabacalera, 1999.
- Gálvez-Muñoz, Lina, and Francisco Comín. "Business and Government: Labour Management in the Spanish Tobacco Monopoly (1887–1935)." In *Business and Society*. Edited by A. M. Kujlaars et al. Rotterdam: Center of Business History, 2000, pp. 159–170.
- Toninelli, Pier Angelo, ed. *The Rise and Fall of the State-Owned Enterprise in the Western World*. New York: Cambridge University Press, 2000.



Taxation

Tobacco taxes are centuries old, yet they remain a crucial element in the debate surrounding the tobacco industry, smoking, and public health. Taxation began as soon as European governments began importing and trading tobacco in the sixteenth century. These taxes (primarily in the form of import duties) were levied to generate revenue for the government. This is an important role that tobacco taxes play to this day. However, the goals of tobacco taxes have changed since they were first used more than 400 years ago, and their use is not as straightforward as it might seem. In the 2000s, in addition to raising general revenue, tobacco taxes may also be used as “user fees” paid by smokers to offset the social costs of smoking or as regulation to directly reduce tobacco consumption. Since they can be successful in each role, governments around the world continue to aggressively use them, tempered mainly by issues of fairness and intergovernmental tax avoidance and smuggling.

A Brief History

Tobacco, once introduced to Europe in the sixteenth century, quickly became popular. Soon after, governments recognized that it could become a lucrative basis of tax revenues. However, at least one European sovereign sought to reduce its use. In 1604 the king of England, James I, published anonymously a booklet titled *Counterblaste to Tobacco*, which condemned smoking as a dirty and unhealthy custom (and even pointed out the problems of secondhand smoke). Coupled with this publication was a huge increase on the import **duty** on tobacco, which raised the rate more than 40 times its original level, from 2 pence per pound of tobacco to 82 pence per pound. This represents the first use of taxation on tobacco to reduce its consumption.

The actions of King James had important consequences for the issues of tobacco taxes, tobacco use, and government revenue. To avoid paying the increased tax rate, importers simply smuggled tobacco into England. Tobacco grew in popularity, but the royal coffers were not filling with tax revenue. Seeing the potential value of tobacco imports,



duty a tax, usually on certain products by type or origin. A tariff.

James changed his mind, and reduced the tobacco tax to 12 pence. This paid off in the form of increased tax collections, and tobacco has been recognized as a good source of government revenue ever since. Thus, by using tobacco taxes to generate revenue, King James set much of the groundwork for the politics of tobacco taxes that still exist in the twenty-first century.

However, it would have to wait several centuries before the political debate over tobacco would encompass public health. The delay was due to tobacco's popularity and its economic and fiscal importance, as well as the fact that there was no authoritative consensus that the health effects of smoking were negative. Instead, tobacco was seen as a vital source of revenue for many governments. Countries including Spain, Venice, France, Austria, Russia, Poland, Morocco, and the Papal States taxed tobacco beginning in the seventeenth century. Great Britain used tobacco taxes to help finance its role in the Napoleonic Wars, and within a few years of ratifying the Constitution, the United States in 1794 adopted tobacco taxes that subsequently rose and fell with revenue needs.

Tobacco Taxes as Revenue Policy in the Past Century

Historically, the federal government in the United States has used tobacco taxes as revenue policy, rather than for regulation or as user fees. The evidence of this is outlined in the following table (adapted from U.S. Department of Health and Human Services), which shows that tax increases on cigarettes coincide with increases in revenue needs due primarily to war and budget deficits. (Note: When two rates are reported, the lower rate is for inexpensive cigarettes.) Excise taxes on tobacco have been popular because historically it has been considered a luxury item. Although the federal government collected only a small portion (.4%) of its total revenue with tobacco taxes in 2002, tobacco tax increases are still proposed, for example by the Congressional Budget Office, as a way to increase revenue by meaningful amounts.

Changes in U.S. Cigarette Tax Rates

Date	Tax Per Pack (cents)	Notes About Adjustment
30 June 1864	8, 2.4	Revenue for Civil War
1 April 1865	2.4, 4.0	Revenue for Civil War
1 August 1866	4.0, 8.0	Alleviate Civil War debts
2 March 1867	10.0	Alleviate Civil War debts
20 July 1868	3.0	Revenue needs due to war eased
3 March 1875	3.5	
3 March 1883	1.0	
15 August 1897	2.0	

14 June 1889	3.0	Revenue for Spanish–American War
1 July 1901	1.08, 2.16	Revenue needs due to war eased
1 July 1910	2.5	
4 October 1917	4.1	Revenue for World War I
25 February 1919	6.0	Alleviate debts from World War I
1 July 1940	6.5	Military expansion
1 November 1942	7.0	Revenue for World War II
1 November 1951	8.0	Revenue for Korean War
1 January 1983	16.0	Reduce federal budget deficit
1 January 1991	20.0	Reduce federal budget deficit
1 January 1993	24.0	Reduce federal budget deficit
1 January 2000	34.0	Maintain balanced budget
1 January 2002	39.0	Reduce federal budget deficit

State governments in the United States have also used tobacco taxes as revenue policy to great success. Although most states now tax a wide range of tobacco products, including chewing tobacco, cigars, and **snuff**, cigarette taxes get the most attention because cigarette smoking accounts for the vast majority of all tobacco consumed in the United States, according to the U.S. Department of Agriculture. In 1921, Iowa was the first state to adopt a tax on cigarettes and several other states quickly followed. As a result of declining income tax revenues during the Great Depression, nineteen more states adopted a cigarette tax between 1927 and the late 1930s. By 1969, all fifty states had a cigarette tax. In 2000, state cigarette tax collections generally represented between .5 percent and 1 percent of state revenue, not including federal government transfers, although Michigan collected 1.5 percent of its revenues with cigarette taxes, according to 2002 figures from the Centers for Disease Control and Prevention. Michigan collects a greater portion of its revenue from cigarette taxes than other states because in the mid-1990s it used a large increase in the cigarette tax rate as a key component of funding of property tax relief. Finally, studies since the 1990s, including those conducted by the World Bank, consistently show that governments around the world can raise tobacco taxes substantially in order to generate revenue. Thus, taxes on tobacco remain an important source of government revenue to this day. For example, Greece generates 9 percent of its total tax receipts from cigarette taxes.



snuff a form of powdered tobacco, usually flavored, either sniffed into the nose or “dipped,” packed between cheek and gum. Snuff was popular in the eighteenth century but had faded to obscurity by the twentieth century.



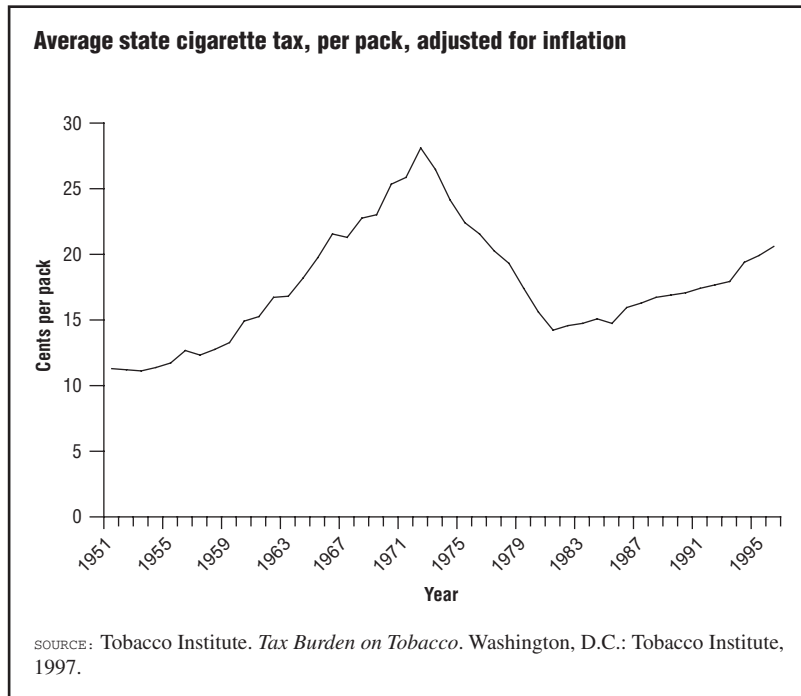
There are several reasons for the usefulness of tobacco taxes as a revenue source. First, since tobacco contains highly addictive nicotine, demand for tobacco is fairly price inelastic. That is, people are less likely to reduce or eliminate their purchases if the price goes up due to taxation by modest amounts. Data from the U.S. Department of Health and Human Services (USDHHS) for the United States show that a 10 percent increase in price leads to a 3 to 5 percent decrease in consumption of cigarettes. Therefore, cigarette consumption will fall by smaller proportions than any other kind of price increases. Carefully taxing tobacco will not seriously depress tobacco sales, instead preserving those sales so as to increase state revenue. Second, for political reasons, politicians can more easily increase excise taxes than general taxes, like income or property taxes. Cigarette taxes are paid only by smokers, who are increasingly stigmatized, while income taxes are paid by everyone who works. Therefore, if a modest amount of revenue is needed, taxes on tobacco are often a politically feasible solution. Third, taxes on tobacco can be justified on the grounds of public health, even if they are being used for revenue. For most low- to middle-income countries, a tobacco tax increase of 10 percent is about as cost effective as many other government-financed public health interventions, such as child immunization programs. Low-income countries include Pakistan, Ethiopia, and Haiti, while middle-income countries include Mexico, Brazil, and Turkey.

Tobacco Taxes as Regulation

In the mid-1950s several published reports linked smoking with cancer, resulting in a widespread tobacco health scare that caught the attention of governments around the world. In 1962 the United Kingdom's Royal College of Physicians issued an official report linking cancer and smoking. Canada and the United States followed suit, issuing their reports in 1963 and 1964, respectively. These reports opened the door for the regulation of tobacco consumption. In the 1980s taxes became a predominant form of smoking regulation, and in the 2000s cigarette taxes are a significant feature of most government efforts to reduce smoking.

Evidence of their use as regulation is obvious when one compares the average tax rate for U.S. states that grow tobacco with states that do not: In May 2000 the average tax on a pack of cigarettes in the six largest tobacco-growing states was 7.1 cents, while the average tax in the rest of the country was 46.5 cents, according to USDHHS. Using tobacco taxation as regulation is difficult in the face of pro-tobacco interests. In his *Tobacco Control: Comparative Politics in the United States and Canada* (2002), Donley Studlar points out that between 1978 and 2000 six top tobacco growing states never raised their cigarette taxes, while the forty-four other states and Washington, D.C., raised cigarette taxes a total of 160 times. More than half of these other states increased their cigarette taxes at least three times during this time span.

Tobacco taxes work as regulation primarily because they raise the price of tobacco products. Due to the addictiveness of nicotine, responses to price increases may be slow. Still, information from the United States shows that a 10 percent increase in the price of cigarettes reduces consumption by 3 to 5 percent in the short term. In the long term, a permanent price increase can have an even larger effect on consumption (about twice as great of an impact). Simply stated, people smoke less



after a large tax increase, particularly in the long run since the effects of a price increase may not occur immediately due to addiction. Further, tobacco taxes can work as regulation because they send a signal to smokers that the government is concerned about public health. By raising tobacco taxes with some fanfare about public health, the government simultaneously sends information about the dangers of tobacco use, which can cause some people to try to cut back or quit. Governments may also choose to launch public awareness campaigns at the same time they increase tobacco taxes.

Tobacco Taxes as User Fees

Since health problems related to tobacco use place demands on governments, such as increased hospital costs or increased unemployment compensation due to smoking-related sickness, it is natural that those using tobacco be required to help offset those demands. By viewing tobacco taxes as user fees, and setting aside tobacco tax revenue for public health and smoking reduction programs, smokers in effect help “pay for” these government activities and social costs. For example, state governments spend billions of dollars per year on smoking-related medical expenses alone. As of 2004, sixteen state governments set aside some tobacco tax revenues to be spent directly on programs to reduce tobacco use and improve public health.

Although some scholars argue that cigarette taxes more than adequately cover any social costs, others are a bit more cautious. At a minimum, cigarette taxes would need to be frequently adjusted to keep up with inflation and health care costs if they were being used consistently as user fees. Since this is not the case, it is doubtful that cigarette taxes offset social costs. For example, the figure above shows that the average state tax rate in the United States has fluctuated greatly, once adjusted for inflation. Furthermore, to employ cigarette taxes as both user fees and revenue policy

would require raising tax rates so that the revenue from them would not be completely consumed by public health and social costs due to smoking.

The Problems of Tobacco Taxes

The continued use of tobacco taxes for revenue, regulation, and user fees faces some important obstacles. For one, tax avoidance and bootlegging pose a problem, particularly when government jurisdictions share a common border. Avoidance of a tobacco tax involves traveling to purchase tobacco products, for personal consumption, in a government jurisdiction with a low tax. Variations in tax can be large enough so that smokers may be able to save a substantial amount of money simply by crossing into a different jurisdiction to purchase cigarettes. While legal, this tax avoidance will undermine the objectives of the taxation policy. Revenues will be lost, tobacco use will not drop as much, and user fees will be paid to the “wrong” government. This effect can also occur internationally. For example, many French, Germans, and Belgians purchase cigarettes in Luxembourg in order to save money. Estimates have shown that only about 15 percent of tobacco purchased in Luxembourg is consumed there.

Bootlegging (or smuggling), on the other hand, is typically the purchase of tobacco products in a low tax jurisdiction and illegally reselling them in another jurisdiction with a higher tax. Smuggling is a worldwide problem. Global tobacco trade statistics indicate that there are large discrepancies between cigarette imports and exports, and that perhaps a third of exported cigarettes are smuggled. Although there is some evidence that smuggling is not caused simply by price differences between government jurisdictions, the Canadian example is evidence that those differences can act as an incentive. During the 1980s Canada taxed cigarettes aggressively as part of that government’s tobacco control policy. By 1991 the difference in the price of cigarettes between Canada and the United States was the largest in the world, at about \$3 U.S. per pack. As a result, the amount of cigarettes smuggled increased more than tenfold from 1990 to 1993, and in 1994 the Canadian government reduced its tax rate.

Tobacco taxes are also under scrutiny because there is some evidence that they are unfair. Certainly they are paid by only a relatively small portion of the population. Furthermore, research shows that tobacco taxes take up a larger portion of income among poorer families, making them a regressive tax. Despite evidence that poorer smokers are more sensitive to price increases, and thus tax *increases* are actually progressive, concerns of fairness may be a reason for why tobacco taxes have not been raised to levels consistent with government goals of revenue or regulation. Certainly, issues of equity and smuggling are limiting factors on the usefulness of tobacco taxes.

See Also Brazil; British Empire; Caribbean; Cuba; Dutch Empire; French Empire; Portuguese Empire; Smuggling and Contraband; Spanish Empire.

■ MICHAEL LICARI

BIBLIOGRAPHY

Centers for Disease Control and Prevention. *Tobacco Control State Highlights 2002: Impact and Opportunity*. Atlanta: Department of Health and Human Services, 2002.

- Corina, Maurice. *Trust in Tobacco: The Anglo-American Struggle for Power*. London: Michael Joseph Ltd., 1975.
- Goodman, Jordan. *Tobacco in History*. London: Routledge, 1993.
- Haas, Mark. "Michigan's Experience with School Finance Reform." Presented at the 56th Annual Federation of Tax Administrators Revenue Estimation and Tax Research Conference, Minneapolis, Minn., 2001.
- Joosens, Luk, and Martin Raw. "Smuggling and Cross Border Shopping of Tobacco in Europe." *British Medical Journal* 310 (1995): 1393–1398.
- . "Cigarette Smuggling in Europe: Who Really Benefits?" *Tobacco Control* 7 (1998): 66–71.
- Licari, Michael J., and Kenneth J. Meier. "Regulatory Politics When Behavior Is Addictive: Smoking, Cigarette Taxes, and Bootlegging." *Political Research Quarterly* 50 (1997): 5–24.
- . "Regulation and Signaling: When a Tax Is Not Just a Tax." *Journal of Politics* 62 (2000): 875–885.
- Lyon, Andrew, and Robert Schwab. "Consumption Taxes in a Life-cycle Framework: Are Sin Taxes Regressive?" *Review of Economics and Statistics* 77 (1995): 389–406.
- Manning, Willard et al. *The Costs of Poor Health Habits*. Cambridge, Mass.: Harvard University Press, 1991.
- Studlar, Donley. *Tobacco Control: Comparative Politics in the United States and Canada*. Peterborough, Ontario: Broadview Press, 2002.
- Taylor, Peter. *Smoke Ring*. London: The Bodley Head, 1984.
- Tobacco Institute. *Tax Burden On Tobacco*. Washington, D.C.: Author, 1997.
- Townsend, Joy, Paul Roderick, and Jacqueline Cooper. "Cigarette Smoking by Socioeconomic Group, Sex, and Age: Effects of Price, Income, and Health Publicity." *British Medical Journal* 309 (1994): 923–926.
- United States Department of Health and Human Services. *Reducing Tobacco Use: A Report of the Surgeon General*. Atlanta: Author, 2000.
- Viscusi, Kip. *Smoke-Filled Rooms: A Postmortem on the Tobacco Deal*. Chicago: University of Chicago Press, 2002.
- Whelan, Elizabeth. *A Smoking Gun: How the Tobacco Industry Gets Away with Murder*. Philadelphia: Stickley, 1984.
- World Bank. *Curbing the Epidemic: Governments and the Economics of Tobacco Control*. Washington, D.C.: Author, 1999.



Therapeutic Uses

In the sixteenth and seventeenth centuries, diverse cultures around the world used tobacco for medicinal purposes in similar ways, although each culture set tobacco's imagined healing properties within a distinctive cosmological framework. Amerindians, the first to use tobacco therapeutically, employed it for a wide range of ailments—as a painkiller for earaches, toothaches, or the pains of childbirth; as a plaster to treat open wounds; as a pesticide to ward off snake and insect bites; and as a remedy against asthma, rheumatism, fevers, convulsions, eye sores, intestinal disorders, various skin disorders, and poisonings. ♦These medical treatments emerged out of complex cultural and religious systems that imbued tobacco with sacred significance.

♦ See "Social and Cultural Uses" for a depiction of Amerindian treatments involving tobacco.

DR PERRIN'S

FUMIGATOR

FOR CATARRH, FOR SORE THROAT,

FOR LOSS OF VOICE, FOR Discharges from the Head

"Dr. HERRICK'S Family Medicine Depot, 67 Murray St., NEW YORK."

This 1869 advertisement for Dr. Perrin's "Fumigator" seems to be promoting the smoking of tobacco as a remedy for catarrh, sore throat, loss of voice, and discharges from the head. Throughout the 1800s, many Europeans and Americans continued to be swayed by medical claims that today would be considered quackery.

© CORBIS

humoral theory the idea, first advanced by the ancient Greeks, that health and temperament were determined by the balance of the four humors, or bodily fluids: blood, phlegm, choler (yellow bile), and melancholy (black bile). This idea dominated medicine until the late 1700s.

Europeans, upon first encountering religious healing rituals involving tobacco in the early sixteenth century, regarded the plant as highly exotic and its ceremonial and medical use as debauched and idolatrous. Over time, European doctors came to regard tobacco as a medicinal herb, but only after they assimilated it into the classical Galenist medical model that had reemerged in Europe in the fifteenth and sixteenth centuries (see the sidebar "Galen and the Four Humors").

Nicolás Mondardes (1519–1588), a well-known author and doctor living in Seville, was the first European physician to unabashedly promote tobacco as a medicine. In 1571, in the second part of his widely read compendium of New World plants, Mondardes highlighted tobacco's healing properties. Basing his assessment of its therapeutic value on the ancient Greek humoral theories of medicine first articulated by Hippocrates (460–377 B.C.E.) and Galen (129–199 C.E.), Mondardes established tobacco's essential properties as hot and dry in the second degree. According to the **humoral theory** of opposites, this meant that tobacco was useful for treating disequilibrium caused by excessive cold or damp by virtue of its hot purgative powers. For example, the hot and drying attributes of tobacco were thought to heal or at least prevent the

Galen and the Four Humors

Prior to the Scientific Revolution that swept through Europe primarily during the seventeenth and eighteenth centuries, tobacco fit easily into a classical conceptual model in which the four primary qualities of hot, cold, wet, and dry were ascribed to all aspects of the living and nonliving world. The four primary qualities expressed aspects of the four elements of air, earth, fire, and water. Together they described the contents of the four humors—blood, black bile, phlegm, and yellow bile—that circulated in all animal and human bodies. Astrologers aligned the four humors with the four cardinal points in the heavens and assigned each humor three constellations.

When tobacco entered the European picture in the sixteenth century, medical theory of the time held that individuals possessed their own *complexio*, or unique combination of humors and environmental factors, such as one's astrological sign and geographic location. For example, if a person with a hot dry *complexio* were to travel to

a cold and wet place under a cold and wet astrological sign, she or he might wish to consult a physician in advance for advice about adjusting diet, exercise, rest, evacuation patterns, and passions so as to minimize the tendency to imbalance, and, hence, illness. This is what the Greek physician Galen (129–199 C.E.), who codified humoral theory, termed the “non-naturals.”

Given the common assumption that the brain and nerves were cold and phlegmy, it is not surprising that early modern Europeans often turned to tobacco for ailments they located in the head. In 1561, for example, the French queen Catherine de Medici reportedly used snuff to treat her son Francis II's recurrent headaches. Pleased with its apparent success, she later pronounced tobacco to be *herba regina*, or queen's herb. Yet as the seventeenth century progressed, medical opinion shifted, and Europeans debated tobacco's therapeutic values.

■ ROBERT L. MARTENSEN

development of conditions, such as asthma, that were associated with cold and wet situations.

Mondardes went on to outline twenty curative uses of the plant including the topical application of green tobacco leaves to relieve headaches or to soothe snake and insect bites. When inhaled or chewed, it could resolve stomachaches, asthma, parasites, rheumatism, bloating, toothaches, poisonings, various skin diseases, and female hysteria. Many of these prescriptions overlapped with those common among Mesoamericans, leading some scholars to conclude that Mondardes largely appropriated indigenous knowledge and practice into his treatise (Norton 2000).

European Debates Over Tobacco's Therapeutic Use

European physicians debated tobacco's medical efficacy throughout the seventeenth century. Many authors, following the lead of Mondardes, continued to describe tobacco as a wonderful panacea for a host of ailments. Others criticized such claims as **hyperbolic** or even fraudulent and deceptive. While acknowledging tobacco's purgative effects on the human body, critics questioned whether such therapy was effective.

Over time, tobacco's reputation as a miraculous drug diminished, and by the eighteenth century tobacco use in Europe came to be recognized as primarily recreational. Nonetheless, **nicotian therapy** continued in Europe well into the nineteenth century. In 1800 European physicians were still using tobacco as an antispasmodic for asthma, an enema for

hyperbolic exaggerated; overstated.

nicotian therapy a smoking-cessation regimen where other, non-addictive substances are substituted for nicotine.

intestinal obstructions, and as a diuretic for dropsy and similar disorders. Some even continued to advocate its use as a prophylactic against infectious diseases such as cholera well into the 1890s.

Seventeenth-Century Chinese Medicine

Tobacco spread to East Asia on the same wave of globalization that carried it to Europe in the sixteenth century. By the late 1500s, tobacco was being widely cultivated and consumed in many areas of China. China's long tradition of medical botany, stretching back over two thousand years, allowed doctors to easily incorporate the new herb into their **materia medica**. The first to do so were the physicians Zhang Jiebin (1563–1640) and Ni Zhumo (c. 1600). Both mention tobacco in the pharmacopoeia section of texts published simultaneously in 1624. Their descriptions of its presumed medical benefits are quite similar both to one another and to those published in sixteenth and seventeenth-century Europe, although these overlapping conclusions were arrived at quite independently. They begin as they do with any other herb, by noting tobacco's taste (bitter and pungent), its essential properties (warm or hot), and by placing it in the categorization scheme of classical pharmaceutical knowledge. (Zhang Jiebin listed it with plants that grow in marshy conditions, while Ni Zhumo set it within his section on "toxic" herbs). Both described tobacco as having considerable toxicity (*du*). By this they meant not that tobacco was poisonous but that it resembled other powerful drugs that had to be prescribed carefully because they had potentially detrimental and lasting effects.

These seventeenth-century Chinese authors understood tobacco's effect on the human body within the classical Chinese cosmology of yin (wetness, coolness) and yang (dryness, heat). According to Chinese medical theory, yin and yang regulated the movement of bodily qi (the generative energy essential for life and health) within the human body. Disease arose when the delicate balance between yin and yang was disrupted in some way: by external pathogens, by an excess of activity or emotion, improper or gluttonous eating or drinking, or by excessive lust or overindulgence in sex. Tobacco was pure yang and as such could be used to counterbalance those with an excess of yin by warming the organs of the body and protecting it from dampness and cold. Its warming properties aided digestion, speeded circulation, stopped vomiting, and removed congestion. Its toxicity could kill intestinal parasites in children, reduce masses or lumps in the abdomens of women, and keep poisonous snakes away. If pounded into a paste and applied to the hair, it could kill head lice. Most importantly, perhaps, these two authors identified smoking tobacco and the topical application of tobacco as prophylactics against epidemics generally, or more specifically against **miasmas** (*zhangqi* or malaria) in the south and "cold damage" (*shanghan*) in the north.

Drawing upon a strikingly different medical tradition from that invoked by Nicolás Mondardes, Zhang Jiebin and Ni Zhumo came to similar conclusions about tobacco's presumed essential properties and its purgative powers. Where they differed from Mondardes was in their assessment of the herb's potential for harm. Tobacco's toxicity (*du*) made it a potent drug that had to be used with care. Zhang Jiebin warned that tobacco could lead to habitual use and that it could be intoxicating after only a few puffs. To counteract the sensation of

materia medica a Latin term for the substances and components of medicine.



Bust of Greek physician Galen (129–199 C.E.), who codified humoral theory.
LIBRARY OF CONGRESS

miasma a polluted, unhealthy atmosphere.

becoming tipsy, he recommended the cooling effects of water or refined sugar. Those with strong yang should not smoke at all. Ni Zhumo similarly cautioned those with dryness in their lungs or those spitting up blood to avoid smoking at all costs.

Eighteenth and Nineteenth-Century Chinese Materia Medica

By outlining both the detrimental and beneficial effects they believed tobacco had on the human body, Zhang Jiebin and Ni Zhumo set the tone for subsequent medical writing about the substance in China. About ninety materia medica written during the Qing dynasty (1644–1911) include discussions of tobacco. Many of these, especially those published in the eighteenth and nineteenth centuries, are popularized versions of more sophisticated medical texts, written in simplified language with the layperson in mind. Stripped down to only the most essential content, these pharmacological primers served as introductory textbooks for beginning medical students or as popular family almanacs to be used for basic medical treatment at home. As such, they provide insight into what ordinary eighteenth and nineteenth-century Chinese thought they were doing when they medicated themselves with tobacco.

Popularizers such as Wang Ang (1615–c. 1695) and Wu Yiluo (eighteenth century) stressed the health benefits of tobacco over its dangers. In these highly accessible texts tobacco was identified as a “hot and dry” drug belonging to the fire category, one that had a pungent taste and a strong heat toxicity. In line with Zhang Jiebin and Ni Zhumo, Wang Ang and Wu Yiluo regarded tobacco as a strong heating agent that could replenish yang. These qualities made it useful in the home for treating illnesses caused by pathogenic cold factors (chills, fevers, colds), for reducing swelling and pain in the joints caused by dampness (such as arthritis), for curing malaria, or for warding off poisonous snakes. **Snuff**, which became quite fashionable among the cultural and political elite in the eighteenth century, was thought to prevent all manner of epidemics because the user, by constantly sniffing tobacco through the nose, was less likely to absorb the miasmas that were thought to lead to disease.

By and large, the majority of these popular texts stressed the positive benefits of tobacco over its deleterious effects (the only negative frequently mentioned was the one first brought up by Zhang Jiebin—that it could make people tipsy). This positive pharmacological understanding of tobacco, published in books widely used throughout the eighteenth and nineteenth centuries can partially explain tobacco’s **ubiquitous** use by people of all ages, genders, and social classes within China.

Chinese Debates Over Tobacco’s Therapeutic Use

In Qing China, as in seventeenth-century Europe, there were physicians who argued forcefully that tobacco was highly dangerous and potentially harmful to human health. One such critic was Zhang Lu, a well-known physician from Jiangsu Province. In a treatise published in 1715, Zhang Lu conceded that tobacco could be used “with caution” in the treatment of eye diseases but he quickly went on to list



snuff a form of powdered tobacco, usually flavored, either sniffed into the nose or “dipped,” packed between cheek and gum. Snuff was popular in the eighteenth century but had faded to obscurity by the twentieth century.



ubiquitous being everywhere; commonplace; widespread.

the drawbacks of smoking. He argued that the heat of tobacco smoke suffocated and burned the internal organs and that its toxicity circulated through the body's channels, doing vital harm. Moreover, Zhang Lu pointed out, contrary to the earlier claims of Zhang Jiebin or Ni Zhumo and their followers, tobacco could not prevent malaria in tropical climates nor could it overcome cold pathogenic factors in the north. Zhang Lu believed that tobacco was highly poisonous and that those who received its toxicity over a long period of time were likely to have lungs that "were not clear" to the point that they might spit up "yellow water" and die.

Despite the ubiquity of tobacco smoking throughout Chinese society and the frequency with which it was mentioned in Qing *materia medica*, there is little evidence that doctors actually used it as a drug in clinical practice. Tobacco is rarely listed in formularies (*fangshu*) and medical case records (*yi an*), the two sections of Qing medical texts that reflect what physicians actually did. Those who do refer to tobacco in their formularies, such as Ye Tianshi (1667–1746), discuss only the external application of tobacco paste to sore joints or open sores, not tobacco inhaled as smoke or snuff.

For the most part, by the nineteenth century tobacco appears to have become primarily a folk remedy used in the home rather than one commonly prescribed by classically trained and highly skilled physicians. In this, developments in China replicated those in Europe. While tobacco gradually lost favor with nineteenth-century European doctors after the poisonous quality of nicotine was identified in 1828, it remained popular among laymen who used it to treat toothaches and to ward off infectious diseases such as influenza.

Tobacco in Twentieth-Century China

In twentieth-century China tobacco continues to hold considerable sway as a folk remedy, particularly in the countryside. Although it is listed as a drug in modern pharmacopoeia, for example the *Dictionary of Chinese Drugs*, it is no longer prescribed by physicians. Contemporary doctors, those who practice both Western medicine and traditional Chinese medicine, are well aware of the dangers of nicotine, and there is a vibrant, medically informed antitobacco movement within China. Nonetheless, folklore persists about its presumed health benefits.

A survey conducted in the 1990s by the publication *China Tobacco Work* found that many Chinese still believe that smoking one or two cigarettes a day can prevent malaria or illness from dampness and cold. Puffing on a cigarette is thought to reduce bloating of the stomach, to cure food poisoning, or to settle digestive troubles brought on by nervousness or anxiety. Tobacco continues to be used as a pesticide: smoking in the summer is said to reduce the number of insects that buzz around one's face, washing one's hair with water laced with tobacco juice is said to kill lice, and the oil from a tobacco pipe is still thought to be useful in the treatment of snake bites.

The Chinese, no less than Europeans or those in other cultural areas, long regarded tobacco as a beneficial and efficacious medicine. The presumed therapeutic uses of tobacco undoubtedly contributed

to its rapid diffusion around the globe, as consumers believed they were ingesting a substance that was good for their health, or at the very least, not harmful. Nonetheless, medical justifications in China, as in Europe, are perhaps less significant in the end for explaining why people smoked than the fact that doing so was highly pleasurable and ultimately habit-forming.

See Also Disease and Mortality; Doctors; Medical Evidence (Cause and Effect); Social and Cultural Uses; South Asia.

■ CAROL BENEDICT

BIBLIOGRAPHY

- Du Yong. "Ming-qing shiqi zhongguoren dui chuiyan yu jiankang guanxi de renshi" (Chinese recognition of the relationship between smoking and health in the Ming-Qing dynasties). *Zhonghua yishi zazhi* (Chinese Journal of Medical History) 30, no. 3 (2000): 148–150.
- Hao Jinda. "Dui yancao chuanru ji yaoyong lishi de kaozheng" (Textual research on the history of tobacco's diffusion into China and its medical use). *Zhonghua yishi zazhi* (Chinese Journal of Medical History) 17, no. 4 (1987): 225–228.
- Harley, David. "The Beginnings of the Tobacco Controversy: Puritanism, James I, and the Royal Physicians." *Bulletin of the History of Medicine* 67, no. 1 (1993): 28–51.
- Jiangsu xin yixue yuan (Jiangsu Province, Institute of New Medicine). *Zhongyao da cidian* (Dictionary of Chinese Medicine). 1912. Reprint, Shanghai, China: Renmin chubanshe (People's Publishing House), 1977.
- Ni Zhumo. *Huitu bencao gangmu huiyan* (Illustrated Materia Medica, Arranged by Drug Descriptions and According to Technical Aspects). 1624. Reprint, Jiantang, China: Publisher unknown, 1694.
- Norton, Marcia Susan. "New World of Goods: A History of Tobacco and Chocolate in the Spanish Empire, 1492–1700." Ph.D. diss., University of California, 2000.
- Stewart, Grace. "A History of the Medical Use of Tobacco, 1492–1860." *Medical History* 11, no. 3 (1967): 228–268.
- Walker, Robin. "Medical Aspects of Tobacco Smoking and the Anti-Tobacco Movement in Britain in the Nineteenth Century." *Medical History* 24, no. 3 (1980): 391–402.
- Wang Ang. *Bencao beiyao* (Essentials of Materia Medica). 1682. Reprint, Beijing, China: Zhongguo zhongyiyao chubanshe (Traditional Chinese Medicine Press), 1998.
- Wu Yiluo. *Bencao congxin* (Restoration of Pharmaceuticals). 1757. Reprint, Hong Kong: Shanghai yinshuguan (Shanghai Press), 1960.
- Zhang Jianyue. "Yancao de yaoyong jiazhi chutan" (A preliminary discussion of tobacco's medicinal value). In *Zhongguo yancao shihua* (A History of Chinese Tobacco). Edited by *Zhongguo yancao gongzuo bianjibu* (Editorial Department of China Tobacco Work). Beijing, China: Zhongguo qinggongye chubanshe (China Light Industry Publishing House), 1993.
- Zhang Jiebin. *Jingyue quanshu* (Jing Yue's Complete Works). 1624. Reprint, Beijing, China: Zhongguo zhongyiyao chubanshe (Traditional Chinese Medicine Press), 1994.
- Zhang Lu. *Benjing fengyuan* (Elucidation of the Meaning of the Original Classic). 1715. Reprint, Beijing, China: Zhongguo zhongyiyao chubanshe (Traditional Chinese Medicine Press), 1996.





Tobacco as an Ornamental Plant

Tobacco plants, classified by the scientific name of *Nicotiana*, have 67 different species or varieties. *Nicotiana* is endemic to Namibia, parts of Australia, Polynesia, and North America, specifically from California to Southern Oregon, as well as from Texas to Mexico. It is also found in the South American countries of Argentina, Bolivia, Brazil, Chile, and Peru. While many people are undoubtedly familiar with the development of the plant as a commercial crop after its so-called discovery by Europeans, very few appreciate the fact that tobacco has long held a place as an ornamental or decorative plant used in the garden.

Tobacco, whether the commercial or ornamental species, has been grown as an annual—a plant that completes its life cycle in one growing season. The value of tobacco as an ornamental plant was not immediately realized at the time of its introduction to the royal courts of France and Portugal by Jean Nicot for purposes other than smoking and medicine. While late-seventeenth-century naturalists, like John Ray, began to catalog several tobacco species, such as *Nicotiana tabacum*, *N. rustica*, *N. latifolium*, *N. angustifolium*, *N. minima*, and *N. minor*, it was not until the middle of the eighteenth century that gardeners began to plant tobacco as an ornamental.

In the eighteenth century, gardening boomed among England's wealthy as gardening dictionaries and compendiums were published in greater numbers, chronicling, among other things, the rapidly increasing know-how of growing tobacco. Among the tobacco species planted for ornamental purposes by British gardeners at the time were *Nicotiana paniculata*, *N. angustifolia*, *N. fruticosa*, *N. glutinosa*, and *N. pusilla*. Gardening "kalendars" instructed that March was for sowing tobacco seed in hothouses and May was for transplanting starts into themed pleasure, flower, or medicinal gardens where the plants would bloom in England's gardens from June to October. British gardeners relied on hothouses to ensure tobacco plants bloomed by the end of their typically cool summers.

In the early nineteenth century, Italian gardeners capitalized on the usage of ornamental tobacco species in clay pots. As early as 1840, Italians were bringing potted *Nicotiana plumbaginifolia* plants to sell at local markets. Apparently around the same time, British gardening authorities remained preoccupied with developing new garden uses for ornamental tobacco species. Certain fragrant, flowering tobaccos, *Nicotiana sylvestris* and *N. alata*, were introduced for the first time into British gardens. In the late 1800s, London gardening circles encouraged English ladies to plant *Nicotiana rotunifolia*, *N. alata*, *N. undulata*, *N. axillaries*, *N. tristis*, and *N. rugosa*, but withheld approval of *N. rustica* because of its "dirty green flowers" (Loudon 1846). In France, by the end of the nineteenth century, the ornamental tobacco species *Nicotiana tomentosa* had ignited a French attraction in subtropical garden effects. Interestingly, it took another fifty years before these beautiful and fragrant tobacco species caught on among U.S. gardeners.

With the dawn of the twentieth century, more savvy gardeners began to look for increased variety in their plants. In 1901 *Nicotiana forgetiana* was introduced into cultivation. Yet it was valued primarily



for its 1903 creation of a new tobacco species born in England through a cross between *N. alata* and *N. forgetiana*, producing *Nicotiana x sanderae*, which in turn was used to father other ornamental varieties. Five years later, in 1908, Italy introduced two additional ornamental varieties to the U.S. market, *Nicotiana noctiflora* and *N. glutinosa*.

In the 1930s, tobacco was not only being used in gardens, but it also began to appear as an indoor houseplant among Massachusetts Garden Club members. By the late 1930s, *Nicotiana* had gained notoriety as summer porch decorations, probably an extension of the nineteenth-century Italians' earlier success in growing potted tobacco. At the same time, gardeners continued to display *Nicotiana glauca*, *N. tomentosa*, *N. tabacum*, *N. sanderae*, and *N. alata* in subtropical displays.

The practice of **hybridization** reached its peak in the latter part of the twentieth century and early twenty-first century, with additional plant hybrids emerging from *Nicotiana alata* and *N. x sanderae*. With each new hybrid or series, gardeners were able to highlight sought-after characteristics of *Nicotiana*. *Nicotiana alata* offers the semi-dwarf yet fragrant Nikki series, and *Nicotiana x sanderae* first produced a velvety-red Crimson King in the 1930s and shortly thereafter Sensation, which was followed by others like the Domino series with upward facing flowers: the compact-growing Havana, the dwarf Merlin (a perfect container variety), and the more weather-tolerant Starship.

Understanding the historical use of tobacco as an ornamental adds splendid detail to the plant's historical tapestry. Though much maligned

Initially grown in seventeenth-century British gardens as a medicinal herb, tobacco quickly became recognized for its value as an ornamental. This modern-day British garden includes fragrant white flowering tobacco, lobelia, and impatiens. © ERIC CRICHTON/CORBIS



hybridization the practice of cross-breeding different varieties of plants or animals to produce offspring with desired characteristics.



Domino Pink and White is a hybrid species of tobacco known for its upturned petals and greater summer heat tolerance. Gardeners favor hybrids because their flowers are not sensitive to the length of daylight, whereas the flowers of “unimproved” varieties open only on cloudy days and at night. © TANIA MIDGLEY/CORBIS

for its more common usage, ornamental varieties of tobacco hold a key place in our gardening heritage. From seventeenth-century England to modern-day America, the intoxicating perfume of the tobacco plant’s flowers ensures its legacy as an ornamental plant.

See Also Botany (History); Native Americans; Origin and Diffusion; Social and Cultural Uses; Therapeutic Uses.

■ CHRISTINA A. S. PERRON

BIBLIOGRAPHY

- Abercrombie, John. *The Garden Vade Mecum, or Compendium of General Gardening*. Dublin: J. Jones, 1790.
- Bailey, L. H. *The Standard Cyclopaedia of Horticulture*. New York: The Macmillan Company, 1937.

Huxley, Anthony, ed. *The New Royal Horticultural Society Dictionary of Gardening*. New York: Stockton Press, 1992.

Loudon, Jane. *Gardening for Ladies: and Companion to the Flower Garden*. New York: Wiley & Putnam, 1846.

Meller, Henry J. *Nicotiana*. London: E. Wilson, 1833.



Tobacco Control in Australia

Australia ranks high among nations that have made effort to reduce the burden of tobacco-caused death and disease. Between 1945 and 2001, adult male smoking prevalence fell mostly continuously from 72 percent to 22 percent. Female rates have fallen as well, from a peak of 31 percent in 1983 to 22 percent in 2001 (Woodward et al., . . . c01t1; Siahpush). Annual adult per capita consumption has fallen 61 percent from 3.54 kilograms in 1961, to 1.37 kilograms in 1999, reflecting falling smoking prevalence and reduced consumption (Woodward et al., . . . c01t2). While a greater proportion of people with less education and income smoke than their more educated and affluent counterparts, the growing proportion of ex-smokers varies little across socioeconomic status, meaning that cessation efforts have impacted evenly across the population. An exception here is Australia's Aborigines, whose smoking rates often exceed 60 percent. Since the late 1980s, male lung cancer rates have been falling dramatically, while female rates have reached a plateau.

Antismoking sentiment has existed in Australia since the end of the nineteenth century. However, efforts to explain rapidly declining tobacco use have generally pointed to milestones that have been in place since the 1970s, including various tobacco-control policies, tobacco-control laws, and prominent antismoking campaigns. However, such explanations tend to credit nothing to those enabling factors that cause these visible and recorded "events" to happen. The advocacy of individual citizens and grassroots organizations that precedes the introduction of a law or the factors responsible for the evolving enthusiasm of a politician for tobacco control are seldom recorded, "counted," or considered in evaluative research. Yet when basic questions are asked—like "How did Australia manage to get tobacco advertising banned?" or "Why has tolerance of smoking in public indoor areas reduced so much?"—no valid account of the process could fail to place advocacy at center stage.

Achievements

In the past three decades, Australian tobacco control advocates have made significant gains in the following areas:

- **Harm Reduction.** Australian advocates were among the first to arrange for the tar and nicotine content of cigarettes to be tested and to advocate for the potential significance of tobacco yield (tar, nicotine, and carbon monoxide) data for harm reduction. This work can be seen as an early chapter in the evolution

A 1992 Philip Morris Corporate Affairs planning document said the following about Australia: "Australia has one of the best organized, best financed, most politically savvy and well-connected antismoking movements in the world. They are aggressive and have been able to use the levers of power very effectively to propose and pass draconian legislation. . . . The implications of Australian anti-smoking activity are significant outside Australia because Australia is a seedbed for anti-smoking programs around the world."



An example of the proposed new “High Impact” graphic images to replace warnings on cigarette packets. Parliamentary Secretary for Health Trish Worth said the government was going through the process under the Trade Practices Act to replace the current warnings on tobacco products with 14 high-impact graphic images. AP/WIDE WORLD PHOTOS

of recent international interest in harm minimization and the international momentum for tobacco products to be regulated in ways that parallel food and drug regulation.

- **Advertising Bans.** Australia was one of the first democracies to ban all tobacco advertising and sponsorship.
- **Pack Warnings.** Australia has one of the world’s largest pack warnings and pioneered research into warnings so as to have maximum impact on youth. Plans to implement these warnings saw prolonged periods of fierce counterlobbying by the industry.
- **Mass-Reach Campaigns.** From the late 1970s, governmental and nongovernmental organizations in Australia were among the first to run mass-reach antismoking campaigns. These were sometimes attacked by the tobacco industry and removed by an industry-dominated self-regulatory process.
- **Civil Disobedience.** Australia was the first nation to experience widespread civil disobedience against the tobacco industry through a campaign where health and community activists sprayed graffiti on tobacco billboards. This effort dramatically reframed tobacco advertising from something most would have seen as an unremarkable, normal part of the commercial

environment into a phenomenon that focused community discourse around irresponsible industry and collusive government policy unwilling to restrain it.

- **Smokeless Tobacco.** In 1986, South Australia became the first government in the world to ban smokeless tobacco. This ban subsequently went national.
- **Small Packs Banned.** In 1986, South Australia was the first government in the world to ban small “kiddie” packs (less than twenty sticks). Again, this ban subsequently went national.
- **Tax.** Australia has a relatively high tobacco tax by international standards, being about the fourth highest in the world.
- **Replacement of Sponsorship.** Victoria pioneered the use of a dedicated 5 percent rise in tobacco tax (hypothecation), which goes to a specific use, not into the general revenue, to enable the buy-out of tobacco sponsorships.
- **Clean Indoor Air.** Australia has among the world’s highest rates of smoke-free workplaces and, progressively, domestic environments. Smoking is banned on all public transport with violations being uncommon. All states have restaurant smoking bans.

■ SIMON CHAPMAN

BIBLIOGRAPHY

- Anderson P., and J. R. Hughes. “Policy Interventions to Reduce the Harm from Smoking.” *Addiction* 95 (2000): Supp. 1:S9–11.
- Barnsley K., and M. Jacobs. “World’s Best Practice in Tobacco Control: Tobacco Advertising and Display of Tobacco Products at Point of Sale: Tasmania, Australia.” *Tobacco Control* 9 (2000): 230–232.
- Borland R., M. Morand, and R. Mullins. “Prevalence of Workplace Smoking Bans in Victoria.” *Aust N Z J Public Health* 21 (1997): 694–698.
- Borland R. et al. “Trends in Environmental Tobacco Smoke Restrictions in the Home in Victoria, Australia.” *Tobacco Control* 9 (1999): 266–271.
- Centre for Behavioural Research in Cancer, Anti-Cancer Council of Victoria. *Centre for Behavioural Research in Cancer: Health Warnings and Content Labelling on Tobacco Products*, 1992.
- Chapman S. “Civil Disobedience and Tobacco Control: The Case of BUGA UP.” *Tobacco Control* 5 (1996): 179–185.
- Chesterfield-Evans, A. “BUGA-UP (Billboard Utilizing Graffitists Against Unhealthy Promotions): An Australian Movement to End Cigarette Advertising.” *New York State Journal of Medicine* 83 (1983): 1333–1334.
- Egger G. et al. “Results of Large Scale Media Antismoking Campaign in Australia: North Coast ‘Quit For Life’ Programme.” *BMJ Clinical Research Ed.* 287 (1983): 1,125–1,128.
- Gray N., and D. Hill. “Cigarette Smoking, Tar Content, and Death-Rates from Lung Cancer in Australian Men.” *Lancet* 1 (1975): 1,252–1,253.
- Hill, D. J., V. M. White, and M. M. Scollo. “Smoking Behaviours of Australian Adults in 1995: Trends and Concerns.” *Med J Aust* 168 (1998): 209–213.
- Holman, C. D. et al. “Banning Tobacco Sponsorship: Replacing Tobacco with Health Messages and Creating Health-Promoting Environments.” *Tobacco Control* 6 (1997): 115–121.

- Morgan, L.C. et al. "Lung Cancer in New South Wales: Current Trends and the Influence of Age and Sex." *Med J Aust* 172 (2000): 578–580.
- Pierce J. P. et al. "Evaluation of the Sydney 'Quit for Life' Anti-smoking Campaign. Part 1: Achievement of Intermediate Goals." *Med J Aust* 144 (1986): 341–344.
- Scollo, M., and D. Sweanor "Cigarette Taxes." *Tobacco Control* 8 (1999): 110–111.
- Siahpush, M. "Prevalence of Smoking in Australia." *Aust NZ J Pub Health* 27 (2003): 556.
- Tyrell, I. *Deadly Enemies: Tobacco and Its Opponents in Australia*. Sydney: University of New South Wales Press, 1999.
- Wilson D.H., et al. "15's: They Fit Anywhere—Especially in a School Bag: A Survey of Purchases of Packets of 15 Cigarettes by 14 and 15 Year Olds in South Australia." *Supplement to Community Health Studies* 9, no. 1 (1986): 16–20.
- Woodward, S., M. Winstanley, and N. Walker. "Tobacco in Australia." Facts and Issues. Available: <<http://www.quit.org.au/Fandi/fandi/c01s1.htm#c01t1>>.
- Woodward, S., M. Winstanley, and N. Walker. "Tobacco in Australia." Facts and Issues. Available: <<http://www.quit.org.au/Fandi/fandi/c02s1.htm#c02t1>>.



Tobacco Control in the United Kingdom

At the turn of the twentieth century, many people in British society, including some medical authorities, believed tobacco had medical uses and health benefits, including relieving stress. The advent of the cigarette in the 1880s made tobacco use more entrenched in British society. By the end of the following century, however, its use had been undermined by science and hedged about with restrictions. Smoking was increasingly a lower-class rather than a cross-class activity; its ubiquity among young, single mothers was a matter of concern for policy makers. Smoking had undergone a process of social repositioning. What were the key factors that brought about this change in the United Kingdom?

Early Research

In the 1930s, statisticians employed by insurance companies took note of rising lung cancer death rates in the population. Researchers suggested that the rising popularity of cigarette smoking—along with worsening environmental pollution from motor cars, industrial plants, and tarred roads—possibly contributed to an increase in lung cancer. This hypothesis led statistician Sir Austin Bradford Hill and his research assistant Richard Doll to study the smoking habits of hospital patients with lung cancer and to compare them with patients without lung cancer. Their paper, published in the *British Medical Journal* in 1950, reported that lung cancer patients were more likely to be smokers, suggesting that smoking could be a cause of lung cancer. However, their



findings were not immediately accepted, and some scientists and physicians were critical of their methods. For example, legendary British statistician R. A. Fisher suggested that there could be a hereditary basis for the association; that is, smokers might carry a gene that made them prone to smoke and also made them more likely to develop cancer. The epidemiologic methods employed by Doll and Hill were novel at the time and were not yet widely accepted as a valid method of scientific proof.

Later Findings

A key turning point was the publication on 7 March 1962 of the Royal College of Physicians' report *Smoking and Health*. Sir George Godber, the deputy chief medical officer in the Ministry of Health, had encouraged the publication of this report in order to increase pressure for governmental action. The report concluded that "Cigarette smoking is a cause of lung cancer, and bronchitis and probably contributes to the development of coronary heart disease and various other less common diseases" (Royal College of Physicians 1962). The report also recommended a series of actions the government could take to address the problem, including education of the public concerning the hazards of smoking, more effective restrictions on the sale of tobacco to children, restrictions on tobacco advertising, wider restriction of smoking in public places, and an increase in taxes on cigarettes.

The report's findings had a substantial impact in the United Kingdom, largely because of the media attention it received. Rather than

A "no smoking" sign placed at the side of a bar in central London. Campaigners said on 9 March 2004 that more people's lives would be saved by banning smoking in public places than are lost every year in road accidents. To mark No Smoking Day, the campaign's director, Ben Youdan, said banning tobacco in pubs, bars, and all workplaces would save 4,800 lives a year in England, Wales, and Scotland. AP/WIDE WORLD PHOTOS

simply summarizing their findings in medical journals or at scientific conferences, Royal College researchers held press conferences and communicated their findings to the general public. Government authorities did not immediately adopt the recommended actions of the report, but they did initiate a health education campaign to inform the public about the health impact of smoking. A ban on cigarette advertising on television followed in 1967, and health warnings on cigarette packets appeared in 1971 after another Royal College report.

In addition to advising people to quit smoking, medical professionals in the 1960s and 1970s sought strategies to reduce harm from smoking in people who would not or could not quit smoking entirely. For example, they proposed that cigarette smokers switch to pipes or cigars and advocated research efforts to identify and remove harmful cancer-causing substances in tobacco and smoke. The main vehicle for these efforts was the Independent Scientific Committee on Smoking and Health (ISCSH), a Department of Health committee made up of independent public health scientists. Through a series of voluntary agreements with the tobacco industry, the committee supported research into “less dangerous smoking,” evaluated cigarette additives and synthetic tobacco substitutes, and established industrywide targets for reducing the **tar** and nicotine content of cigarettes.

However, in the late 1970s the medical and public health communities began to take a stronger activist stand against tobacco, this time stressing the need for abstinence rather than reduction of harm. A key organization was ASH (Action on Smoking and Health) founded in 1971 by doctors active in the Royal College. ASH was a new type of health pressure group, an alliance between doctors and health publicists that used the media as a primary arena for its activities.

A Turning Point

In the late twentieth century, public health efforts were limited by the fact that many people still viewed smoking as an act of free will, an activity that harmed only the smoker and not others. However, that argument was undermined from two directions in the 1980s and 1990s, and a turning point came in tobacco control in the United Kingdom. First, the publication of Japanese epidemiologist Takeshi Hirayama’s paper in the *British Medical Journal* in 1981 about the health impacts of smoking on the nonsmoking wives of smokers brought the debate on passive smoking to the fore. Smoking was no longer an activity that just harmed the smoker, but one that involved innocent victims, a powerful argument for policy change. Thus, what had been a moral issue was redefined as a scientific one. Second, as scientists began to understand the addictive properties of nicotine, these findings clashed with the tobacco industry’s traditional defense that smoking was a matter of personal choice. Tobacco control activists and policy makers drew parallels between the use of nicotine and that of illicit drugs. But rather than attempting to eliminate nicotine, public health advocates increasingly focused on ensuring access to nicotine replacement therapy for smokers, particularly for smokers in the lower social classes, who could not afford to pay for treatment.

■ VIRGINIA BERRIDGE



tar a residue of tobacco smoke, composed of many chemical substances that are collectively known by this term.

BIBLIOGRAPHY

- Berridge, Virginia. "Post War Smoking Policy in the UK and the Redefinition of Public Health." *Twentieth Century British History* 14, no. 1 (2003): 61–82.
- Doll, Richard, and Austin Bradford Hill. "Smoking and Carcinoma of the Lung. Preliminary Report." *British Medical Journal* 2 (1950): 739–748.
- Hirayama, Takeshi. "Nonsmoking Wives of Heavy Smokers Have a Higher Risk of Lung Cancer : A Study from Japan." *British Medical Journal* 282 (1981): 183–185.
- Royal College of Physicians. *Smoking and Health*. London: Pitman Medical Publishing Company, 1962.



Tobacco Industry Science

For decades, the tobacco industry has used several strategies to attempt to generate controversy about the health risks of its products. These strategies are: 1) fund and publish research that supports the tobacco industry's position; 2) suppress and criticize research that does not support the industry's position; and 3) disseminate tobacco industry-generated data in the lay press and directly to policy makers. The strategies used by the tobacco industry have remained remarkably constant since the early 1950s when the industry focused on refuting data on the harmful effects of active smoking. Beginning in the 1970s and through the 1990s, the industry became more concerned with refuting data on the harmful effects of secondhand smoke. The tobacco industry funded and manipulated research on topics ranging from nicotine and addiction, adverse health effects of active smoking and secondhand smoke, exposure assessments, and product design studies.

Previously secret internal tobacco industry documents that have been made public through litigation have given the public health community unprecedented insight into the tobacco industry's internal and external scientific research programs. The documents reveal that industry research programs have been pursued primarily to protect the industry's economic interests rather than to generate independent scientific knowledge. In addition, the tobacco industry has also funded research that is not directly related to its products in order to distract from tobacco as a health problem, to generate good publicity, and to enhance its image. For example, one of the criteria that Philip Morris' Worldwide Scientific Affairs Program considered when deciding whether to fund a research application was whether the research would enhance the credibility of the company.

The tobacco industry funded research through a number of mechanisms: 1) its trade association, The Tobacco Institute; 2) tobacco companies; 3) legal firms with tobacco companies as clients; and 4) research organizations funded by tobacco companies. These research organizations, the Council for Tobacco Research (CTR) founded in 1954 and the Center for Indoor Air Research (CIAR) founded in 1988, often funded projects that were reviewed by tobacco industry lawyers and executives, rather than scientists. Lawyers were not only involved in selecting





A chemist examines tobacco residue in test tubes during a 1956 experiment to discover the effects of smoking on the lungs. © HULTON-DEUTSCH COLLECTION/CORBIS

projects for funding, but also in designing the research and disseminating the results of the selected projects. Although CTR and CIAR were disbanded as part of the 1998 master settlement agreement, in 2000, Philip Morris reinitiated an external research grants program that is almost identical in terms of grant review procedures and scope to CIAR.

The tobacco industry documents have revealed the extent to which industry lawyers were involved in decisions in every research arena. Correspondence among industry lawyers shows how scientific research, marketing, public relations, and almost all industry activities were directed by tobacco industry lawyers' efforts to protect the industry from litigation. Lawyers monitored in-house and externally funded research. Tobacco industry lawyers edited scientific papers produced by company scientists and externally funded scientists prior to their publication in the peer-reviewed literature. This editing included deleting references, changing wording, and deleting acknowledgements of tobacco industry sponsorship. Lawyers at Brown & Williamson developed methods for handling documents in order to protect them from discovery during lawsuits. Documents were circulated on restricted lists and some documents were labeled, sometimes inappropriately, as "work product" or "privileged" in order to prevent them from being used in court. Documents that dealt with the toxicity of tobacco smoke or the pharmacological properties of nicotine often fell into these protected categories. The documents that were considered by lawyers to have the most potential for damage to the industry were shipped from U.S. tobacco companies to non-U.S. companies to avoid discovery during litigation.

A defining characteristic of the tobacco industry's research program was the secrecy that surrounded the involvement of industry lawyers, executives, and scientists in the design, conduct, and dissemination of research, particularly externally funded research. Lawyers

not only edited research reports, but also sometimes prevented their release. For example, by the early 1960s, the tobacco industry learned that nicotine was addictive. Studies on nicotine addiction appeared years later in the general scientific literature and the surgeon general did not conclude that nicotine was addictive until 1979. The industry kept their knowledge of nicotine from the public. The documents show that the tobacco industry has been engaged in deceiving policy makers and the public for decades about the harmful health effects of their products.

The tobacco industry's development of the Japanese Spousal Smoking Study provides a case example of the industry's involvement in the design, conduct, and dissemination of research and its efforts to hide this involvement. The tobacco industry created the Japanese Spousal Smoking Study in order to refute an influential independent study by researcher Takeshi Hirayama showing that there was an association of secondhand smoke exposure and lung cancer. Although the Japanese Spousal Smoking Study had named academic investigators, project management was conducted by Covington and Burling (a tobacco industry law firm), the research was supervised by a tobacco industry scientist, and a tobacco industry consultant assisted in reviewing the study design and interpretation of data. The tobacco companies that funded the study did not want any of these individuals named as co-authors on any of the resulting scientific publications. Although the tobacco companies considered using CIAR as "a cover" to fund the study, three companies agreed to fund the study directly. Progress reports for the study were prepared on Covington and Burling stationery. When the study was prepared for publication, the tobacco industry consultant was the sole author. The publication acknowledged "financial support from several companies of the tobacco industry." This acknowledgement tells the reader little about who was actually involved in the design, conduct and publication of the study. The hidden roles of the tobacco company lawyers and scientist raise questions about who is accountable for the research.

The tobacco industry has also funded scientific publications as a way to disseminate their research. These publications, often in the form of symposium proceedings, were generally not peer-reviewed by scientists, presented an unbalanced view of the health risks of tobacco, and were of poor research quality. The tobacco industry also funded review articles on the adverse effects of secondhand smoke and these reviews are a favored source of information for policy makers. However, tobacco industry funded review articles on the health effects of secondhand smoke are about 90 times more likely to conclude that passive smoking was not harmful compared to reviews funded by any other source, even when controlling for a variety of other factors that might be associated with the outcome of the research.

Tobacco industry lawyers also played a major role in organizing scientific symposia. They arranged for funding, screened speakers, and sometimes arranged for sponsorship through a third party so that the conference would be perceived as "independent" of the tobacco industry. To suggest that the research it funds meets scientific standards and that there is substantial support for its position, the tobacco industry often cites its industry-funded, non-peer reviewed publications in the lay press, as well as scientific and regulatory settings.

Symposia were often attended and presented by scientific consultants who were hired by the tobacco industry. A major goal of the tobacco industry's scientific consultancy program was to refute data about the harmful effects of tobacco. The industry consultants were paid to criticize independent research on tobacco and secondhand smoke in a variety of forums, including participation in scientific conferences; publication in the form of conference proceedings, journal articles, and books; media appearances; testimony at tobacco litigation trial; and the preparation of statements for government committees. The industry consultant programs were international and used to discredit research conducted by non-industry scientists around the world.

Tobacco companies have coordinated their efforts at an international level (U.S. tobacco companies did not just work with U.S. tobacco companies but with companies all over the world to do research and promote tobacco). In addition, tobacco companies also coordinated their activities with other corporate interests. Financial ties between tobacco companies and the chemical, pharmaceutical and food industries have given the tobacco companies leverage to influence policies that could affect these other industries. For example, the tobacco industry used its financial tie with pharmaceutical companies to pressure them to weaken their marketing of nicotine replacement therapies.

See Also Chemistry of Tobacco and Tobacco Smoke; Medical Evidence (Cause and Effect); Public Relations.

■ LISA BERO

BIBLIOGRAPHY

- Barnes, Deborah, and Lisa Bero. "Industry-Funded Research and Conflict of Interest: An Analysis of Research Sponsored by the Tobacco Industry through the Center for Indoor Air Research." *Journal of Health Politics, Policy, and Law* 21 (1996): 515–542.
- Barnoya, Joaquin, and Stanton Glantz. "Scientific Quality of Original Research Articles on Environmental Tobacco Smoke." *Tobacco Control* 6, no. 1 (1997): 19–26.
- . "Why Review Articles on the Health Effects of Passive Smoking Reach Different Conclusions." *Journal of the American Medical Association* 279 (1998): 1566–1570.
- . "Tobacco Industry Success in Preventing Regulation of Secondhand Smoke in Latin America: The 'Latin Project.'" *Tobacco Control* 11, no. 4 (2002): 305–314.



Tobacco Mosaic Virus

Tobacco Mosaic Virus (TMV) derives its name from the mosaic pattern it causes on the leaves of infected tobacco plants. The importance of TMV, however, goes far beyond agriculture. It is one of the best-studied viruses. Over a century of TMV research has repeatedly extended the boundaries of fundamental biological knowledge.

In 1886 the German bacteriologist Adolf Mayer named a mottled leaf pathology tobacco mosaic disease after showing it was infectious. Six years later, the Russian scientist Dmitri Iosifovich discovered that surprisingly, unlike other known infectious agents, the infectivity of the sap from diseased plants could pass through a bacteria-retarding filter. The discipline of **virology** effectively began in 1898 when the Dutch microbiologist Martinus Beijerinck argued that the agent of tobacco mosaic disease was caused not by a very small bacterium but rather by something fundamentally different, something he called a virus. TMV was the first demonstration of a nonbacterial infective agent.

To great fanfare, the American scientist Wendell Stanley announced that he had crystallized TMV in 1935. It was the first virus and the first living organism crystallized. His needle-shaped para-crystals of TMV particles blurred the distinction between biology and chemistry and raised questions about the nature of life. Prior to 1935, scientists thought that only nonliving things could be crystallized. But if the crystals of TMV were dissolved, the released TMV particles remained infectious, or still alive, so to speak. Perhaps there was no sharp distinction between living and nonliving things.

With more precision than Stanley, the British scientists Fred Bawden and Bill Pirie demonstrated in 1936 that TMV contained 5 percent **ribonucleic acid (RNA)** as well as protein. Further knowledge of the nature of TMV came from applications of the physical techniques of electron microscopy and x-ray diffraction. The invention of electron microscopy allowed scientists to visualize the rod shape of individual TMV particles. In the late 1930s Isadore Fankuchen and John Bernal analyzed the structure of TMV using x-ray diffraction and proposed that the rod-shaped TMV particle itself consisted of an ordered arrangement of small subunits.

Partially interrupted by World War II, research on the substructure of TMV began to flourish in the 1950s. James Watson, the codiscoverer of the structure of deoxyribonucleic acid (DNA), speculated that the rod-shaped TMV particle was in fact a long helix of protein subunits and RNA, a prediction verified and refined by Donald Caspar and Rosalind Franklin in the 1950s using x-ray diffraction. From their work, a picture emerges of a helical virus 300 nanometers (nm) long, with a hollow core, consisting of approximately 2,100 identical protein subunits assembled much like stairs in a spiral staircase and a single strand of RNA interlaced through the protein subunits. At the time, this description of TMV was the most detailed of any virus. There is no significant connection between the structure of TMV and that of DNA, other than both being helical.

A further milestone in molecular biology involving TMV occurred in 1955. In the United States, Heinz Fraenkel-Conrat and Robley Williams and independently in Germany, Alfred Gierer and Gerhard Schramm successfully dismantled TMV into its constituent protein and RNA components and then reconstituted them *in vitro* to produce infective particles. They in effect reassembled the virus from its parts. When different strains of TMV were taken apart, their parts exchanged and reconstituted, progeny virus resembled the strain that contributed the RNA, not the strain that contributed the protein. These reconstitution experiments were important in demonstrating that nucleic acid and not protein was the genetic material of life.



virology the study of viruses and viral diseases.



ribonucleic acid (RNA) an essential component of all living matter, present in the cytoplasm of all cells.

In the second half of the twentieth century, TMV served as a model for the self-assembly of large biological molecules and the interplay between RNA and protein. Although some controversy remains over the initiation of the process, the assembly pathway of TMV is still one of the best understood of all viruses. Research continues on TMV, but its heyday as a cutting-edge research model appears to have passed.

See Also Cigarettes; “Light” and Filtered Cigarettes; Nicotine; Product Design; Toxins.

■ GREGORY J. MORGAN

BIBLIOGRAPHY

- Creager, Angela N. H. *The Life of a Virus: Tobacco Mosaic Virus as an Experimental Model, 1930–1965*. Chicago: University of Chicago Press, 2002.
- Creager, Angela N. H., et al. “Tobacco Mosaic Virus: Pioneering Research for a Century.” *Plant Cell* 11, no. 3 (March 1999): 301–308.
- Scholthof, Karen-Beth G., John G. Shaw, and Milton Zaitlin, eds. *Tobacco Mosaic Virus: One Hundred Years of Contributions to Virology*. St Paul, Minn.: American Phytopathological Society Press, 1999.



Toxins

Natural tobacco contains more than 3,000 separate chemical compounds. In commercial products, the composition of tobacco is altered by the use of pesticides, curing, processing, and the addition of flavorants. In smoked tobacco products, further changes are produced by partial combustion of the tobacco and the transfer of chemicals to smoke. Toxic compounds present in manufactured tobacco and smoke are the basis for the many negative health effects associated with tobacco use. A number of specific compounds contributing to increased cancer and other disease risks have been identified. Government attempts to regulate tobacco product toxicity have focused on the need for reduction of these harm-producing compounds. This has led manufacturers to adopt changes in product design and delivery, including the development of **low-yield cigarettes** and, more recently, reduced nitrosamine tobaccos and other potential reduced-exposure products. Because of the complexity of tobacco products and product compounds, the total impact of these changes on exposure may never be fully understood.



low-yield cigarettes a cigarette designed to deliver less nicotine to the smoker, and, theoretically, less harmful. Actual results seem to dispute this contention.

Historical Assessment of Tobacco Toxicity

Although the perceived negative effects of tobacco have been a subject of controversy at least since its introduction into Europe in the early part of the sixteenth century, modern investigation of smoking and health began around 1900. At that time, observed statistical increases



Scientist Ernst Ludwig Wynder (1922–1999) in 1957 shows the cancerous lesions on a laboratory rabbit. The rabbit's skin had been coated with tobacco tars (particulate matter). © BETTMANN/CORBIS

in lung cancer rates in the United States and England led to studies seeking to identify the relationship between tobacco use and lung cancer and other disease.

The earliest common method for estimating the cancer-causing potency of tobacco smoke and specific tobacco toxins involved painting collected tobacco particulate matter, or **tar**, onto the shaven backs of mice in order to observe the possible development of tumors and lesions. Skin painting studies in the 1950s and 1960s confirmed a clear relationship between the amount of tar applied and the percentage of observed cancers. Inhalation-based animal studies were later used to assess the development of cancers in the respiratory system, specifically in the larynx, nasal cavity, and lung. A clear relationship between dose and response has been established with other noncancerous diseases, including heart and respiratory disease.

Measures of human exposure to tobacco smoke and isolated smoke compounds have generally been obtained by use of a smoking machine that mimics human smoking of a cigarette using a standard set of puffing parameters, including puff volume, duration, and time between puffs. The American Tobacco Company began using a standard machine smoking measurement in 1936, which was subsequently adopted in 1969 by the Federal Trade Commission for routine measurement of tar and nicotine in tobacco smoke with only slight modifications. But these early efforts only measured overall tar and nicotine content and could not measure individual compounds or determine which were most toxic.



tar a residue of tobacco smoke, composed of many chemical substances that are collectively known by this term.

Chemistry of Tobacco Toxins

Tobacco smoke is extraordinarily complex—scientists estimate that at least 4,800 compounds are present in burned tobacco, even before the use of additives or other commercially introduced changes (National Cancer Institute 2001). The smoke is generally divided into two phases: the particulate, consisting of larger smoke particles, and more highly volatile gas or vapor compounds. Measures of smoke tar do not describe a particular smoke compound but are rather a sum of the thousands of chemicals in the total smoke particulate (usually excluding water and nicotine).

Particulate smoke demonstrates the greatest carcinogenic (cancer-causing) activity in cigarette smoke, including 55 separate compounds that have been identified as possible human carcinogens. Of this group, polynuclear aromatic hydrocarbons (PAH) and tobacco-specific nitrosamines (TSNA) have received particular attention. PAH are produced by the incomplete combustion of organic material, and can be found in a number of sources including vehicle exhaust, wood smoke, and grilled meats. TSNA are formed from nicotine and other tobacco **alkaloids** and are present in tobacco, tobacco smoke, and secondhand smoke. These compounds are potent cancer-causing agents.

Smoke gases include carbon monoxide, believed to play a major role in the development of heart disease, and **ciliotoxic** agents such as hydrogen cyanide and acrolein, which are likely contributors to respiratory disease. Overall, smoking tobacco results in exposure to hundreds of known carcinogens and other toxic agents with different potencies and effects. Other compounds not yet identified are also likely to be present.

At least 28 tumor-producing agents have been identified in smokeless tobacco products such as chewing tobacco and **snuff**. The most abundant carcinogens are volatile aldehydes, which although weak carcinogens, likely contribute to carcinogenic potential. Nitrosamines, including TSNA, are believed to be a major contributor to smokeless tobacco risk.

Tremendous effort has been expended to characterize tobacco and to identify disease-producing compounds in tobacco and smoke. The identification of carcinogens, ciliotoxins, and other harmful compounds represent an important advance for understanding the risks of cigarette smoking. However, the data to assess whether some compounds play a greater role in determining overall health effects of tobacco use, and the significance of their interaction with each other, is still incomplete.

Product Regulation and Changes

In response to growing health concerns, tobacco manufacturers introduced major cigarette modifications between 1950 and 1975. Product changes included the introduction of filters and ventilation to reduce the delivery of smoke toxins, increased use of processed tobaccos (which lowered smoke delivery as well as product costs), and the use of chemical additives, largely to offset ensuing losses in taste and sensory perception. Together, these changes have resulted in significantly reduced tar and carbon monoxide levels as measured by smoking machines; however, there is no conclusive evidence that they have made tobacco products less toxic.



alkaloid an organic compound made out of carbon, hydrogen, nitrogen, and sometimes oxygen. Alkaloids have potent effects on the human body. The primary alkaloid in tobacco is nicotine.

ciliotoxic being harmful to the cilia of the lungs. Cilia are tiny, hair-like, structures on the inner surfaces of the lung.

snuff a form of powdered tobacco, usually flavored, either sniffed into the nose or “dipped,” packed between cheek and gum. Snuff was popular in the eighteenth century but had faded to obscurity by the twentieth century.

First, common measures of total smoke delivery (such as tar) do not reflect the complexity of possible changes in the composition of smoke. It has been demonstrated that reductions over time in the smoke levels of some toxins, such as benzo(a)pyrene, an important PAH, have at the same time produced increases in others, such as NNK, a potent TSNA. Reliance on smoke machine measures fails to account for possible shifts in one or a number of classes of harmful compounds contained in the smoke.

A second problem results from changes in human smoking patterns that have developed in response to product changes. Smokers have adapted behaviors to inhale more smoke from a cigarette and to inhale more deeply in order to maintain levels of smoke delivery. The amount of toxins a smoker is exposed to depends not only on how many cigarettes are smoked but also on how they are smoked. Because smoke machines cannot adapt their behavior to cigarette changes, they are likely to misrepresent actual smoke delivery and, therefore, the smoker's exposure. These behavioral changes may particularly affect the delivery of compounds, such as carbon monoxide, for which absorption is dependent on the depth of inhalation.

A significant reduction in nitrosamines and TSNA formation appears to be feasible based on manufacturing processes currently used for smokeless tobacco (Snus) produced in Sweden, and now being considered experimentally in the United States and elsewhere. Other potentially harmful agents, particularly harm-producing additives, have been considered for regulation internationally, including in the European Union, Canada, and Australia. However, because of the complexity of tobacco and tobacco toxins, the actual impact of these changes on health effects requires more careful study.

See Also Cigarettes; "Light" and Filtered Cigarettes; Menthol Cigarettes; Nicotine; Product Design.

■ GEOFFREY FERRIS WAYNE

BIBLIOGRAPHY

- Brunnemann, Klaus D., and Dietrich Hoffmann. "Chemical Composition of Smokeless Tobacco Products." In *Smokeless Tobacco or Health: An International Perspective*. Smoking and Tobacco Control Monograph 2. Bethesda, Md.: U.S. Department of Health and Human Services, National Institutes of Health, 1992. Pp. 96–108.
- Hoffmann, D., and I. Hoffmann "The Changing Cigarette, 1950–1995." *Journal of Toxicology and Environmental Health* 50, no. 4 (March 1997): 307–364.
- National Cancer Institute. *Risks Associated with Smoking Cigarettes with Low Machine-Measured Yields of Tar and Nicotine*. Smoking and Tobacco Control Monograph 13. Bethesda, Md.: U.S. Department of Health and Human Services, [Public Health Service,] National Institutes of Health, National Cancer Institute, 2001. Full report Available: <<http://cancercontrol.cancer.gov/tcrb/monographs/13/index.html>>.
- Stratton, Kathleen, et al., eds. *Clearing the Smoke: Assessing the Science Base for Tobacco Harm Reduction*. Washington, D.C.: Institute of Medicine, National Academy Press, 2001. Full report available: <<http://www.nap.edu>>.



U.S. Department of Health and Human Services. *The Health Consequences of Smoking: The Changing Cigarette*. A Report of the Surgeon General. Rockville, Md.: U.S. Department of Health and Human Services, Office on Smoking and Health, 1981. Full report available: <http://www.cdc.gov/tobacco/sgr/sgr_1981/index.htm>.



Trade

In the fifteenth century, the tobacco plant (*Nicotiana rustica* and *Nicotiana tabacum*) was dispersed throughout the Americas by the native people. This diffusion process extended beyond the continent to embrace the islands of the Caribbean where the first recorded European encounter with tobacco took place. Christopher Columbus's journal records that, on 15 October 1492, the explorer intercepted a single Native American, paddling a canoe, whose small cargo of goods included some dried tobacco leaves. Columbus observed that tobacco "must be a thing highly valued by them, for they bartered with it at the island of San Salvador" (Goodman 1993).

Knowledge of tobacco was transmitted to Europe in a multistage process. Printed reports, based on the accounts of Columbus and other early explorers, appeared comparatively quickly. The chronicler Peter Martyr published an account of tobacco usage among Taino Indians on Hispaniola in 1511 based on an earlier testimony written by Friar Ramon Pané—a Catalan priest who had accompanied Columbus on his second voyage to the New World in 1493. In view of the novelty of printing technology itself, it is probable that manuscript and verbal accounts similar to Pané's circulated even earlier than printed texts. European consumption of tobacco in the New World was increasingly well documented from the 1530s in Spanish, Portuguese, and subsequently French colonial settlements. Some scholars have also suggested that Brazilian colonists had begun growing small quantities of tobacco by 1534. Transcontinental experiments in planting followed soon afterward as seedlings were introduced into Portugal around 1548. By the 1570s, successful attempts at cultivation had been made in Northern Europe, Africa, and Asia. For the first time in history, tobacco had become a globally produced commodity.

The first distinct set of European consumers of nicotine consisted of the direct participants in colonial ventures, particularly merchants and mariners of Spain and Portugal. Spanish sailors, for example, are reported to have consumed tobacco as a regular part of their diet during the 1550s. During the last quarter of the sixteenth century, the health properties of tobacco began to be discussed in Europe's medicinal literature as consumption spread more widely. The first medical treatise devoted exclusively to tobacco was published by Anthony Chute in 1595. At approximately the same time, clay replaced walnut and silver as the staple material used to manufacture tobacco pipes in England, while in 1597 the first tax on tobacco was imposed by Elizabeth I. Viewed collectively, this evidence suggests strongly that tobacco consumption had become an established part of European consumers habits by the later sixteenth century.

Surviving sources documenting tobacco's diffusion suggest a rapid transmission of reports of the commodity, a delay of approximately half a century between the first encounter and experiments in cultivating and consuming tobacco in Europe, and a further gap (of approximately fifty years) until trade in tobacco expanded to the point where it became worthwhile for governments to tax it.

It is instructive to compare tobacco's chronology of dissemination with that of coffee, using England as a test case. Tobacco and coffee possessed similarities: both were entirely new commodities with stimulating properties. Moreover, in each case successful introduction was associated with important product innovations (clay pipes, ceramic cups with handles, roasting machinery, expansion of taverns, the establishment of coffee houses). Circulation of printed reports of coffee occurred within a decade of the travellers Leonard Rauwolfius and Constantino Garzoni's experience of the drink in Aleppo and Constantinople in 1573; the first experiments of consumption in England, however, occurred after a lag of six decades; the first tax was levied approximately eighty-seven years after the first documented European encounter with coffee.

Tobacco and coffee's trajectories of diffusion are similar but there were also important differences between the two commodities. Commercial coffee cultivation existed prior to the establishment of European trade and demand in Europe initially absorbed only a small proportion of output. Despite problems of periodic disruption and distance, in the case of coffee a land alternative existed to maritime supply. Indeed, the caravan route was initially used to bring the drink westward. In contrast, Amerindian agriculture lacked a tobacco surplus sufficient to meet European demand as it expanded. For a trade to develop, therefore, direct investment in production was required.

Tobacco Colonies and New World Settlement

In areas of Europe where agriculture was specialised and highly commercialized, land could be diverted to tobacco and the plant cultivated as a cash crop. Holland proved the most prolific European region of production, though successful attempts were also made to grow the plant in England, in the French territories of Guyenne and Alsace, and in the German **Palatinate**. The share held by European cultivators in total commercial output was, however, small and Dutch tobacco was primarily used to supplement imports into Europe from the Americas. In Amsterdam and Rotterdam, dealers mixed low-quality Dutch and German leaf with imported supplies to produce a blend that was consumed primarily in the form of **snuff**.

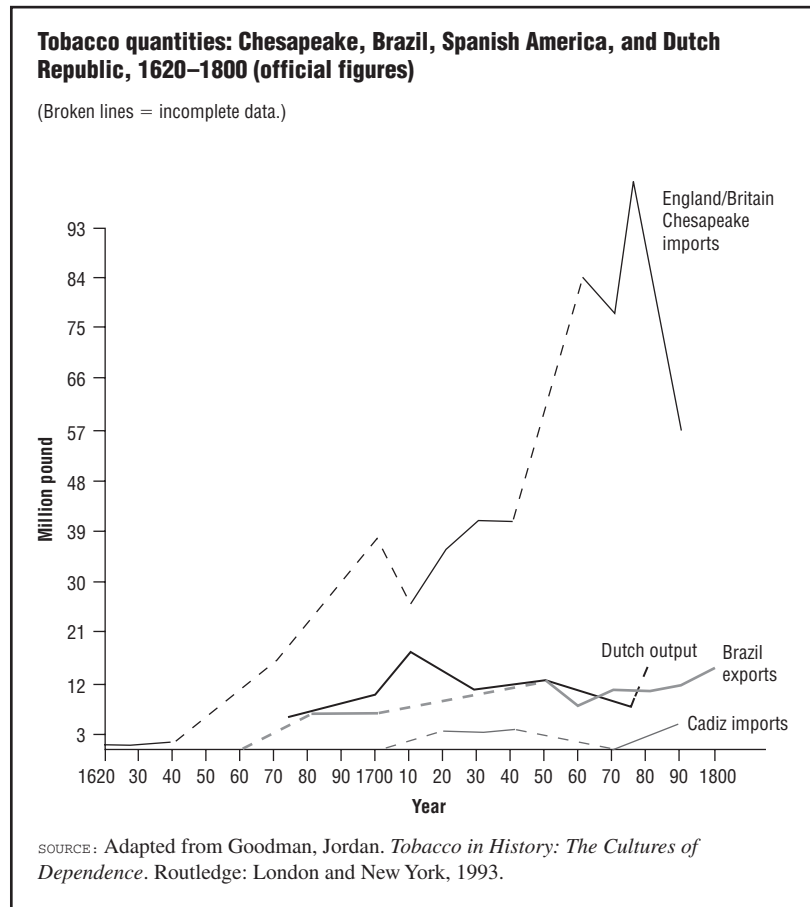
Despite Dutch success in tobacco growing, the bulk of tobacco consumed by Europe's smokers and snuff takers during the seventeenth and eighteenth centuries was supplied by New World producers. In Figure 1, which excludes Caribbean production), the dominant position of the Americas is apparent. Tobacco growing in the Americas was based initially on the assimilation of Amerindian agricultural practices. European innovation, however, was responsible for transforming cultivation into a major export industry and tobacco formed a staple element of Britain's colonization of North America. Commercialization of tobacco growing was achieved, however, only at the expense of environmental damage and high mortality among both white servants and black slaves shipped across the Atlantic (Menard and Walsh 1974).



palatinate the territory of a feudal lord having sovereign power within his domain.

snuff a form of powdered tobacco, usually flavored, either sniffed into the nose or "dipped," packed between cheek and gum. Snuff was popular in the eighteenth century but had faded to obscurity by the twentieth century.

FIGURE 1



Initially, the willingness of Native Americans to trade small quantities of tobacco enabled Europeans to experiment with smoking and snuff taking. Unlike the commodities coffee and tea, however, tobacco did not form part of a large-scale commercial network within the New World. Spanish and Portuguese colonists were the first to expand tobacco's supply by cultivating and trading tobacco leaf. Tobacco first became available in England through illicit trade with Spanish settlers, particularly in Trinidad and Guiana, supplemented by the capture of prize cargoes by privateers. By the end of the sixteenth century, direct supply of tobacco grown in both North America and England itself began to replace contraband leaf. Political factors played an important part in this shift as deteriorating relations between England and Spain provoked a crack down on smuggling by the Spanish imperial authorities while also providing a stimulus to English colonizing ventures.

Tobacco leaf was not cultivated by British settlers in either the location or form in which it was first encountered by colonial settlers. Sweet-scented varieties of the plant were preferred to the astringent-tasting tobacco grown by the majority of Amerindians. Production was also characterized rather by shifting comparative advantage as Europeans transplanted tobacco within the Americas. First Brazil and then the Caribbean became centers of production, before the focus of trade switched to the Chesapeake colonies of Virginia and Maryland during the second half of the seventeenth century. Like all staple crops entering into

colonial trade, tobacco was grown in regions with favorable ratios of land mass to coastline in order to exploit the low cost of transportation by water relative to land. For this reason, tobacco was grown on Bermuda and the smaller Caribbean islands of Barbados, Saint Kitts, Martinique, and Guadeloupe during an early stage of each colony's settlement.

The introduction of sugar into the Caribbean during the 1640s and 1650s was followed by a reorganization of colonial trade. Tropical islands increasingly specialized in sugar and rum, while tobacco migrated to Virginia and Maryland colonies, characterized by a vast network of rivers and creeks draining into the Chesapeake Bay.

European colonizers confronted an immense task in establishing viable settlements in the Americas capable of producing a cash crop, shipping tobacco across the Atlantic, and then marketing the commodity successfully in a society with no prior experience of smoking or snuff taking. The potential of New World commerce was recognized by syndicates of London merchants who attempted to develop trade with the Chesapeake and the West Indies. Elite city businesspeople financed the Virginia and Roanoke settlements during the 1580s, established the Virginia Company (in 1606) and allied themselves with the Earl of Carlisle, who had obtained a proprietary patent to settle Barbados in 1627. These early ventures proved disastrous for investors and many of the participants. Captain John Smith's *General History of Virginia* (published in 1624) describes the "starving time" experienced by the Jamestown colonists in 1609, which reduced the Virginia population from 500 to barely sixty survivors. Yet despite generating few profits, the experiments yielded valuable information about the economic realities of New World settlement, including knowledge about tobacco cultivation and use.

After the enormous practical difficulties of establishing settlements was grasped, most early investors withdrew their support. As a consequence, the large quantities of capital and labor required to meet the substantial development costs of colonization was not forthcoming from established commercial sources. The confidence and commitment required to sustain the long-term investment process that colonization required was instead supplied by entrepreneurs hitherto located on the fringes of England's commercial community. Provincial gentry, west coast merchants (initially in Bristol and later Liverpool), and representatives of middling groups (shopkeepers and tradesmen of England's county towns) were instrumental in financing trade and settlement in what became the tobacco colonies. The shift in the profile of investors was accompanied by a change in commercial policy. Company monopolies and proprietary rights in colonies were replaced by a more open-access policy, whereby settlers occupied land as freeholders and merchants were permitted to trade with the colonies free of guild restrictions.

The physical barrier of the Atlantic and the disease environment in the New World placed formidable obstacles in the way of successful tobacco planting. The former problem was overcome by adapting the ancient system of European apprenticeship, enabling prospective colonists to finance their crossing by becoming indentured servants for terms of up to seven years. In effect, migrants took out a loan secured by their own person, which they subsequently paid off by working for a colonial master. Limited medical knowledge prevented any easy solutions to the problem of identifying hostile diseases, such as malaria and

water pollution, contributing to the rise in the death rate. New arrivals to the West Indies and the Chesapeake, as a consequence, faced a much greater risk of death during their first years in the New World than their counterparts in Europe. Children born to settlers likewise lacked immunity and paid a grim mortality penalty. Delayed marriage until after the completion of terms of indentured servitude, coupled with a shortage of females (a majority of servants were males), compounded the reproduction problem.

Tobacco was an ideal start-up crop for a colony because it required limited amounts of capital (an iron hoe and a wooden dry house comprising the most important inputs) and also lacked economies of scale. A smallholder, working less than twenty acres alongside a couple of servants, could be as productive as a large plantation owner. In order to sustain output, however, constant flow of labor was needed to overcome the high death rate and low fertility in the colony. During the second half of the seventeenth century, the supply of servants was diminished because of competition from other areas of settlement (particularly the Middle Colonies, most notably Pennsylvania), slower population growth in England, and higher wages for workers in Europe. Therefore, enslaved Africans were introduced into the Chesapeake in large numbers for the first time during the 1680s and 1690s. This dramatic shift in the composition of the labor force was assisted by a fall in the price of slaves associated with the ending of the Royal African Company's monopoly of supply.

A trade depression, aggravated by disruption to commerce during the War of the Spanish Succession (1702–1713) brought great hardship to the tobacco colonies. The temporary fall in numbers of servants and slaves shipped to the Chesapeake, however, assisted the region in the long term because it helped equalize the sex ratios and speeded the emergence of a Creole (native-born) majority among both the white and black population. **Creoles** possessed greater natural immunity to disease and were usually in a position to marry earlier than new servant arrivals. From the second decade of the eighteenth century onward, natural increase (a surplus of births over deaths) supplied the greater part of the Chesapeake's labor requirements.

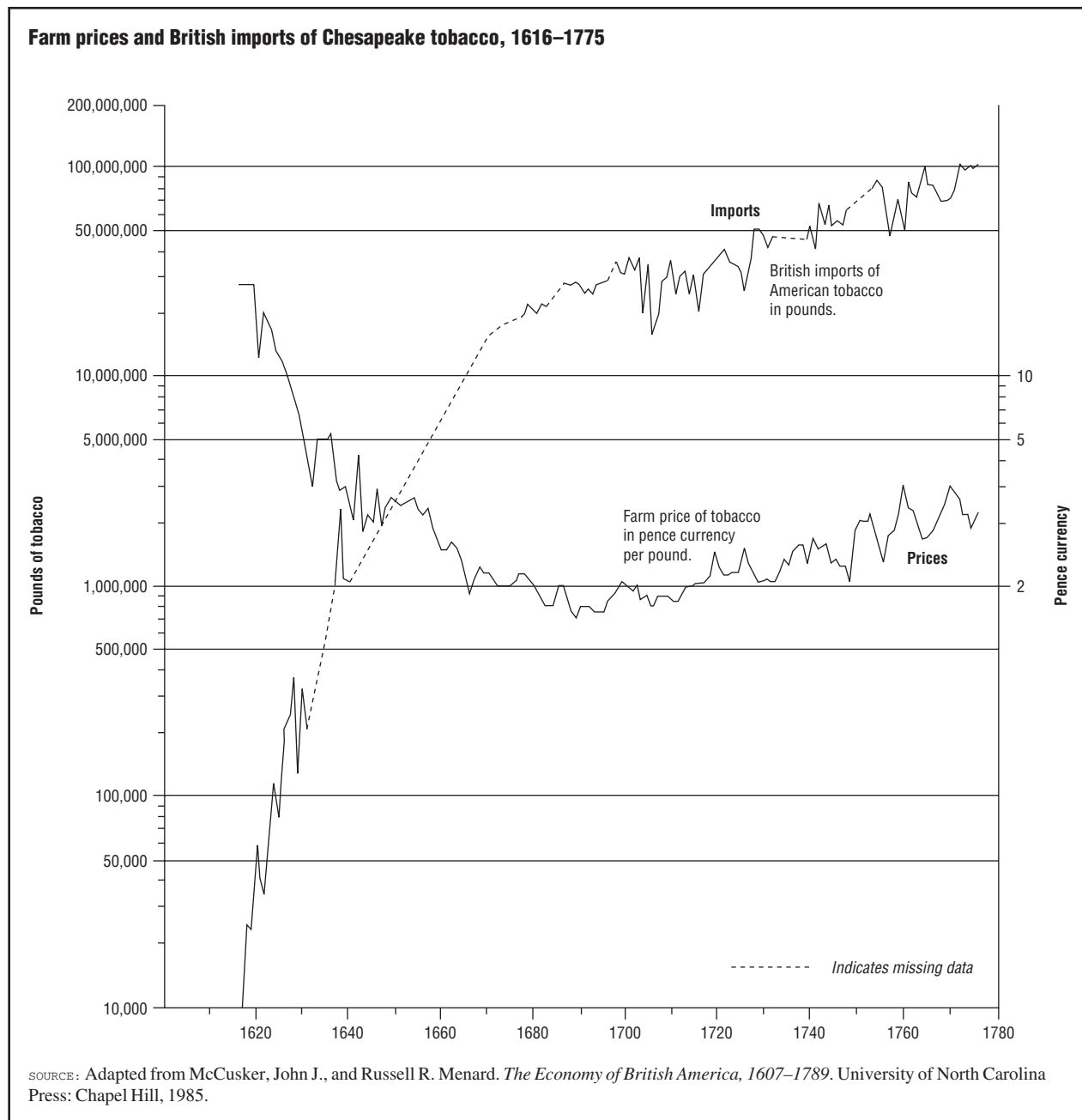
One of the best-known charts in colonial economic history is the "scissor chart," as shown in Figure 2, which contrasts the falling farm price of Maryland tobacco with the rising volume of leaf exports to Britain shipped from the Chesapeake (McCusker and Menard 1985). British imports of tobacco grew exponentially from less than 10,000 pounds (4,549 kilo) in 1620 to just under 40 million pounds (18 million kilo) by 1700; at the same time the farm price of tobacco in the Chesapeake fell from 22 old pence per pound (roughly 80 cents per kilo) to less than 4 cents by the 1680s. These spectacular developments reflected the striking gains in productivity achieved by planters.

Knowledge gained from practical experience revealed the best soil locations and seasons for planting tobacco. The substitution of cheaper enslaved workers for increasingly expensive servants led to further cost savings. While few economies of scale existed on the production side, distribution was another matter. The early practice employed by British merchants of chartering a ship and sending it to the Chesapeake speculatively to sell a cargo of manufactures and purchase tobacco was replaced by the establishment of permanent factors in the colony to



Creole originally, a person of European descent born in the Spanish colonies. Later, the term was applied to persons of mixed European and African descent. As an adjective, it can describe admixtures of European and African cultural components such as language, cookery, and religion.

FIGURE 2



coordinate business. In some areas, planters established direct correspondences with merchants in London or the outports, enabling credit relations to form. This system of trade was known as the consignment system. During the course of the eighteenth century, Scottish merchants were instrumental in creating networks of stores in the Chesapeake in a further attempt to reduce risk and uncertainty.

The improved productivity of shipping in the tobacco trade can be measured directly in a reduction in turnaround times by vessels sailing to the colonies. Whereas between 1694 and 1701 vessels calling at Maryland and Virginia spent an average of nearly 100 days in port, by



hogshead a large wooden barrel formerly used to store and transport cured leaf tobacco. A hogshead typically held approximately 800 to 1000 pounds (350 to 450 kg) of tobacco.

the 1760s they spent less than 50 days tied up loading and unloading merchandise. More efficient use of cargo space was also achieved by designing improved containers for tobacco, called **hogsheads**, and packing them ever more densely with tobacco leaf. Because there was considerable local variation, it is difficult for historians to be exact about trends in the mean dimensions of the hogsheads used to pack tobacco, but they have suggested that capacity increased from approximately 13 cubic feet in 1674 to 22 cubic feet by 1747. The development of sophisticated insurance markets permitted losses to be spread among the trading community as a whole, reducing the risk of bankruptcy. Sailing ships were extremely costly capital assets with high variable costs due to the large crew required to operate them. Improved techniques that saved resources, therefore, had profound implications for the trade.

Overdependency on Tobacco in the Chesapeake

Tobacco dominated economic activity in the Chesapeake for much of the seventeenth and eighteenth centuries and probably provided the major portion of income earned by upward of 80 percent of families. While the crop held many attractions for a newly settled region, over the longer-term significant problems of dependency emerged. Though spectacular, the productivity gains made in the tobacco industry were of a once-and-for-all nature and eventually a limit was reached. The point where the price of tobacco ceased falling on trend and instead started to fluctuate in cycles marks the beginning of difficulties for producers. While economies continued to be made on the distribution side, cultivators found it difficult to realize further significant productivity gains; therefore, earnings were linked increasingly to the state of the market in Europe. The atomized structure of tobacco farming made planning difficult to accomplish within the Chesapeake. Therefore, high prices in one season led planters to overreact by increasing their output, leading to overproduction and subsequent falls in price during the next season.

The limited skill and capital requirements of tobacco also meant that the crop possessed few linkages with other sectors. Agricultural techniques (leaving tree stumps to rot in the ground and failure to make extensive use of manure) were also wasteful of land and favored extensive cultivation with large fallow patches. Hoe cultivation generated a smaller demand for purchases of iron manufactures than agricultural systems based on plough cultivation. The processing of tobacco leaf itself took place in simple wooden dry houses and, unlike cereal crops, did not require the construction of complex mill machinery.

Tobacco's status as a cash crop within the colony (accounting in 1727 for 87% of export earnings) inhibited the development of local manufacturing as producers imported goods from Britain to meet the bulk of their needs. The absence of large towns in the Chesapeake is a striking symptom of tobacco's minimal potential as an engine of economic **diversification**. Approximately 30 percent of the population of British North America lived in the Chesapeake in 1770 yet the region lacked a major urban center. Baltimore, the largest city with approximately 6,000 inhabitants, was tiny in comparison to Philadelphia, New York, and Boston; moreover, Baltimore's growth occurred late in the colonial period and was driven by grain cultivation rather than tobacco.



diversification in agriculture, avoiding overdependence upon one crop by producing several different crops.

Europe's Expanding Market for Tobacco

The statistics of the English and Scottish tobacco trade, which dominated European supplies, can be divided into two phases. For most of the seventeenth century, most of the tobacco imported from the Chesapeake was probably retained for domestic consumption. For example, during the years 1693 to 1697 (the earliest for which complete data have been found), 12.7 million pounds (5.7 million kilo) of tobacco was retained for the home market in Britain, whereas 14.2 million pounds (6.5 million kilo) was re-exported. Thereafter, re-exports of tobacco grew faster than retained imports.

Following Anglo-Scots Union in 1707, Scottish traders played an increasingly prominent role in the organisation of the tobacco trade. During the second quarter of the eighteenth century, the port of Glasgow established itself as the second port after London in the British tobacco trade; during the third quarter, Glasgow overtook the metropolis, accounting for 45 percent of imports during the years 1771 to 1773. Profits from tobacco trading helped finance Scottish industries and land improvement in Glasgow's hinterland. Scots merchants also established commission houses and mercantile partnerships in London that further strengthened their grip over Chesapeake tobacco distribution, particularly with respect to the Virginia trade and the contract to supply the French tobacco farmers general.

The growth of smoking in Britain itself is obscured by the haze of smuggling (particularly re-export frauds designed to evade the high level of **duty** levied on imports). The best attempts to adjust for the effects of smuggling suggest that up until the beginning of the eighteenth century, tobacco usage in Britain rose from virtually nothing in the early 1630s to approximately 1 pound per head during the 1660s; during the next thirty years, consumption grew further and had attained a level of 2 pounds per head by the early 1690s. Thereafter, only modest increases in the level of consumption per head were recorded in the trade data prior to the introduction of cigarettes during the early twentieth century. It is likely, however, that improvements in the efficiency in distribution raised the amount of tobacco reaching consumers. A shift from pipe smoking to snuff taking probably also contributed to a rise in tobacco usage that is masked by the available statistics.

Britain's consumption trends were similar to those of other European markets where importation of tobacco per head also grew rapidly before leveling off. There are a number of possible explanations of this phenomenon. Tobacco possesses addictive properties and it may simply be that once consumers satisfied their cravings they ceased to demand further quantities of leaf. (Yet across Europe a significant proportion of tobacco was taken as snuff and the addictiveness of tobacco ingested in this form is weaker than if it is smoked so other explanations of consumer behavior must be considered.)

European states were quick to introduce taxation once imports of tobacco reached a level where this was viable. The form of taxation varied. In Britain, tobacco was taxed by levying import duties. In other countries, beginning with Spain and including France and the Papal States, governments created a monopoly franchise and sold or "farmed" the right to distribute tobacco to a private company in order to raise revenue. As a result of these impositions, the price fall recorded in Figure 1 was not fully reflected in the retail price of tobacco, notwithstanding



duty a tax, usually on certain products by type or origin. A tariff.



the encouragement that the tax system gave to revenue fraud and smuggling. Confusion between farm prices received by planters and retail prices paid by consumers has led to the misconception that demand for tobacco increased in Europe primarily because Chesapeake production lowered prices. Without innovation and productivity gains a large-scale trade in tobacco could not have developed, but only a limited reduction in retail prices occurred owing to the fact that government increased taxes as farm prices declined. High duties provided a stimulus to smugglers, but contraband was neither a riskless nor costless activity and the gains accruing to smuggling gangs made at the expense of the state did not necessarily provide consumers with a cheaper product. Taxation policies also contributed, therefore, to the failure of tobacco consumption to broach a ceiling level.

The social context of tobacco usage also appears to have set limits to the growth of demand. Studies by both cultural and economic historians have emphasized how smoking and snuff taking were social activities that were influenced by contemporary conceptions of masculinity and status. The form research has taken differs; cultural historians have examined contemporary references to tobacco in literature and pamphlets while economists have considered the role of income distribution on demand. Nevertheless, the conclusions reached by researchers are similar: tobacco usage was influenced by the institutions associated with smoking, by distinctions of status and gender, and by the income levels and consumer preferences of different groups within society.

Static market conditions at home meant that for most of the eighteenth century well in excess of 60 percent of tobacco grown in the Chesapeake and shipped to British ports was re-exported to Continental Europe, most notably to the markets of France, Flanders, and Holland which accounted for approximately two-thirds of the trade, as shown in the table below, which displays British tobacco trade from 1721–1770 (Price 1973). The re-export trade to France was dominated by the supply of tobacco to the French farmers general, who held the contract to supply France, whereas the Dutch ports of Rotterdam and Amsterdam mixed together blends of tobacco for distribution in the German territories and shipment to other markets.

Years	Imports	Retained Imports	Re-Exports	Re-Exports: France and Flanders	Re-Exports: Holland
1721–1730	39.23	15.32	23.91	6.62	8.42
1731–1740	45.97	13.55	32.42	12.21	9.18
1741–1750	61.54	21.10	40.44	12.71	13.34
1751–1760	67.75	19.93	47.82	15.91	15.65
1761–1770	76.20	9.28	66.92	22.19	24.18

Impressive Achievements but Gained at Heavy Cost

Within two centuries of the first documented encounter with tobacco, European merchants and planters had succeeded in transforming tobacco into a global commodity and forging a long-distance supply chain to

meet the demands of European consumers. This task was not accomplished easily. It cost the lives of many Amerindians and white settlers, while also condemning generations of Afro-Americans to chattel slavery. Reviewing the growth of the tobacco trade before 1800, however, it is difficult not to be impressed by the invention and ingenuity with which private individuals on both sides of the Atlantic employed a range of interdependent technologies and innovated across a broad front to bring tobacco from colonial plantation to clay pipe and snuff box.

Tobacco Trade from the Revolutionary War into the Nineteenth Century

Tobacco trade of the United States was curtailed during the Revolutionary War. The U.S. government cultivated French support in the war through tobacco. Benjamin Franklin obtained a loan by using 5 million pounds of tobacco as collateral. As a result, the British concentrated their armies in southern colonies in the last years of the war and destroyed **plantations** and considerable warehouse holdings of tobacco. Virginia planters were indebted to British merchants for some 2 million pounds sterling, but planters got no relief since the Treaty of Paris and subsequent court cases provided for full recovery of debts. Consequently, members of many families left for a new life in the virgin soil in the West.

Agriculture in the United States was stimulated by the war, but tobacco remained the leading U.S. export, worth about \$4 million in 1790. About one-half of the southern population, including most of the black slaves, was engaged in or dependent on tobacco growing. After 1800, the relative importance of tobacco exports declined rapidly because of the expansion of cotton production, which was revolutionized by the invention of the cotton gin in 1793. With numerous inlets on tidewater suitable for ocean-going ships, Maryland and Virginia growers dominated the tobacco export trade until preference shifted around 1850 to the milder-flavored **flue-cured tobacco** of North Carolina.

From 1790 to 1814, U.S. exports of tobacco (reported officially as unmanufactured tobacco) ranged widely, from 118 million pounds in 1790 to only 3 million pounds (War of 1812). It was not until 1851 that exports permanently exceeded 100 million pounds. At the beginning of the nineteenth century, with British trade connections reconnected, U.S. tobacco exports represented close to 90 percent of U.S. production and may have accounted for around 90 percent of world tobacco export trade.

Several factors helped to undermine the position of United States tobacco in the world market during the first half of the nineteenth century: the disturbed trade conditions resulting from the Napoleonic wars; the post-1815 attempt of England to stimulate domestic tobacco production or West Indian importation; the high duties imposed by countries of continental Europe anxious for revenue; and the competition of Cuba, Sumatra, and Columbia markets.

Beginning in the late 1700s, planters in Kentucky and Tennessee annually floated thousands of hogsheads of tobacco down the Mississippi River to New Orleans, but they periodically encountered disputes with inspectors and other port officials. France had acquired Louisiana



plantation historically, a large agricultural estate dedicated to producing a cash crop worked by laborers living on the property. Before 1865, plantations in the American South were usually worked by slaves.



flue-cured tobacco also called Bright Leaf, a variety of leaf tobacco dried (or cured) in air-tight barns using artificial heat. Heat is distributed through a network of pipes, or flues, near the barn floor.

from Spain in 1800, and then in 1803 United States purchased Louisiana to clear up these disputes. Because early tobacco growing laid waste to lands, settlers sought new lands in the West rather than struggle with worn-out fields.

In Europe, the Napoleonic wars meant that soldiers from Britain, France, and other countries came into contact with different tobacco habits, especially cigar-smoking. The Spanish upper classes enjoyed smoking cigars, a habit adopted by British cavalry officers. In the 1830s, French travelers observed Spanish women smoking *papalettes*, or shredded tobacco wrapped in paper, and the French called the smoking devices cigarettes. A smoking revival occurred in Britain (pipes as well as cigars), and snuffing went into decline. Demand for cigars meant more tobacco production outside the United States and new factories in the Spanish colony of Cuba and in Spain itself.

Worldwide Trade in the Early Twentieth Century

By the beginning of the twentieth century, at least fifteen countries reported exporting 688 million pounds of tobacco, or about one-third of the total world production. Exports ranged from none from Japan and only 6 percent of India's tobacco crop to nearly 100 percent for Brazil and Dutch East Indies (Java and Sumatra). The United States remained the leading exporter, with nearly one-half of the world's tobacco trade. With the growth of the U.S. domestic market, exports came to represent less than one-half of U.S. tobacco production. Both India and Japan had a considerable historical record of producing tobacco for local consumption, whereas Brazil and Dutch East Indies tobacco trade was primarily in cigar leaf tobaccos and was fostered by tobacco dealers and exporters. Cuba, the Philippines, Greece, and Turkey were major suppliers in the world tobacco market.

International trade in tobacco at the beginning of the twentieth century was fostered largely by buyers representing European countries. Cigarette production was still a minor outlet for tobacco and smoking tobacco, and cigars dominated the tobacco market in most countries. Germany represented 22 percent of world imports; Germany, Austria-Hungary, Belgium, France, Italy, Netherlands, Spain, and the United Kingdom accounted for three-fourths of tobacco-import trading. A government tobacco monopoly operated in France, Italy, and Spain, while the American Tobacco Company acquired control of major tobacco companies elsewhere in Europe and in the British Colonies. A few countries in Western Europe grew almost no tobacco commercially (Denmark, Finland, Norway, Sweden, and United Kingdom) and purchased from other countries the kinds of leaf they required. Some of those countries may have recorded exports because they acted as transshipping points (receiving and holding tobacco for later shipment).

Most producing countries grew more than one type of tobacco and supplemented their own production by imports of other types required by the domestic industry. By the 1920s, with expanding cigarette consumption pulling up the tobacco markets, the United States remained the premier exporting country but it also imported oriental or **Turkish tobacco**, which represented about 10 percent of a typical American-style cigarette blend. (Domestic-grown flue-cured, burley, and Maryland



Turkish tobacco a variety of mild, aromatic tobacco. Ironically, Turkish tobacco is not native to Turkey but was imported from North America. Turkish tobacco leaves are smaller and more delicate than American varieties. It is usually blended with Bright Leaf (Virginia) and Burley in cigarettes.

tobaccos represented about 90 percent.) Similarly, China's tobacco production was close to that of the United States; China also needed sizable imports for blending and ranked third among importing countries, with about one-half the quantities going to Germany and United Kingdom.

By contrast, some countries in the 1920s were nearly self-sufficient in tobacco: Greece, Turkey, Bulgaria, Cuba, and the Soviet Union. Typically, this situation was due to government import control to regulate foreign exchange or protect domestic tobacco growers.

Exports in the pre-World War II period (1935–39) were below that of a decade earlier because of the decline in cigar consumption, which meant reduced shipments for Indonesia, the Philippines, Cuba, and the Dominican Republic. U.S. exports were also lower, primarily because of a sharp fall-off in shipments of fire-cured and dark **air-cured** types (primarily used for cigars and snuff). Accounting for 4 percent of the world total, Canada, Nyasaland (now Malawi), and Rhodesia (now Zimbabwe) could provide tobacco under the umbrella of the U.S. agricultural price support program. Some U.S. growers moved to Canada to avoid U.S. production restrictions. Growers in the British Africa colonies followed the pattern of U.S. growers of two centuries earlier with a labor-intensive cash crop and sales arrangements with international tobacco dealers.

After three decades as the leading tobacco import destination, Germany fell behind United Kingdom in the 1930s in part because of the sharp rise in sales of UK cigarettes. They were made entirely of flue-cured tobacco in contrast to German cigarettes, which consisted of the American-style blend. Also, the German government exercised considerable control over trade matters and began an antismoking campaign during that period. European countries accounted for three-fourths of tobacco imports. The United States and China imported the most tobacco in this period. For both the United Kingdom and China, the United States was the principal supplier.

Changes after World War II

World War II brought great hardships to many around the world, including relocations of populations, independence to many former colonial countries, and interrupted trade routes. From 1935 to 1959, tobacco exports rose 25 percent, and shifting shares among countries continued as cigarettes took the lead in tobacco manufacturing. U.S. exports continued to lead, with 35 percent of the total. The most striking shift was the slump in exports from Indonesia (formerly Netherlands India) to only one-third of the prewar volume and to a mere 2 percent share of total exports. As the local industry became more oriented to satisfying the local population, surpluses for export diminished. Canada, Rhodesia, and Malawi now accounted for 12.5 percent of export trade. With the overall market expanding, these newer suppliers could more easily enter the trade. Tobacco auction markets, patterned after those in the United States, facilitated sales to foreign manufacturers.

Among import destinations in the period from 1955 to 1959, the United Kingdom remained the leader, with one-fourth of the total; the European continent accounted for 70 percent. Data from China and the Soviet Union in this period are not available, but their trade was considered to be largely internal and strictly controlled by the central



air-cured tobacco leaf tobacco that has been dried naturally without artificial heat.

The ship “Eibe Oldendorff Monrovia” sitting at a loading dock in Seattle, Washington, © MIKE ZENS/CORBIS



authorities. The United States took a 10-percent share of imports as cigarette output rose and U.S. cigar manufacturers shifted to overseas sources.

At about this time, European countries still remembered food shortages during World War II, and several came together for new trade arrangements that became the European Common Market (later the European Union). Also included was a Common Agricultural Policy (CAP) that provided support for domestic agriculture without production controls and sales of any surpluses to areas outside the Common Market. Many observers at that time commented that such a system would be unsatisfactory. Another major government policy change was a unilateral declaration of independence in 1965 by Rhodesia from the British Commonwealth. The United Nations declared sanctions and asked other nations not to accept Rhodesia's exports. Initially, U.S. exports filled the void, but eventually Rhodesia shippers were able to move their tobacco through intermediary countries. In 1980, normal trade resumed following the election of a new government.

Between 1976 and 1978, tobacco trade had risen to 2.9 billion pounds. U.S. shipments led the way at a peak of 642 million pounds, or a 22 percent share. Brazil had jumped to become the second largest exporter, with 238 million pounds and an 8 percent share. In earlier years, Brazil produced and exported a considerable amount of cigar leaf tobacco, so a network of dealers and exporters was in place. The jump occurred in cigarette leaf production located in the southern state of Rio Grande do Sol. As in many other countries, tobacco, as an export crop was an ideal source of cash income for diversified crop farms.

With emphasis on domestic food production, Cuba's tobacco trade languished and fell to only 1 percent of the world total by the 1970s. Tobacco production in the Mediterranean area is extremely labor-intensive but exports have held their own; nonetheless, Greece and Turkey's share of world trade has fallen. Italy's exports (3.5 percent of total) represent surplus production that the CAP was required to sell outside the European Union.



Trade in the Twenty-First Century

By the start of the twenty-first century, tobacco trade had expanded by over one-half in twenty-five years. But half of the increase was due to the inclusion of data from the newly independent countries that had been part of the Soviet Union, whose trade had previously been internal. Brazil has become the leading exporting country, with 21 percent of the total. The United States and Zimbabwe were in a virtual tie for second place, with 9 percent each. Under the U.S. production-control and price-support program, the U.S. Department of Agriculture was required to reduce the tobacco **marketing quotas**, and so less tobacco was available for purchase. Exporters claimed that U.S. price levels were noncompetitive with comparable tobaccos from other countries, costing about one-half of U.S.-grown crops. Even by the end of the 1980s, U.S. tobacco imports were exceeding leaf tobacco exports.

Greece and Turkey retained about a 10 percent share as the market for oriental tobacco continued to thrive and with cigarette production shifting to American-style blends. Malawi is probably the country most heavily dependent on tobacco exports, with 5 percent of the world leaf trade. India's exports vary somewhat, but the share of around 5 percent indicates that the crop retains many economic advantages for producers. Italy's surplus continues to cascade onto the world tobacco market, at 5 percent in 2001. The surplus from the EU countries (except Greece) represents 14 percent of world exports.

Tobacco buyers in Zimbabwe check the aroma of the leaf on the opening day of the selling season, April 2000. Tobacco, the country's leading foreign currency earner, started trading at one-third normal capacity caused by an overvalued local currency and the disruption caused by the invasion of farms by war veterans and villagers © REUTERS NEWMEDIA INC./CORBIS



marketing quota the amount of cured leaf tobacco (usually expressed in pounds) that a tobacco grower may produce and sell in a given year. The United States Department of Agriculture began setting marketing quotas for tobacco in 1933.

Although the greater portion of tobacco production of the world is consumed in the producing countries, a considerable amount, about one-third in recent years, enters international trade, in the form of leaf or products, supplements for deficient supplies in some countries, or total requirements in others. World exports of leaf tobacco amounted to 2.1 billion metric tons in 2002, compared with .4 billion in the years 1935–1939. This was an increase of over 400 percent, in contrast to a 125 percent increase in world production of leaf tobacco. This development reflects the rapid rise in consumption almost worldwide, with many populous countries needing proportionately larger imports than could be acquired from domestic production to meet the rising leaf requirements of manufacturers. The principal importing countries are the Peoples Republic of China, the Russian Federation, the United States, Germany, the United Kingdom, and the Netherlands.

With the antitobacco efforts gathering force in the developed countries, major cigarette manufacturers have established joint ventures with former state manufacturers in Eastern Europe. They have also stepped up cigarette sales to Third World populations and have pushed into other business lines, such as food and beverages. As markets shift, many growers and marketing firms find almost no useful alternatives for their production and processing facilities.

See Also Africa; Brazil; British Empire; Caribbean; Chesapeake Region; China; Cuba; Dutch Empire; French Empire; Mexico; Middle East; Oceania; Philippines; Portuguese Empire; South and Central America; South Asia; South East Asia; Spanish Empire; Zimbabwe.

■ SIMON SMITH
■ ROBERT MILLER

BIBLIOGRAPHY

- American Tobacco Company. *"Sold American!" The First Fifty Years*. Privately printed, 1954.
- Batie, Robert Carlyle. "Why Sugar? Economic Cycles and the Changing of Staples in the English and French Antilles, 1624–1654." In *Caribbean Slave Society and Economy*. Edited by Hilary Beckles and Verene Shepherd. New York: New Press, 1991.
- Brenner, Robert. *Merchants and Revolution: Commercial Change, Political Conflict, and London's Overseas Traders, 1550–1653*. Cambridge and New York: Cambridge University Press, 1993.
- Brigham, Janet. *Dying to Quit: Why We Smoke and How We Stop*. Washington: John Henry Press, 1998.
- Burrough, Bryan, and John Helyar. *Barbarians at the Gate: The Fall of RJR*. New York: Harper and Row, 1998.
- Capehart, Thomas. *Tobacco Situation and Outlook Yearbook. Economic Research Service*. Washington: U.S. Department of Agriculture, 2002.
- Carr, Lois Green, and Russell R. Menard. "Land, Labor, and Economies of Scale in Early Maryland: Some Limits to Growth in the Chesapeake System of Husbandry." *Journal of Economic History* 49 (1989): 407–418.
- Chute, Anthony. *Tabaco: the Distinct and Severall Opinions of the Late and Best Phisitions that have Written of the Divers Natures and Qualities Thereof*. London, 1595.

- Cooper, Mary H. "Regulating Tobacco." *The CQ Researcher*. Congressional Quarterly (1994): 841-864.
- Devine, T. M. *The Tobacco Lords: A Study of the Tobacco Merchants of Glasgow and Their Trading Activities, c.1740-1790*. Edinburgh, Scotland: John Donald Publishers, 1975.
- , ed. *A Scottish Firm in Virginia, 1767-1777: William Cunninghame and Company*. Edinburgh, Scotland: Scottish History Society Publications, 1984.
- Dickson, S. A. *Panacea or Precious Bane: Tobacco in Sixteenth Century Literature*. New York: New York Public Library, 1954.
- Edwards, Everett E. "American Agriculture: The First 300 Years." *Yearbook of Agriculture: Farmers in a Changing World*. Washington: U.S. Department of Agriculture, 1940.
- Friedman, Kenneth Michael. *Public Policy and the Smoking Health Controversy*. Lexington: Lexington Books, 1975.
- Fritschler, A. Lee, and James M. Hoefler. *Smoking and Politics: Policymaking and the Federal Bureaucracy*. New York: Appleton-Century-Crofts, 1969.
- Gage, Charles E. *American Tobacco Types: Uses and Markets*. Washington: U.S. Department of Agriculture Circular 249, 1942.
- Galenson, David. "White Servitude and the Growth of Black Slavery in Colonial America." *Journal of Economic History* 41 (1981): 39-47.
- Gately, Iain. *Tobacco: A Cultural History of How an Exotic Plant Seduced Civilization*. New York: Grove Wiedefeld, 2001.
- Goodman, Jordan. *Tobacco in History: The Cultures of Dependence*. London and New York: Routledge, 1993.
- Grise, Verner. *Structural Characteristics of Flue-Cured Tobacco Farms and Prospects for Mechanization*, Ag. Economic Report 277. Washington: U.S. Department of Agriculture Economic Research Service, 1975.
- . *Tobacco: Background for 1990 Farm Legislation*. Washington: U.S. Department of Agriculture Economic Research, 1989.
- Historical Statistics of the United States, Colonial Times to 1970*. Washington: United States Department of Commerce, Bureau of the Census, 1970.
- Jost, Kenneth. "Closing In on Tobacco". *The CQ Researcher*. Congressional Quarterly (1999): 977-1000.
- Kulikoff, Allan. *Tobacco and Slaves: The Development of Southern Cultures in the Chesapeake, 1680-1800*. Chapel Hill: University of North Carolina Press, 1986.
- Lorimer, J. "The English Contraband Tobacco Trade in Trinidad and Guiana, 1590-1617." In *The Westward Enterprise: English Activities in Ireland, the Atlantic, and America, 1460-1650*. Edited by K. R. Andrews et al. Liverpool, U.K.: Liverpool University Press, 1978.
- Mann, Charles Kellogg. *Tobacco: The Ants and the Elephants*. Salt Lake City: Olympus, 1975.
- Mann, Jitendar. *Dynamics of the U.S. Tobacco Economy*. Washington: U.S. Department of Agriculture Economic Research Tech. Bulletin 1499, 1974.
- McCusker, John J., and Russell R. Menard. *The Economy of British America, 1607-1789*. Chapel Hill: University of North Carolina Press, 1985.
- Menard, Russell R. "From Servants to Slaves: The Transformation of the Chesapeake Labor System." *Southern Studies* xvi (1977): 355-390.
- . "Immigrants and Their Increase: The Process of Population Growth in Early Colonial Maryland." In *Law, Society, and Politics in Early Maryland*. Edited by Aubrey C. Land, Lois Green Carr, and Edward C. Papenfuse. Baltimore and London: Johns Hopkins Press, 1977.

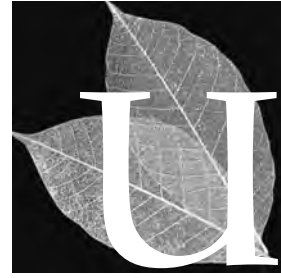


- . "Population, Economy, and Society in Seventeenth-Century Maryland." *Maryland Historical Magazine* 79 (1984): 71–92.
- Menard, Russell, and Lorena Walsh. "Death in the Chesapeake: Two Life Tables for Men in Early Colonial Maryland." *Maryland Historical Magazine* 69 (1974): 211–227.
- Mollenkamp, Carrick, Adam Levy, and Joseph Menn. *The People vs. Big Tobacco: How the States Took on the Cigarette Giants*. Princeton: Bloomberg Press, 1998.
- Nash, R. C. "The English and Scottish Tobacco Trades in the Seventeenth and Eighteenth Centuries: Legal and Illegal Trade." *Economic History Review* 35 (1982): 354–372.
- North, Douglass C. "Sources of Productivity Change in Ocean Shipping, 1600–1850." *Journal of Political Economy* 76 (1968): 953–970.
- O'Rourke, Kevin, and Jeffrey G. Williamson. "After Columbus: Explaining the Global Trade Boom, 1500–1800." *Journal of Economic History* 62 (2002): 417–456.
- Osler, Gerry, Graham A. Colditz, and Nancy L. Kelly. *The Economic Costs of Smoking and Benefits of Quitting*. Lexington: Lexington Books, 1984.
- Price, Jacob M. "The Rise of Glasgow in the Chesapeake Tobacco Trade, 1707–1775." *William and Mary Quarterly* 43 (1954): 179–199.
- . *France and the Chesapeake: A History of the French Tobacco Monopoly, 1674–1791, and of Its Relationship to the British and American Tobacco Trades*, 2 vols. Ann Arbor: University of Michigan Press, 1973.
- , ed. *Joshua Johnson's Letterbook, 1771–4: Letters from a Merchant in London to his Partners in Maryland*. London: Record Society Publications, 1979.
- . "The Last Phase of the Virginia-London Consignment Trade: James Buchanan & Co., 1758–68." *William and Mary Quarterly* 43 (1986): 64–98.
- Robert, Joseph C. *The Story of Tobacco in America*. New York: A. Knopf, 1949.
- Roessingh, H. K. "Tobacco Growing in Holland in the Seventeenth and Eighteenth Centuries: A Case Study of the Innovative Spirit of Dutch Peasants." *The Low Countries History Yearbook* 11 (1978): 18–54.
- Shammas, Carole. "American Colonization and English Commercial Development, 1560–1620." In *The Westward Enterprise: English Activity in Ireland, the Atlantic and America, 1500–1650*. Edited by K. R. Andrews et al. Liverpool, U.K.: Liverpool University Press, 1978.
- Shepherd, J. F., and G. M. Walton. *Shipping, Maritime Trade, and the Economic Development of Colonial North America*. Cambridge and New York: Cambridge University Press, 1972.
- Smith, S. D. "The Market for Manufactures in the Thirteen Continental Colonies, 1698–1776." *Economic History Review* 51 (1998): 676–708.
- . "The Early Diffusion of Coffee Drinking in England" In *Le Commerce du Café avant l'ère des Plantations Coloniales: Espaces, Réseaux, Sociétés, xv^e-xix^e Siècle*. Edited by Michel Tuscherer. Cairo: Institute Français d'archéologie orientale, cahier des annales islamologiques, 2001.
- Soltow, J. H. "Scottish Traders in Virginia, 1750–1775." *Economic History Review* 12 (1959): 83–98.
- Taylor, Peter. *The Smoke Ring: Tobacco, Money, and Multinational Politics*. New York: Pantheon Books, 1984.
- Thirsk, Joan. "New Crops and their Diffusion: Tobacco-Growing in Seventeenth-Century England." In *Rural Change and Urban Growth, 1500–1800*. Edited by C. W. Chalkin and M. A. Havinden. London and New York: Longman, 1974.

Tobacco: Deeply Rooted in America's Heritage. Tobacco Institute. Privately printed, 1985.

White, Larry C. *Merchants of Death: The American Tobacco Industry.* New York, Beech Tree Books, 1988.

World Production and Trade. Circulars 2–4, 10–30. Washington: United States Department of Agriculture, Foreign Agricultural Service, 2003.



United States Agriculture

For better or worse, tobacco is thoroughly American. Native Americans grew and smoked tobacco long before Europeans and Africans came to the New World. Tobacco farming is America's oldest commercial enterprise. For almost four centuries, American farmers have sent the weed in its many forms throughout the world. And while other nations grow tobacco, American products enjoy a popularity in world markets not accorded any other producer. Historically, vast areas of the American South were devoted to producing tobacco, and entire rural populations marched to the cadence of tobacco culture. The living standards of millions of Americans have risen and fallen with the fortunes of the crop. This chapter of the tobacco story begins with American independence.

Geographic Expansion, 1780s–1800s

By the end of the Revolutionary War (1783), tobacco was well established as America's leading export. From Europe to China, smokers wanted American tobacco, and by 1792 exports were up 36 percent over prewar levels. Demand for American leaf drove its expansion far beyond its original home in Tidewater Virginia and Maryland. Predictably, tobacco culture followed patterns of settlement. As farm families migrated west and south, they carried tobacco seeds and knowledge with them to their new homes. Thus, tobacco farming spread into the Virginia/North Carolina border region, Tennessee, Kentucky, and the South Carolina Piedmont. By the early 1800s, tobacco culture had crossed into Ohio and Missouri as well.

At first, tobacco played a minor role in the frontier economy as pioneer families divided their time between raising food crops and hunting game. Tobacco was grown in small plots for home consumption and barter. Soon, however, tobacco evolved into a cash crop as backcountry settlers grew greater quantities, not only to smoke but also to sell. The new tobacco regions had advantages over the historic culture areas. After many decades of growing tobacco, eastern Virginia soils had lost



Aerial photo of striped tobacco fields, Blue Ridge Mountains, North Carolina, 1991.
© RICHARD A. COOKE/CORBIS

much of their fertility, and Western growers could sell leaf profitably at prices below the East's cost of production. Poor transportation and remoteness from markets hindered backcountry farmers for a while, but by the 1840s expanding rail service was linking the backcountry with the coast. Other Western tobacco growers shipped their leaf down the Ohio, Missouri, and Mississippi Rivers to New Orleans markets. Western competition ultimately forced Tidewater Virginia farmers to plant other, more profitable crops.

Tobacco 1800–1865

Tobacco farming was labor intensive. Indeed, tobacco was virtually a handmade crop as each leaf was handled several times during cultivation and processing. Seedbeds were sown in winter. Farmers typically located seedbeds at the edge of a wooded area to shelter them from wind. After sowing, growers covered the beds with straw to protect the young plants. By spring, the plants were several inches high and ready for transplanting. Growers pulled the plants from the seedbeds and transplanted them into fields of a few acres. Sometimes, a child would ladle water from a wooden bucket onto each young plant.

As the plants grew, farmers plowed or hoed the fields to remove weeds. After six weeks or so, the plants reached adolescence and flowers began forming at the top. Seeking to concentrate the plants' energies on leaf production, growers "topped" the plants, removing the flowers by hand. Also removed were "suckers," leaf-like outgrowths at the axils—the juncture of leaf and stalk—that diverted nourishment

from the leaves. Growers pruned the suckers by hand, starting at the top and working down. Tobacco worms—fat, green caterpillars—were picked off at the same time. “Suckering” was tedious work, hard on the arms and back. Sometimes, growers removed the “lugs”—the bottom leaves—to direct nourishment to the more valuable middle and upper leaves. The plants ripened through the summer, the leaves gradually turning from green to yellow. When the plants were judged fully ripe, farmers harvested the tobacco, severing the stalks at the bottom.

After harvesting, the tobacco farmers’ work was only half done: Curing, **stripping**, bulking, grading, and tying the crop were still to come. Tobacco leaves contain moisture that must be removed. Thus, tobacco growers were required not only to nurture and cultivate the plants but to dry or “cure” them as well. Typically, harvested plants were hung in well-ventilated barns to air-cure. **Air-curing** could take several weeks. Sometimes, farmers lit small fires on the dirt floors of the barns to speed curing. Fire-cured tobacco acquired a heavy, smoky flavor. In late autumn, farmers stripped the dry, brown leaves from the stalks and “bulked” them in piles to improve quality.

Usually, farmers sorted the leaves into four or five grades based on color and size. The cured leaves were then “tied.” A folded leaf was wrapped around the stems of several leaves forming a small bundle called a “hand.” The hands were packed in large, wooden barrels called “**hogsheads**” and brought to market. A hogshead of tobacco often weighed 1,000 pounds (450kg) or more. By the mid-nineteenth century, many farmers abandoned hogsheads and carried their tobacco to market in large baskets.

For much of the nineteenth century, Europe was the most important market for American tobacco. By 1800, the European passion for **snuff** had about run its course, and Europeans were turning more to the cigar. Demand for cigar tobaccos, especially the flavorful wrapper leaves, was met by tobacco growers in the Connecticut Valley. Fine leaf had been produced there since the 1760s, and by the early nineteenth century Connecticut Valley growers were specializing in producing cigar tobaccos for Europe and a growing American market. Later in the century, Connecticut Valley growers learned to imitate Asian climatic conditions by growing tobacco under porous cloth. The attendant rise in temperature and humidity together with the region’s unique soils produced superior cigar tobaccos. Cigars were the smoke of choice for much of the nineteenth century on both sides of the Atlantic.

As the nation grew, a strong domestic market developed for all types of American tobaccos. At first, only tobacco judged too poor for export was consumed locally. By the early 1800s, however, more and better leaf was manufactured and consumed by Americans. Besides Connecticut Valley wrappers, Americans smoked cigars rolled from dark Tennessee and Kentucky leaf. Much tobacco was consumed in pipes as well. Frontier women commonly smoked, and even children sometimes puffed small pipes. But the most popular tobacco product in the United States in the early nineteenth century was chewing tobacco. “**Plug**,” “quid,” or “chaw,” as it was variously known, was commonplace by the 1830s. Cured leaves were coated with molasses, licorice, rum, fruit brandies, or other flavorings and molded into blocks—plugs—about the size of a deck of playing cards. Users cut off the desired amount with a pen knife and packed the “chaw” between cheek and gum. Copious amounts of saliva were produced and expelled from the mouth in brown, malodorous



stripping in the Burley and fire-cured tobacco cultures, cured leaves must be separated from the dead stalk. This is called “stripping.”

air-curing the process of drying leaf tobacco without artificial heat. Harvested plants are hung in well-ventilated barns allowing the free circulation of air throughout the leaves. Air-curing can take several weeks. Burley tobacco is air-cured.

hogshead a large wooden barrel formerly used to store and transport cured leaf tobacco. A hogshead typically held approximately 800 to 1000 pounds (350 to 450 kg) of tobacco.



snuff a form of powdered tobacco, usually flavored, either sniffed into the nose or “dipped,” packed between cheek and gum. Snuff was popular in the eighteenth century but had faded to obscurity by the twentieth century.



plug a small, compressed cake of flavored tobacco usually cut into pieces for chewing.



“FINE TOBACCO—I’ll smoke it later in *LUCKIES*”

So **round** – so **firm** –
 so **fully packed**
 –so **free** and **easy**
 on the **draw**



A 1944 advertisement for Lucky Strike cigarettes features a detail of “Grading Leaf” by Peter Hurd.
 © BETTMANN/CORBIS

streams. As the tobacco was not burned, chewing was less of a fire hazard than smoking. But the health risks of sidewalks and lawns covered with human excretations were often as hazardous as fire.

Cigarettes were rare before the 1870s. They were hand rolled in New York sweatshops, and the price was steep. Rolling one’s own was cheaper but inconvenient. Moreover, the strong cigarette tobaccos were harsh-tasting, and attempts to inhale the smoke often led to a coughing spasm. Therefore, most tobacco users contented themselves with pipes, cigars, snuff, and chewing.

The cotton boom of the early 1800s was a momentous event in American agriculture, and its effects were felt in the tobacco industry. With the invention of the cotton gin, large-scale cotton production became feasible for the first time. Driven by strong demand for cloth, cotton prices rose well above prices for leaf tobacco. Responding to higher prices, many farmers reduced their tobacco acreage in favor of cotton.

In some areas, cotton drove tobacco culture virtually to extinction. For example, by the 1820s tobacco shipments through Savannah, Georgia, had fallen 89 percent from 1,500 hogsheads per year to only 170. In Charleston, South Carolina, former tobacco processing facilities were rededicated to cotton. For two centuries, tobacco had reigned as America's leading export. In the early 1800s, however, cotton succeeded tobacco as king of American agriculture.

From the beginning, tobacco and slavery were bound together. The first African slaves brought to America toiled in tobacco fields. Tobacco, therefore, set slavery in motion and provided an eager slave market for two centuries. Some **plantations** were small with only a few slaves; some held more than one hundred people in bondage and were essentially independent little villages. By the 1800s, most slave-based tobacco farms—especially the larger plantations—had adopted the task system. Under the task system, slaves were given individual job assignments rather than laboring in gangs. Tasks included jobs related to every stage of cultivating and processing tobacco. For example, a hoeing or suckering task might allot a certain area of a field. Sometimes, wooden stakes would mark the boundary of the task area. A stripping task could specify a certain poundage of leaf to be stripped. Once the task was completed, the slave was released from labor for the day. Most slaves could finish their tasks by four or five o'clock, but very industrious workers might finish earlier.

Unfortunately, slavery also moved west with tobacco culture. Western lands were cheap while slaves were expensive. Moreover, human property was mobile while real estate was not. Thus, many planters found it expedient to move to new lands every few years, taking their slaves with them. The impact of slavery was felt throughout the white community as well. Slavery placed small, independent farmers at a competitive disadvantage since they had to pay for labor. Slavery also undermined the free labor market by lowering wages for free blacks and white workers. In Tidewater Virginia, many former tobacco planters sold their slaves to toil in the newer cotton and tobacco regions of the West and South.

Post-Slavery Changing Labor Relations

The victory of the Union in the Civil War (1861–1865) ended slavery in the United States. But resolving old questions raised new ones. What would replace slavery as the dominant labor system in Southern agriculture? Most freedpeople wanted land of their own, but while a fortunate few acquired land, most continued to work for white landowners. **Sharecropping** did not originate in the post-Civil War period. The custom of landowner and laborer dividing a crop was well established before the war, but both parties had typically been white. With emancipation, however, sharecropping increasingly involved white landowners and black laborers. Although details varied, the basic sharecrop arrangement was fairly simple. Landowners provided land, horses or mules, implements, and a house. The cropper family furnished all the labor, and the parties equally divided the proceeds from the crop. That housing was provided was, perhaps, the most tangible benefit to the cropper. A large tobacco farm could have several cropper families living and working on assigned parcels of land.



plantation historically, a large agricultural estate dedicated to producing a cash crop worked by laborers living on the property. Before 1865, plantations in the American South were usually worked by slaves.



sharecropping a form of agricultural labor that gained popularity after the Civil War. Laborers, usually families, lived and worked on land belonging to a proprietor. They grew staple crops like tobacco and cotton. Rather than regular cash wages, they were paid with shares of the crop at harvest time.

Farmers harvesting tobacco leaves on a Virginia plantation, c. 1612. HULTON ARCHIVE/GETTY IMAGES



In the beginning, most freedpeople viewed sharecropping as a temporary transition to owning land. But as the years passed, few realized their dream of economic independence. Sometimes croppers obtained food and other necessities on credit, but their earnings were insufficient to settle their debts and they slid into hopeless poverty. Low tobacco prices worsened the problem. In years of low prices—and there were many—there was little profit for either the cropper or the landlord. For many, therefore, sharecropping became a trap into which they were born, lived, and died.

Another form of land tenure in tobacco farming was tenantry. Basically, tenantry was a type of rental. Tenants typically owned a team of horses or mules, plows and other implements, and had established credit with local merchants. Sometimes, tenants paid landowners a flat cash rental for the land and dwelling. More commonly, tenants paid a quarter of the crop. Although the distinctions may seem subtle, tenantry was considered a step above sharecropping in the agrarian hierarchy of the rural South. Many hands were needed to ready a crop for market, and a sizeable farm would be home to several tenant families. The landowner often reserved a “home place,” a parcel around his dwelling to cultivate himself. Over time, tenantry gradually replaced sharecropping on Southern tobacco farms, and by the 1940s probably eighty percent of the Southern tobacco crop was produced by tenants and small landowners. Tenantry declined rapidly in the 1960s as machines replaced human and animal labor. Few persons born after 1945 ever held tenant status as adults.

Tobacco crops ranged in size from 3 acres to more than 100, but the most common unit was the small family farm raising 6 to 10 acres of tobacco. The family lived on the property and provided their own labor with perhaps a few hired hands in busy seasons. The entire family contributed to making the crop. Children as young as six or seven were given simple tasks like picking up dropped leaves; old men and women, no longer up to field work, could grade and tie the cured leaves.

Tobacco farmers raised other crops and livestock for food and extra income. Most learned to rotate their crops, including soil-building plants

like clover in the rotation. A balanced farming plan included corn, wheat, beef, pork, and poultry as well as a vegetable garden. Women and children usually tended the garden and fed the chickens; older boys and men tended the horses, cattle, and hogs. Farmers pastured cattle on fallow fields to renew the fertility of the soil.

Bright Leaf Tobacco

The development of Bright leaf or **flue-cured tobacco** was a critical event in the tobacco story. Farmers learned to cure tobacco with artificial heat employing a furnace outside the curing barn. Heat was distributed through a system of stove pipes, or “flues,” running parallel to and a few inches above the floor. Harvested plants were hung overhead. The furnace chimney carried exhaust outside the barn so plants were untainted by smoke and soot. With the higher temperatures, a barn of tobacco cured in about five days rather than the five weeks needed for air-curing. Not only did flue-cured tobacco cure faster, but it was lighter, milder, and more aromatic than **air-cured** tobacco. Its characteristic yellow color gave it the name Bright Leaf. Consumers liked Bright Leaf from the start, and by the 1870s many farmers in the North Carolina-Virginia border region were flue-curing.

To obtain the best possible color and flavor, Bright leaf growers replaced stalk harvesting with leaf harvesting. Tobacco leaves ripen in sequence beginning at the bottom of the stalk, then the next higher leaves, and so on to the uppermost leaves. Waiting for the upper leaves to ripen insured that the lower leaves were overripe and less valuable. Harvesting the leaves as they ripened guaranteed the highest value for every leaf. Farmers learned to harvest their crop four times, taking one-fourth of the leaves with each priming. Stalks never left the field but were simply plowed under after the final harvest.

Before the 1870s, cigarettes were a novelty as few consumers enjoyed the harsh-tasting, pungent smoke. Bright leaf tobacco changed that. The milder, lighter tobacco was ideal for cigarette smoking. Moreover, the milder smoke was more easily inhaled, enhancing the smoker’s satisfaction. Inhaling also enhanced and accelerated the smoker’s addiction to the product. At the same time smokers were embracing Bright leaf, technological breakthroughs in cigarette manufacture made mass production possible for the first time. Economies of scale enabled manufacturers to cut cigarette prices in half, and the price of the ten-unit pack fell from 10 cents to 5 cents. Buttressed by strong advertising support, sales soared. Cigarette consumption in the United States increased sharply, rising from 42 million in 1875 to 500 million in 1880, a rate of increase approaching 1,200 percent in five years. Cigarette consumption passed 1 billion in 1884 and 2 billion in 1887.

Why did cigarette smoking become so popular? Several factors are responsible. Smokers liked the mild, aromatic Bright leaf tobacco, and lower prices placed cigarettes within reach of all social classes. Cigarettes were convenient. Unlike cigars and pipes, cigarettes required no special paraphernalia—only a match. And while a cigar or pipe required considerable time to enjoy, a cigarette could be consumed in five minutes. Of course, addiction underlay everything. Occasional smokers soon became steady users.



flue-cured tobacco also called Bright Leaf, a variety of leaf tobacco dried (or cured) in air-tight barns using artificial heat. Heat is distributed through a network of pipes, or flues, near the barn floor.



air-cured tobacco leaf tobacco that has been dried naturally without artificial heat.



Geographic Expansion, 1880s–1930s

The dramatic increase in cigarette smoking required a corresponding increase in the supply of leaf tobacco. By the 1890s, Bright leaf tobacco culture had spread into eastern North Carolina and eastern South Carolina. By the early twentieth century, farmers in southern Georgia and northern Florida were learning to grow and cure tobacco. Burley production expanded also. Nearly every county in Kentucky raised that variety, and production expanded in Missouri and Ohio as well. Historic culture areas of Maryland and Virginia saw a resurgence of tobacco culture for the first time in living memory.

By the 1920s, supply was outpacing demand. Moreover, tobacco manufacturers exploited the farmers' weak marketing position to keep leaf prices low. In the Great Depression of the 1930s, prices fell below the cost of production, and all tobacco regions faced misery and want. Through the Agricultural Adjustment Act of 1933, the national government limited supplies of leaf tobacco through allotments and quotas. Expansion was frozen in place; no new regions could produce tobacco. Existing tobacco farms were assigned a leaf quota, controlling the amount of tobacco they could produce and sell. The quota was adjusted every year to reflect changes in demand. By limiting supply, leaf prices rose dramatically and tobacco farming became profitable again. The tobacco program has proven very popular and durable. It has survived, with some changes, since the 1930s.

Mechanization, 1940s–2000s

Mechanization—replacing human and animal labor with machines—provided another important source of change on American tobacco farms in the twentieth century. With greater profitability, tobacco growers could invest in labor-saving and highly efficient farm machinery. The farm tractor multiplied the horsepower on a typical tobacco farm by a factor of ten. Through the years, tobacco-specific implements were developed to mechanize certain tasks while leaving others unchanged. Chemical technologies were important also. Scientifically developed fertilizers reinforced by nitrogen and potassium supplements pushed yields above 2,000 pounds (900 kg) per acre. Herbicides and pesticides controlled insects and undesirable weeds. In the 1970s, mechanized harvesting and curing equipment automated those labor-intensive operations. By the 1980s, sharply reduced labor requirements were increasingly met by migrant labor. Greater capital requirements made tobacco farming more of a commercial activity, and smaller farmers found it difficult to compete. Many sold or rented their quotas to larger and better capitalized growers. Between 1970 and 2000, the size of the average tobacco farm more than tripled. In the 2000s, tobacco farming is larger, more mechanized, and employs fewer people than at any time in its history.

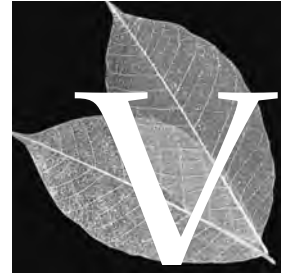
See Also Labor; Plantations.

■ ELDRED E. "WINK" PRINCE JR.

BIBLIOGRAPHY

Badger, Anthony J. *Prosperity Road: The New Deal, Tobacco, and North Carolina*. Chapel Hill: University of North Carolina Press, 1980.

- Daniel, Pete. *Breaking the Land: The Transformation of Cotton, Tobacco, and Rice Cultures Since 1880*. Urbana: University of Illinois Press, 1985.
- Fite, Gilbert C. *Cotton Fields No More: Southern Agriculture, 1865–1980*. Lexington, Ky.: University Press of Kentucky, 1984.
- Gately, Iain. *Tobacco: The Story of How Tobacco Seduced the World*. New York: Grove Press, 2001.
- Goodman, Jordan. *Tobacco in History: The Cultures of Dependence*. London: Routledge Press, 1993.
- Hirschfelder, Arlene B. *The Encyclopedia of Smoking and Tobacco*. Phoenix, Ariz.: Oryx Press, 1999.
- Kulikoff, Allan. *Tobacco and Slaves: The Development of Southern Cultures in the Chesapeake, 1680–1800*. Chapel Hill and London: University of North Carolina Press, 1986.
- Prince, Eldred E., Jr., and Robert Simpson. *Long Green: The Rise and Fall of Tobacco in South Carolina*. Athens and London: University of Georgia Press, 2000.
- Tilley, Nannie May. *The Bright-Tobacco Industry, 1860–1929*. Chapel Hill: University of North Carolina Press, 1948.



Virginia Slims

Throughout the 1960s, Philip Morris (PM) was a rapidly growing company, its expansion fueled primarily by the explosive growth of its Marlboro brand. With PM's success based largely on one brand, the company sought to broaden its customer base by establishing other brands, so as not to be dependent solely on Marlboro for its profitability.

As a growing, hungry company, PM sought out new **marketing niches** in a market that was fragmenting rapidly, because PM's many competitors were launching numerous new brands. Ironically, one of the niches it exploited most successfully was the same one it had abandoned in 1955 when the original Marlboro was discontinued: women.

American Tobacco Company's Silva Thins brand was first introduced in 1967. In 1968 Virginia Slims appeared on the scene. Although several other brands for women were available, Virginia Slims was the most successful, with a marketing campaign that hit its target dead-on. Conceptually, the marketing strategy was to use a feminine name that also connoted beauty and thinness. The cigarette itself was extremely slim—markedly thinner than the industry standard—and, correspondingly, the package was slender and appealingly stylish and was considered by many a fashion accessory.

By capitalizing on the emerging women's movement of the 1960s, PM built a successful advertising campaign that established Virginia Slims as a best-seller in its niche. Ads featuring the slogan "You've come a long way, Baby" simulated old photographs that both contrasted and compared Victorian era women to modern women. The result was a successful new product that, by 1971, was selling 5.5 billion units a year, a little over one percent of the market. While Virginia Slims did not hold a large share of the market, it was enough to be a highly profitable brand.

Starting in 1970, PM began sponsoring the Virginia Slims Tennis Tour, originally because PM's president, Joseph Cullman III, was a tennis fan. It turned out to be a good move from PM's standpoint, as



marketing niche the area of commerce most appropriate for a particular product; for example, sugar-free soda would fill the marketing niche for dieting persons.



Popular advertisements for Virginia Slims cigarettes contrasted modern, liberated women with those of the Victorian era. In this magazine ad from the 1970s, the image of a stylish model is juxtaposed against a fictitious historical newspaper that announces “Alaskan Town Allows Woman to Smoke.” THE ADVERTISING ARCHIVE LTD./VIRGINIA SLIMS



irony an event or circumstance that is the opposite of what might be expected, for example, athletes endorsing cigarettes.

the players were anxious not only because female players wanted to earn what their male counterparts were making, but also for the star status that came with the publicity. In return, the tour provided good publicity for Virginia Slims. This relationship, however, became a lightning rod for women’s health advocates who publicized the **irony** of athletes promoting cigarettes. After the University of Illinois at Chicago hosted the Virginia Slims Tournament in 1993 and 1994, protests by health advocates forced the University to cancel its contract with PM.

Over the years, PM has targeted the female smoker by promoting a consistent image for Virginia Slims. Humorous advertisements told women how far they had come and congratulated them on having their own cigarette. Promotional items included the Virginia Slims Book of Dates, so that such independent women could keep track of all their men. In the early 1990s, PM also introduced a line of clothing and accessories worn by attractive, young, and slim models to promote the brand.

By the early 1990s, Virginia Slims had captured roughly 3 percent of the American market and was the leading women’s cigarette. By the

start of the twenty-first century, in a highly fragmented market where only one brand, Marlboro, captured more than 10 percent of the market, Virginia Slims retained a **market share** of approximately 2.4 percent. This figure represented approximately 10 billion cigarettes, which made Virginia Slims the tenth largest-selling cigarette in the United States in 2002.

See Also Camel; Cigarettes; Gitanes/Gauloises; Lucky Strike; Marlboro; Philip Morris.

■ JOSEPH PARKER

BIBLIOGRAPHY

- Jones, Raymond M. *Strategic Management in a Hostile Environment: Lessons From the Tobacco Industry*. Westport, Conn.: Quorum Books, 1997.
- Kluger, Richard. *Ashes to Ashes: America's Hundred-Year Cigarette War, the Public Health, and the Unabashed Triumph of Philip Morris*. New York: Alfred A Knopf, 1996.
- Sobel, Robert. *They Satisfy: The Cigarette in American Life*. New York: Anchor Press/Doubleday Publishing, 1978.



Visual Arts

In the twentieth century tobacco companies spent millions on advertising campaigns that used glamour to lure people into smoking particular brands of cigarettes and cigars. Highly paid art directors and photographers created images of pleasure and power that featured celebrity smokers, including actors and sports heroes, who already were fantasy subjects for admirers. As noted by Patrick Carroll, founder of Freedom Tobacco International, in a 7 August 2003 article for *The Miami Herald*, "To be honest, celebrities make or break your brands. If you look at who drinks what or that sort of thing, celebrity endorsements have always meant a lot."

Historical Background

Since its sixteenth-century rise to prominence in western culture, smoking has possessed a degree of glamour as a mood-altering substance and as an exotic practice. Its effect on health was debated, with supporters (including tobacco merchants) claiming it was a panacea (cure-all) for depression and other maladies. Opponents, especially religious figures, considered smoking a new form of sensual indulgence and condemned it as a threat to health, morals, and the social order. These controversies have only added an aura of sinful pleasure to smoking.

Centuries before modern ad campaigns, painters and printmakers found smoking an appealing subject for formal and symbolic reasons. Smoke, a fluid element without stable proportions—rather like water or

market share the fraction, usually expressed as a percentage, of total commerce for a given product controlled by a single brand; the consumer patronage for a given brand or style of product.

Before the eighteenth century, European portrayals of tobacco use typically were negative. This detail from Jan Steen's 1663 painting *Topsy-Turvy World* gives an unglamorous portrayal of people governed by carnal desires, including wine, women, and song. One of the neglected children in the background holds a pipe to his lips.

© ARCHIVO ICONOGRAFICO, S.A./CORBIS



clouds—allows an artist to compose freely, using spirals, wisps, or puffs, and veils of varying transparencies. Smoke leads the viewer's eye through a canvas and establishes links between characters and objects. A pipe can call attention to a character's hands, or mouth, and the spark from a flint lends drama to a canvas. Imitations of fire and smoke demonstrated the sort of virtuosity prized by collectors.

The authority of religious leaders in western culture, before the eighteenth century, was strong enough to curb glamorous representations of smoking. Seventeenth-century Protestant Holland, for example, was the nucleus for *vanitas*—still-life paintings that emphasize the foolishness of indulging the senses at the eternal soul's expense. In such a still life an abandoned pipe could refer to a departed owner, smoke to the brevity of life, and ashes to penance or death.

A number of paintings from this period depicted market or tavern scenes that showed the lower classes as governed by their appetites. The seventeenth-century Dutch painter Jan Steen, in *The Effects of Intemperance*, shows a woman lost in alcoholic slumber with a pipe dangling in front of her legs. Similar disorder is portrayed in Steen's *Topsy-Turvy World*, in which an unattended child in the background appears to be smoking a pipe. Such portrayals of women smokers and drinkers as neglectful of their children and their personal virtue are decidedly lacking in glamour. However, glamorous representations began to appear in the eighteenth century, especially in France, as philosophers supported critical attitudes toward religion and social habits.

Members of the eighteenth-century French aristocracy considered the pursuit of pleasure a privilege of their class. As trendsetters to the western world, they lent glamour to tobacco ingestion. During days filled with flirting, gambling, eating, and drinking, snuff-taking became as ritualized as tea-drinking in Japan. A courtier would open a gold **rococo** snuffbox with a flourish of a lace cuff, insert snuff in a nostril, and unfurl a lavishly embroidered handkerchief for a sneeze. Highly skilled craftsmen catered to the desire for glamorous tobacco accessories; these paved the way for elegant nineteenth- and twentieth-century **Art Nouveau** and **Art Deco** cigarette cases.

Tobacco use grew enormously in the nineteenth century thanks, in part, to the industrial revolution, which introduced rail transport to better distribute products and mass media to better publicize them. Major wars glamorized smoking, and self-assertive women began to acquire what had been a largely a male habit. Western travel literature linked smoking habits in the Near East with sensual fantasies. Moreover, as Paris became the art and pleasure capital of the world, its artists and writers frequently treated smoking as an attribute of modernity.

War and Smoking

As a repetitive, addictive act, which provides oral satisfaction and encourages camaraderie, smoking became endemic among the military during the nineteenth century. In the Crimean War (1853–1856) British soldiers learned from their Turkish allies to smoke cigarettes for their cheapness and convenience. They brought the habit home to England, where civilians began to associate smoking with Near Eastern exoticism and the imagined adventures of war.

Wars also served to strengthen the link between smoking and male virility. Caricaturists and pornographers, such as the Belgian painter and graphic artist Félicien Rops, often capitalized on the resemblance of pipes, cigars, or cigarettes to penises and of expelled smoke to ejaculations. In ads for cigars, the continued sexual vigor of a wealthy, elderly man could be implied by the upward tilt of his cigar or the vigorous ejection of smoke. The Austrian neurologist and founder of psychoanalysis Sigmund Freud, in his *Three Essays on Sexuality and Other Writings* (1901–1905), noted that “There is a constitutional intensification of the erotogenic significance of the labial region. If that significance persists, these same children, when they are grown up, will become epicures in kissing, will be inclined to perverse kissing, or, if males, will have a powerful motive for drinking and smoking.”

The New Woman

In nineteenth-century fine and commercial art women were seldom shown in the act of smoking, unless they were such outsiders as actresses, prostitutes, degenerate society women, or so-called new women, who acted like men. Beautiful women were frequently shown in posters or on cigar box labels, but—with few exceptions—not with a smoking implement in their mouths. The blonde-haired woman depicted by the Art Nouveau Czech illustrator Alphonse Mucha in his

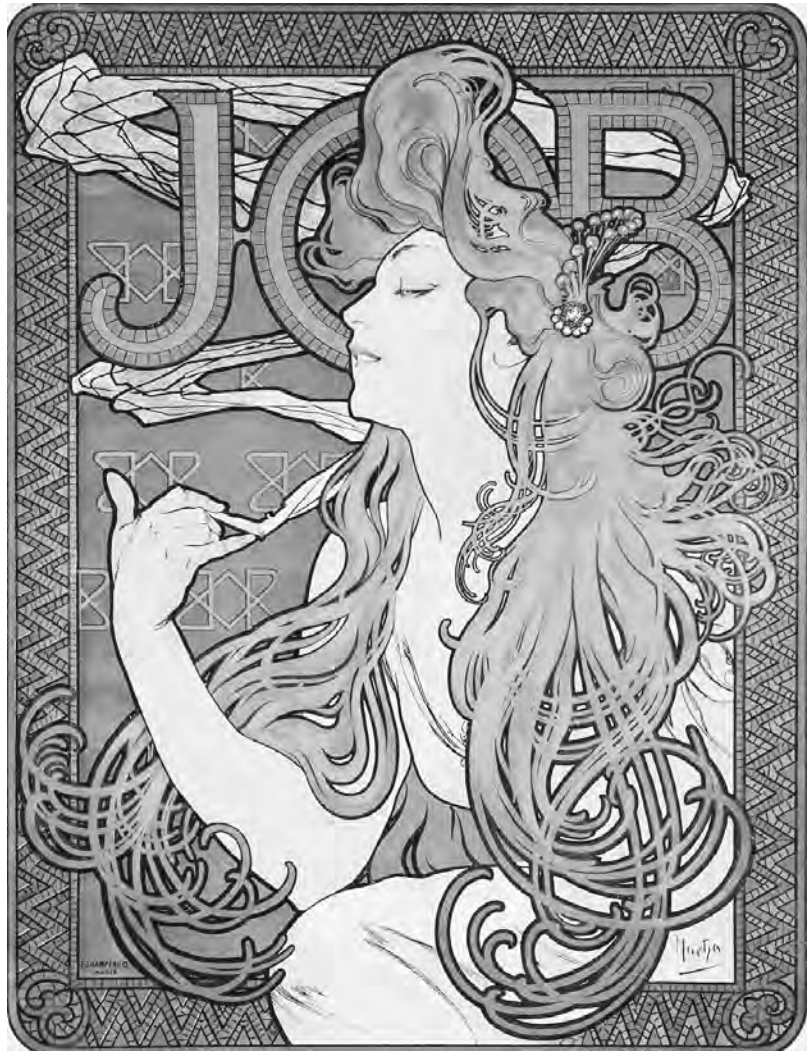


rococo an artistic and architectural style of the eighteenth century (1700s) characterized by elaborate ornamentation.

Art Nouveau the leading ornamental style from the 1890s through World War I. Art Nouveau employs idealized human figures together with natural elements like vines, acorns, and palms. Art Nouveau advertising copy and packaging was very popular with tobacco products, especially cigars.

Art Deco the most fashionable style of design in the 1920s and 1930s. Art Deco is usually characterized by geometric lines and shapes. Smoking tobacco tins, cigarette packages of this period were often rendered in the Art Deco style.

Decorative tendrils of hair swirl about the shoulders of a woman as she smokes a Job cigarette and slips into reverie. This 1896 Art Nouveau-style poster was created by Alphonse Mucha. © HISTORICAL PICTURE ARCHIVE/CORBIS



1896 Job cigarette poster swoons in a cigarette-induced orgasm, yet the cigarette does not touch her lips.

Antismoking campaigns, connected with temperance movements, railed against women smokers. The physician J. H. Cohausen argued that “Freedom in smoking and drinking goes with freedom in morals.” Yet increasing numbers of women who wanted greater political and social privileges took on the male habit of smoking. The French novelist George Sand (the male pseudonym of Armandine Aurore Lucille Dupin) was known as a notorious smoker, and British actress Lily Langtry, perhaps the first actress to be photographed smoking, insisted on being included in after-dinner smoking parties, where men traded ribald stories over their cigars.

The British novelist Ouida also demanded to stay in the dining room when men lit up, pronouncing: “Smoke and drink as if you were at the club; talk as if you were in the smoking-room there.” The heroine of Ouida’s 1867 novel *Under Two Flags* is nicknamed Cigarette because she smokes, takes lovers, and is as brave as any of her foreign legion comrades.

In the 1890s Frances Benjamin Johnston, the first commercially successful American woman photographer, created a witty bohemian self-portrait in which she holds a cigarette in one hand, a beer stein in the other, and displays her petticoats. Her faint smile suggests that she enjoys flaunting social norms. These nineteenth-century female celebrities added an aura of glamour to smoking by women, thus foreshadowing the twentieth-century Virginia Slims ad campaigns.

Impressionism and Pleasure

The French painter Renoir was one of several impressionist artists who celebrated the pleasures of the senses. In his *Luncheon of the Boating Party* amorous, healthy-looking men and women communicate the joy of being alive. The man closest to the viewer is smoking a cigarette. Such art had a tremendous impact throughout Europe and America.

The lives of artists and writers struck many who lived through the industrial revolution as last bastions of freedom. In the vast majority of nineteenth-century magazine illustrations of artists at work, they are smoking cigarettes. Smoking as an aid to inspiration and as a sign of a glamorous, liberated lifestyle soon became set in the public mind. In the nineteenth-century English novelist Oscar Wilde's *The Picture of Dorian Gray* (1891) the protagonist Dorian Gray claims "A cigarette is the perfect type of a perfect pleasure. It is exquisite, and it leaves one unsatisfied."

Exoticism

During the 1880s, thousands of small cigar factories began to use labels to attract buyers. Cigar box labels, illustrated insert cards, and posters were often collected in albums for entertainment prior to radio and television. Such art was designed mainly for white manufacturers by white male artists for a white male audience.

Frequently, exotic women from countries associated with tobacco production were featured on these labels, and their images often implied that they were offering themselves along with the smoke. At this time it was a cliché for a man to speak of his cigarette or cigar as his lover. The English author Rudyard Kipling referred to his beloved Cuban cigars as "a harem of dusky beauties tied fifty in a string." The exotic woman expressed a sensuality that became identified with smoking products, which are held in the mouth to kiss and suck.

The women featured were most often Turkish, Spanish (including Cuban and Gypsy), Native American, or African. Of these, only the African woman is not usually shown as glamorous. A Turkish woman, calling to mind Scheherazade of *Thousand and One Nights*, typically lounged within a harem and had a nearby hookah to smoke. She appeared as a pleasure commodity to be bought and sold to satisfy male appetites, as were cigars.

Native American women were often shown offering tobacco leaves to European explorers or settlers, supporting the popular notion that uncivilized people were to provide raw materials to civilized ones. Native American women were also idealized as being in harmony with nature and were seldom shown in overtly sexual roles.



Spanish women could be *femmes fatales* reminiscent of the literary protagonist Carmen, who in Prosper Mérimée's 1845 novel worked in a cigarette factory and took pleasure in the masculine practices of sex and smoking. When Georges Bizet's opera of the same name opened in Paris in 1875, the audience was shocked to see cigarette girls smoking on stage as a male chorus sang "Look at them! Bold looks, flirting ways."

In contrast, blacks in nineteenth-century tobacco illustrations are typically shown as figures for ridicule, or as distant field workers overseen by a white plantation owner. Harem women, with whom the average European or American male had no contact, encouraged sexual fantasies, but Black women, who frequently had given birth to children sired by their white masters, did not.

Twentieth-Century Images of Glamour and Smoking

Cultivating brand loyalty became a key goal of twentieth-century advertising. Ad agencies developed more sophisticated ways to stimulate desire, drawing upon psychology and consumer surveys. Such agencies were particularly drawn to the movies and organized sports, whose stars were idolized by the public.

WARTIME ADVERTISING. During World War I and World War II tobacco ads featured the glamour of extreme experiences—foreign travel, heroism, and intense camaraderie. War's aura of glamour came largely from media-constructed images rather than from war's grim realities. In 1918 the U.S. War Department purchased the entire output of Bull Durham tobacco, and the company advertised, "When our boys light up, the Huns will light out." In a Camel ad of the 1930s, a middle-aged man smokes while watching his wife gift wrap cigarettes for their overseas soldier son and comments, "Like you sent 'em to me—remember?" The ad continues: "He recalls the times when he received the same gift from his wife. Camel. Yes, they were first with men in the army then—and they are today. Not only in the Army but in the Navy, the Marines, the Coast Guard . . . with the millions who stand behind them . . . for Camel is America's favorite."

THE MOVIES. During the 1920s and into the Depression years, Americans flocked to films that depicted glamorous lifestyles. They purchased magazines that depicted the extravagant homes of favorite actors and actresses. Within films, the glamour of smoking was enhanced by gorgeous costumes and settings. When the American actress Marlene Dietrich toyed with a cigarette set in a long holder she communicated emotions that ranged from boredom to passion.

The Motion Picture Production Code of 1930—which prohibited, among other things, "excessive and lustful kissing, lustful embraces, suggestive postures and gestures"—unwittingly encouraged greater use of smoking in movies. Directors found in smoking powerful ways to imply sexual intimacy. As Paul Henreid lights Bette Davis's cigarette in the 1942 film *Now, Voyager*, their hands touch, and their glances are



In the 1947 film *Out of the Past* Jane Greer lights Robert Mitchum's cigarette. Greer's usage of cigarettes contributed to the seductive and sinister spirit of her film noir character. © THE KOBAL COLLECTION

full of desire. To step up the heat, Henried lights Davis's cigarette from the smoldering one he holds between his lips.

Smoking within the dark, film noir movies of the 1940s and 1950s might involve a startling burst of flame from a match and the snaking of smoke through a cellar. Gangsters, femme fatales, and private eyes all smoked in these films that linked smoking with the danger and glamour of living life on the edge.

Tobacco and Health

During the 1950s, as research established links between smoking and disease, tobacco ads featured health-oriented testimonials from celebrities. The film star Linda Darnel is featured in one such ad where she is shown smoking in a mirrored, neorococo dressing room and wearing a strapless red evening dress and diamond jewelry. When asked why she changed to Camels, she responds: "I found they got along wonderfully with my throat. I especially appreciate Camel mildness when I'm making a picture."

In 1955 Philip Morris introduced the cowboy figure of the Marlboro Man in their ads in an effort to counteract the effeminate stigma attached to filtered cigarettes. ♦ Cowboy life in films and ads was glamorized as heroic and individualistic, a popular fantasy at a time when most men worked in urban environments or for large corporations. The campaign made Marlboro the top-selling filtered cigarette in the United States .

While sports heroes have played a role in the marketing of tobacco since the early twentieth century when they appeared on tobacco trading cards, with the proliferation of mass media—newspapers, magazines, radio, movies, and television—their influence became more appealing to

♦ See "Marlboro" for a photograph of Philip Morris advertisements featuring early versions of the rugged cattleman.

cigarette manufacturers. In 1968 Philip Morris introduced its Virginia Slims cigarettes to America, and two years later the brand began sponsoring a women's tennis tournament. The tennis champion Billie Jean King, in 1973, wearing Virginia Slims colors, defeated Bobby Riggs in a highly publicized match, thus associating smoking with the glamour of victory.

The Cigarette Labeling and Advertising Act

In response to the 1964 U.S. surgeon general's *Report on Smoking and Health*, the following year Congress passed the Cigarette Labeling and Advertising Act, which called for a nationwide ban on tobacco advertising on radio and television. It also required the printing of the statement "Caution: Cigarette Smoking May Be Hazardous to Your Health" on all cigarette packages and in advertising.

The act encouraged groups and individuals to attack the aura of glamour that had been constructed around smoking. Some of the most effective efforts were made by celebrities who had smoked on television, such as Edward R. Murrow and William Talman, the prosecuting attorney in the *Perry Mason* series. Both made antismoking pleas, which were especially poignant after their deaths from lung cancer.

In 1992 Marlboro shareholders received a visit from Wayne McLaren, who had modeled as their Marlboro Man, at their annual meeting. He told them he was dying of cancer and asked the company to voluntarily limit its advertising. The corporation, then boasting a market worth \$32 billion, did not cooperate. McLaren's plea, however, ran in major newspapers. In 1976 a television program titled "Death in the West—the Marlboro Story," created for Britain's Thames Television by Peter Taylor and Martin Smith, interspersed Marlboro ads with interviews with cowboy smokers stricken with lung cancer. Legal problems in Britain led to suspension of initial showings, but in 1982 the film played nationwide in the United States.

Recent Developments

Now that public consciousness has been impressed with the dangers of smoking and the manipulations of tobacco companies, some television and film writers have used smoking to identify the bad guys in their works. In *The X-Files* (1993–2002), a popular television series that investigated paranormal phenomena, the protagonists Fox Mulder and Dana Scully were nonsmokers, but the truly sinister characters in the program—particularly the mysterious character called simply "Cigarette Smoking Man"—were chain smokers.

Writers have also used smoking to establish a character's willingness to take risks. In the 1999 film *Fight Club* the actor Brad Pitt plays Tyler Durden, a character invented, unknowingly, by Jack (played by Edward Norton) to act out Jack's suppressed desires. Jack does not smoke and works in an office where smoking is prohibited. His alter ego, Tyler, does smoke. While smoking, Tyler tells Jack, "I'm free in all the ways you want to be." Tyler organizes increasingly vicious fights among young men and gradually lures Jack into becoming both a smoker and fighter. The actress Helena Bonham Carter, who in the film

"Tobacco"

Tobacco is a dirty weed. I
like it.
It satisfies no normal need. I
like it.
It makes you thin, it makes
you lean,
It takes the hair right off
your bean.
It's the worst darn stuff I've
ever seen.
I like it.

■ GRAHAM LEE HEMMINGER
(PENN STATE FROTH, 1915)

plays Marla, a woman desired by both sides of this split personality, smokes constantly. As she exhales, smoke pours from her open mouth, as if from an internal furnace.

Tobacco companies have developed ways to bypass the Cigarette Act. For example, producers of the film *License to Kill* accepted a \$350,000 payment to have James Bond smoke Larks on camera, and the movie stars and role models Arnold Schwarzenegger, Bruce Willis, Demi Moore, and Pierce Brosnan have all appeared on the cover of *Cigar Aficionado* magazine. The cigarette manufacturer Freedom Tobacco International, in introducing its cigarette brand Legal, paid actresses to smoke the brand in Manhattan bars and nightclubs in the spring of 2003 to promote the brand. With so much money at stake, it seems likely that tobacco companies will continue to invent ways to make smoking appear glamorous.

See Also Advertising; Advertising Restrictions; Antismoking Movement From 1950; Arents Collection; Camel; Film; Intellectuals; Literature; Marlboro; Music, Classical; Music, Popular; Social and Cultural Uses; Virginia Slims.

■ DOLORES MITCHELL

BIBLIOGRAPHY

- Apperson, G. L. *The Social History of Smoking*. London: M. Secker, 1914.
- Arents, George, Jr. *Tobacco: Its History Illustrated by the Books, Manuscripts, and Engravings in the Library of George Arents Jr.*, 5 vols. Edited by Jerome E. Brooks. New York: Rosenbach Co., 1937–1952.
- Kluger, Richard. *Ashes to Ashes: America's Hundred-Year Cigarette War, the Public Health, and the Unabashed Triumph of Philip Morris*. New York: Alfred A. Knopf, 1996.
- Pearlstone, Zena. "Native American Images in Advertising." *American Indian Art* 20, no. 3 (summer 1995): 36–43 .



Warning Labels

Studies have provided evidence that warning labels on packages and in advertising of tobacco products, particularly if graphic and highly visible, can reduce smoking. Over time, these labels have become more direct and explicit in their warnings and larger in size in an attempt to discourage smoking.

United States

The practice of placing warning labels on tobacco products in the United States was initiated in 1965 as an outcome of the landmark 1964 report *Smoking and Health: Report of the Advisory Committee to the Surgeon General of the Public Health Service* (see sidebar). Although the report provided evidence of the negative effects of smoking on health, it did not make any specific policy recommendations. Within a week after its release, however, the Federal Trade Commission (FTC) proposed that a health warning be placed on cigarette packages and in advertisements.

Convinced that it would fare better in Congress than with the FTC because of the help of prominent tobacco-friendly members of Congress, the tobacco industry encouraged legislative action, and in 1965 the Cigarette Labeling and Advertising Act (PL 89-92) was passed. This law required a health warning on cigarette packages, but suspended the FTC's proposed warnings in advertising. It also prohibited other federal agencies from requiring health warnings in advertising and prohibited state and local governments from enacting requirements for more stringent regulation. Because of these latter provisions, the bill was viewed by critics such as Senator Frank Moss (D-Utah), Federal Trade Commissioner Philip Elman, and the *New York Times* as a protection for the industry.

Beginning in 1966, cigarette packages were required to carry a label that read "Caution: Cigarette smoking may be hazardous to your health." The cautious wording of this statement was replaced in 1970 as the result of the passage of the 1969 Public Health Cigarette Smoking

Dr. Luther L. Terry

After President John F. Kennedy appointed him surgeon general in 1961, Dr. Luther L. Terry spearheaded the first surgeon general's report on smoking and health, which conclusively linked smoking to lung cancer and chronic bronchitis. Terry ensured that the report received substantial media attention by organizing a press conference to announce his committee's highly anticipated findings on 11 January 1964. The report also prompted Congress to take action by passing the *Cigarette Labeling and Advertising Act of 1965*, which mandated the first surgeon general's warning on cigarette packages. Despite stepping down as surgeon general in 1965, Terry maintained a strong crusade against the tobacco industry until his death in 1985. He successfully lobbied for the 1971 end to radio and television cigarette advertising, and later helped lead the way to ban cigarettes from the workplace. The American Cancer Society recognizes individuals worldwide for exemplary work in tobacco control and prevention through their Luther L. Terry Awards.

■ DONALD LOWE

Act (PL 91–222), which changed the label to the stronger “Warning: The Surgeon General has determined that cigarette smoking is dangerous to your health.” That legislation also banned all television advertising of cigarettes as of 1971 and empowered the FTC to consider the inclusion of warning labels in all other forms of advertising within six months after the broadcast ban went into effect.

Preferring health warnings that were vague, the tobacco industry had defeated an effort to add a reference to lung cancer and other diseases in the labels mandated by the Public Health Cigarette Smoking Act. The industry was not as successful on this issue in 1984, however, when new legislation required that cigarette packages carry four rotating messages (all of which were expressed as Surgeon General's warnings) that were to appear in type that was 50 percent larger than before. One of the rotating messages specifically stated that smoking causes lung cancer, heart disease, and emphysema. The other warnings stressed that smoking could have negative effects on a fetus, that cigarette smoke contains carbon monoxide, and that quitting smoking greatly reduces serious health threats. The industry succeeded in blocking efforts to include any reference to addiction to tobacco in the proposed rotating labels. The 1984 legislation also extended the reach of the warning labels to most forms of cigarette advertising.

Under the Comprehensive Smokeless Tobacco Health Education Act (PL 99–252) of 1986, the FTC required that warning labels also appear on all packaging and in all advertising for smokeless tobacco products. This act also banned broadcast advertising of smokeless tobacco products. Although the advertising of cigars and little cigar products was banned from radio and television by amendments in 1971 and 1973 to the Cigarette Labeling and Advertising Act, no warning labels were required under these amendments. In 2000, however, the Federal Trade Commission reached a settlement with seven of the largest American cigar companies requiring health warnings on cigar products and in various types of advertising for these products.

In the 2000s, many tobacco critics are not convinced that the warning labels on cigarettes are effective in the effort to reduce the number of smokers. They want larger and more graphic warnings with pictures that will readily attract the attention of smokers. Several bills to make warning labels more prominent have been introduced into Congress since 2000.

Other Countries

The practice of placing warning labels on tobacco products was adopted by numerous countries from the 1970s to the 1990s. Health warnings were introduced on cigarette packages, for example, in the United Kingdom in 1971 (at first voluntarily by tobacco companies, but later mandated by law), in Australia in 1972, in Thailand in 1974, and in Singapore in 1980. By 1991, 77 countries required such warnings, although in most cases the warnings were not very strong. In Japan, for instance, cigarette packages from the late 1980s until 2003 carried only the vague warning, “Since smoking might injure your health, let's be careful not to smoke too much.” In some developing countries, either no warnings or only rudimentary health warnings were required, and American tobacco companies were criticized by



In the United States, early warning labels in the 1960s carried the mandatory warning label, "Caution: Cigarette smoking may be hazardous to your health." By 2002, warning labels in the United States and other countries were larger in size, were more explicit in their message, and sometimes included graphic images.
© AP/WIDE WORLD PHOTOS

groups such as Public Citizen and the Center for Communications, Health, and the Environment for meeting only the minimum local requirements on cigarette packages sold in these nations rather than including the stronger warnings required on cigarettes sold in the United States.

During the 1990s, a number of countries strengthened the warnings on tobacco products so that the United States was no longer the leader in this field. The 2000 Surgeon General's report *Reducing Tobacco Use* concluded that by the time the report was compiled American practices in this area were less restrictive than those of several other countries. The toughest warning labels were mandated in Canada. By 2001, all cigarette packages in that country were required to carry strong rotating warning labels (such as, "Cigarettes are highly addictive") accompanied by images, which in some cases were highly graphic (for example, an image of a human heart with clogged arteries).

In 2001, the European Parliament adopted stringent regulations concerning warning labels for member countries of the European Union. The size of the warnings was increased from a minimum of 4 percent to at least 30 percent of the front and 40 percent of the back surfaces of cigarette packages. The required warning statements were blunt, such as "Smoking kills." Smokeless and oral tobacco products were also required to display stronger and more visible warnings. The European Union Commission later developed guidelines to allow member states to add graphic images to tobacco packaging.

The effort to promote stronger warning labels was extended to a global level with the unanimous passage of the Framework Convention on Tobacco Control by the 192 nations of the World Health Organization in 2003. Along with a variety of provisions, this treaty obliges nations that sign it to adopt and implement large, clear, visible, and rotating



These cigar boxes from California contain warnings of the health hazards associated with the chemicals they contain.
 PHOTOGRAPH BY ROBERT J. HUFFMAN.
 FIELD MARK PUBLICATIONS

health warnings that occupy at least 30 percent of the display area on a tobacco product package. The United States delegation was the last to accept the treaty. As of 2004, the treaty has not been signed by the president or ratified by Congress. Some observers believe that tobacco companies in the United States and other nations will lobby heavily against the signing of the treaty.

See Also Cigarettes; Disease and Mortality; Regulation of Tobacco Products in the United States

■ JOHN PARASCANDOLA

BIBLIOGRAPHY

Action on Smoking and Health. Available: <<http://www.ash.org.uk/html/regulation/html/warnings.html>>.

Centers for Disease Control and Prevention. Available: <http://www.cdc.gov/tobacco/sgr/sgr_2000/factsheets/factsheet_labels.htm>.

Jha, Prabhat, and Frank Chaloupka. *Curbing the Epidemic: Governments and the Economics of Tobacco Control*. Washington, D.C.: World Bank, 1999.

Kluger, Richard. *Ashes to Ashes: America's Hundred-Year Cigarette War, the Public Health, and the Unabashed Triumph of Philip Morris*. New York: Vintage Books, 1997.

U.S. Department of Health and Human Services. *Reducing Tobacco Use: A Report of the Surgeon General*. Washington, D.C.: U.S. Department of Health and Human Services, 2000.

Water Pipes See Pipes.



Women

The history of tobacco consumption is gendered and enmeshed in sexual politics. Cultural rules about who can use tobacco, in what form, and in what contexts, have often been related to ideas about masculinity, femininity, and appropriate gender relations. Cigarette smoking in particular has, since the late 1800s, often been used and interpreted as a symbol of women's emancipation. However, from the 1970s, amidst growing fears about the health risks of tobacco use, the global expansion of girls' and women's smoking has been widely viewed as a response to persistent gender inequalities.

Gendered Tobacco Consumption in Europe and North America

In preindustrial Europe and North America, there is no evidence of any proscription of tobacco use by gender; in fact, tobacco was regarded by some Europeans as beneficial for pregnant women. Where tobacco was used by men, it was also used by women. Women from all classes smoked in seventeenth- and eighteenth-century Britain, but it was not common except among "humbler" folk in areas such as Cornwall and the west of England (Apperson 1914). **Snuff**-taking was, however, a luxury enjoyed by women in the upper echelons of eighteenth-century England. Snuff was also popular among the French, including the "noblest ladies" of the French Court and the middle-class women who "imitated them" (Schivelbusch 1992). Dutch and French paintings also suggest that elegant women smoked clay pipes at this time (Goodman 1994). In colonial America it was also not unusual for women to smoke pipes, or to take snuff. In 1686 a French traveler in the English-American colonies noted that women smoked everywhere, including church. Although women were not prevented from smoking there is some evidence of gender-specific restrictions. For example, in colonial America it was acceptable for women to smoke in their homes or on their doorsteps but not in taverns, particularly in the company of strangers. In seventeenth-century London, pipe smoking in public was not considered appropriate for all women: "gentlewomen . . . and virtuous women accustom themselves to take it [tobacco] as medicine, but in secret" (Goodman).

The onset of industrialization in the late eighteenth and nineteenth centuries had far-reaching implications for gender identities and gender relations. Industrialization resulted in a shift of production from the



snuff a form of powdered tobacco, usually flavored, either sniffed into the nose or "dipped," packed between cheek and gum. Snuff was popular in the eighteenth century but had faded to obscurity by the twentieth century.

Actress Helena Bonham Carter (right) lights a cigarette in her role as the independent-minded Kate Croy in the 1997 film *The Wings of the Dove*. The film, based on the novel by author Henry James, takes place in the early 1900s. PHOTOGRAPH BY MARK TILLIE. THE KOBAL COLLECTION



home to the workplace, the establishment of “separate spheres” for men and women, and a pronounced sexual division of labor. These arrangements were buttressed by an ideology of sexual difference whereby women were constructed as guardians of morality, the home, and the family. The pronounced gender structuring of industrializing societies, and the distinctive meanings attached to being male and female, were accompanied by shifts in the gender dimensions of tobacco consumption. Smoking became firmly associated with men and masculinities; respectable women did not smoke, and respectable men did not smoke in the presence of women. Smoking was seen as “unwomanly” as it endangered female reproductive health and was inconsistent with women’s roles as mothers and guardians of morality. Concerns about women’s smoking were fuelled by assumptions about the greater vulnerability of women than men to both the health risks of smoking and the lure of cigarettes.

Despite these common ideas about smoking, some women continued to smoke but they were usually placed outside the boundaries of respectable womanhood. In Britain, old working-class women sometimes smoked clay pipes; smoking was also common among Irish women street traders in London and women laborers in Northumberland and the Scottish border. In the United States, poor European immigrants smoked cigarettes. While poor women smoked principally for the pleasures it afforded, some radical upper-class women deliberately used tobacco to make a statement. When George Sands, the bisexual French writer, smoked in public and the American “femme fatale” Lola Montez posed in 1851 for a photograph with a cigarette in her gloved hand, both flaunted conventions of “respectable” womanhood.

Although “respectable ladies” did not smoke in the nineteenth century, tobacco use was often linked, at a symbolic level, to male ownership and/or control of women’s bodies. Tobacco has long been personified as a woman and in the nineteenth century it was a cliché for a man to refer to cigars or cigarettes as lovers or mistresses. Rudyard Kipling described his cigars as “a harem of dusky beauties.” This description



conveys the association between the color of tobacco and that of an “exotic” woman’s skin and the captivity of both the cigars and the woman, awaiting the “owner’s” needs (Mitchell 1992). These associations were visible in nineteenth-century pornography, commercial art, and high culture.

Seductive women were central to the marketing of tobacco products to men. “Exotic” women—Turkish, Spanish, Gypsy, Native American, and African—were commonly used to decorate American tobacco cartons. Labels depicting seductive gypsy women were designed to appeal to “the buyer who wanted an aura of danger along with his smoke—these were fiery women who only the most virile of males might dare to take on” (Mitchell). The sexual associations of smoking were enhanced by the use of **cigarette cards** which featured photos of scantily clad actresses and other beautiful women.

Links between smoking and sexuality were also established in opera, most notably *Carmen*, which was popular in Britain and the United States in the 1880s and 1890s. In *Carmen*, as the scholar Dolores Mitchell described, the cigarette factory is like a harem, as men cannot enter without a permit because of women’s state of undress, and the heroine is a temptress who enslaves her lovers. The English novelist Ouida’s *Under Two Flags* (1867), and the female character “Cigarette,” similarly aligned smoking with female sexuality.

Two sailors from HMS Fury share a smoke with two women while they are ashore, UK, 1935. © HULTON-DEUTSCH COLLECTION/CORBIS



cigarette cards paper trading cards sometimes featuring sports personalities or movie stars packaged with cigarettes and offered as an incentive for purchase.

Cigarettes and the “Emancipation” of Western Women, Pre-1950

Smoking was principally a male pursuit in industrializing countries at the end of the nineteenth century even though it was increasingly popular among women from the upper and professional middle classes in urban centers of North America, Australia, and Europe. The growth of smoking among women was facilitated by the emergence, and accessibility, of manufactured cigarettes from the 1880s. Also, the availability of mild tobacco blends made cigarettes more palatable. However, wide-reaching social and economic changes in the position of women and in their expectations were the main reasons why women increasingly wanted to, and could, smoke. Upper-middle- and upper-class women used smoking as a visual statement of rebellion against the prevailing domestic ideal and as a critique of gender relations that positioned women as unequal, and subordinate, to men. Cigarette smoking symbolized a woman’s emancipation and her claim to privileges previously the preserve of men. One alarmist German newspaper in the 1840s referred to “miniature George Sands” smoking cigars in the streets of Berlin as a sign of their emancipation; caricatures of women smoking in public also appeared in the French press of the 1840s (Schivelbusch). In Britain, from the 1880s, cigarettes were advertised in the suffrage press, and some women’s clubs provided smoking rooms for their members.

World War I played a significant role in further shifting gender patterns of tobacco use in Western countries due to the disruption it caused to the public/private distinction and conventional notions of femininity and gender relations. The war introduced women to employment previously deemed as men’s work and demonstrated their competence in these areas; fostered women’s confidence and spurred a demand for equality and a rejection of prewar gender conventions; increased women’s disposable income; and fostered rebellion against bourgeois values and the embrace of a modern world order. In the United States, the war de-stigmatized cigarette smoking for both sexes and aligned it with patriotism. More widely, the war increased women’s exposure to tobacco as they collected cigarettes to send to soldiers or, in the course of nursing, lighted cigarettes for the wounded. For women on the home front as well as on the military one, smoking served also as a symbol of their newfound status.

In the 1920s cigarettes were smoked by progressive and professional women, but they were most visibly associated with young and affluent “modern girls” and “flappers.” Women’s smoking was, however, still a minority practice; in 1924, it constituted only 5 percent of national tobacco consumption in the United States and 1.9 percent in Britain. Although increasingly accepted, women’s smoking still attracted criticism. British, American, and Australian women smokers were often ridiculed by men on the grounds that they were unable to smoke properly. In Britain, and possibly elsewhere, women were also criticized when they smoked like men; the thin line between acceptable and nonacceptable smoking was drawn in relation to the perceived threat which smoking posed to gender and gender relations.

Attractive images of women smokers became increasingly visible during the interwar period, following the establishment of cigarette smoking among women of the higher social classes. Advertisements featuring women holding, or smoking, cigarettes began to appear in



June McCall, chosen “Miss Perfecto” by the California Cigar Retailers Association, displays a box of “stogies,” Los Angeles, 1950. She won the title, according to the cigar men, because in this costume she exhibits “quality wrapper, snug binder, and superb filler.” © BETTMANN/CORBIS

upper-class British and Australian magazines around the time of World War I and became a staple of middle-class women's magazines by 1930 in Britain, and a few years later in Australia. U.S. advertising was slower to target women directly because the tobacco industry was cautious not to attract the attention of the anticigarette lobby. Advertisements for Milo Violets targeted North American women in 1918, but advertisers of mass produced brands were more cautious in doing this. The first notable advertisement was in 1926 when a woman was depicted accepting a Chesterfield cigarette. This was followed in 1927 by an advertisement for Marlboro which portrayed a woman smoking. By World War II cigarette advertisements appeared in most middle-class North American women's magazines.

Scholars debate the significance of advertising as it relates to the growth of women's smoking in the early 1900s though it is widely accepted that the proliferation of images of women smokers did provide people with favorable ways of understanding this practice. Some commentators have argued that news coverage of early women smokers played a more important role than advertising in popularizing women's smoking. Film has also been identified by some as more significant. In American and British film, the woman smoker became commonplace by 1930 and heroines, more so than female villains, brandished cigarettes.

By 1939 cigarette smoking was established as a respectable feminine practice, at least among the upper and middle classes. However, smoking was not universally respectable. In Britain, smoking among working-class women continued to have strong associations with loose sexual behaviour; not surprisingly, "nice" working-class girls did not smoke (Tinkler 2003). The scholar Michael Koetzle noted that in Germany, and the West more generally, there remained an "ambivalence" about women smoking. A thin line existed between on the one hand, modern, fashionable, elegant smoking and, on the other hand, lasciviousness. Harping back to earlier sexual associations in the history of tobacco, sensuality continued to be part of the symbolic repertoire of cigarette smoking for women.

World War II served as a catalyst for a dramatic increase in women's smoking and by the late 1940s roughly one-third of British and U.S. women smoked cigarettes as did one-quarter of Australian women. Nevertheless, forms of tobacco consumption remained highly gendered throughout the twentieth century. Cigar and pipe smoking remained firmly masculine smoking practices in Britain and the United States. In Australia, where tailor-made cigarettes were not popular with men prior to the 1950s, pipes and roll-your-own cigarettes marked the gender boundaries of smoking before and after 1950. Some women did use "masculine" products, but they were invariably of low social status. Pipes and roll-your-own cigarettes were, for example, smoked by some Australian women, usually aboriginal women or "rough" white women (Tyrrell 1999). In interwar Britain, clay pipes and cigars were smoked by gender and sexual rebels, especially lesbians, for example the artist Gluck, the speed boat racer Joe Carstairs, and the novelist Radclyffe Hall; **briar** pipes and cigars were also commonly smoked by lesbians in the 1950s. While in the West the cigarette was unisex, the consumption of other forms of tobacco, such as cigars, pipes, and chewing tobacco, remained firmly masculine in association and continued to signify sexual difference.



briar a hardwood tree native to southern Europe. The bowls of fine pipes are carved from the burl, or roots, of briar trees.



bidis thin, hand-rolled cigarettes produced in India. Bidis are often flavored with strawberry or other fruits and are popular with teenagers.

Cigarette Smoking on a Global Scale, 1970–Present

Until the late twentieth century, high-income countries generally had higher rates of smoking among women than did low- and middle-income countries. A difference in the proportion of males and females that smoke is also more pronounced in low-income countries. Part of the explanation for this pattern lies in different cultural traditions that are sometimes, as in Islamic states, underpinned by religious proscription. Traditional forms of tobacco consumption are, however, still prevalent among women in mainly rural communities in parts of Asia, Africa, and the Middle East. In India, for example, some women smoke **bidis**, chew pan (tobacco mixed with betel nut and lime), or smoke reverse-chutta (the lit end of a long cigar that is inserted into the mouth and puffed on).

Urbanization and shifts in the position of women after World War II have usually been accompanied by dramatic increases in women's cigarette smoking. In Europe socioeconomic and political changes have been aligned with increases in women's smoking. After the fall of the Generalissimo Franco regime in Spain, the proportion of women smoking increased from 17 percent in 1978 to 27 percent in 1997. In former socialist countries there were also notable changes. In Lithuania the proportion of women smoking doubled over a five-year period in the 1990s. In former East Germany between 1993 and 1997, rates of smoking among twelve- to twenty-five-year-old women rose from 27 percent to 47 percent. Increased tobacco consumption by young women has also been noted among the more developed countries in the West Pacific region. Commentators frequently refer to an "epidemic" of smoking in which women and young people are increasingly implicated.

In general, proportionally more men than women smoke. However, in high-income countries in the 1980s the proportion of women smoking began to converge with that of men. One example illustrates this trend. In Britain in 1948, twice as many men as women smoked (including cigars and pipes as well as cigarettes), and one and a half times as many men as women smoked cigarettes. By 1990, 38 percent of men and 31 percent of British women smoked, and 31 percent of men and 29 percent of women smoked cigarettes. At an international level, the convergence of male and female levels of smoking has been attributed to two key processes. First, levels of smoking in many "developed" countries decreased more quickly among men than women. In the "rich world" in the early 1980s, the proportion of men who smoked was falling in 19 out of 22 countries while the proportion of women who smoked was rising or stable in 11 of them. Second, among young smokers the gender balance was often reversing. Whereas before 1980 more boys than girls smoked, by the 1980s girls were often more likely to be smokers than their male peers. Young women in their teens and early twenties emerged as a fast growing group of smokers. Among Spanish fourteen- to eighteen-year-olds in 2000, 25 percent of males smoked compared to nearly 36 percent of females, and among fifteen-year-olds in Britain in 2003, 19 percent of boys smoked compared to 25 percent of girls.

In the context of well-publicized health risks of smoking in many Western countries, cigarettes were increasingly perceived as "ladykillers" rather than as "torches of freedom"; smoking was now a feminist issue.

The questions addressed were twofold: Why did women smoke when faced with information about the health risks of smoking, and why was smoking more attractive to girls than boys?

Explanations are not straightforward. A common theme was the importance of smoking for girls and women as a means of coping with the material and cultural constraints and pressures that arose from gender inequalities. Gender inequalities are manifest in a range of historically shifting forms and, for some women, this type of inequality was cross-cut by other forms of disadvantages that correlated usually with high rates of smoking such as a low social class and, in some countries, ethnic minority status. Managing a combination of paid work and childcare responsibilities featured as a specifically gendered characteristic of German women smokers in the late 1970s. In Britain, smoking emerged as a coping mechanism “when life’s a drag” for white working-class women, particularly those with childcare responsibilities living in disadvantaged circumstances (Graham 1993). Similarly, for Australian and Canadian women the cigarette was an aid to coping with gender-specific feelings and experiences. Another explanation offered for the increased number of female smokers has been the tobacco industry’s deftness in targeting women.

Targeting Women

Cigarettes were usually targeted at a mass market until the 1960s, although there were some experiments with specifically feminine cigarettes in Europe and North America before this. Rose Tips and Milo Violets were among the brands sold to North American women before World War I. Similarly in Britain there were a range of ladies’ cigarettes including ones that were perfumed to order with tips covered in silver paper. In the interwar years these cigarettes were eclipsed by mass-produced brands. Specifically female cigarettes were tried unsuccessfully, for example, Fems in the United States. Producers also experimented with feminized versions of mainstream brands such as red-tipped cigarettes. As an advertisement for Minors Red Tips in a 1937 issue of *Woman* magazine explained, red tips are “the brilliant notion that prevents lipstick from showing on a cigarette, and helps men to preserve their beautiful illusions . . . Red tips for Red lips” (Tinkler 2001a).

It was not until 1968 that a specifically feminine cigarette was successful. Virginia Slims, launched by Philip Morris, was the eleventh best-selling cigarette in the U.S. in 1983 and quickly became established internationally. Other “female brands” followed include Kim, Capri, and, in Brazil, Charm cigarettes, which were Brazil’s twelfth best-selling brand in 1983. Since the 1970s other brands have also been targeted primarily at women, and filter tips, along with low-**tar** and low-nicotine cigarettes, have been marketed as having feminine appeal.

Gender-specific marketing strategies have been central to targeting women as cigarette smokers. As early as 1929, debutantes brandishing lit cigarettes—their “torches of freedom”—were paraded through New York in an effort by one tobacco company to shift the taboos against women smoking in the streets and to thereby increase the number of cigarettes women could smoke. Women’s magazines have also been enlisted to promote smoking to women through advertising.



tar a residue of tobacco smoke, composed of many chemical substances that are collectively known by this term.



Gender themes have a high profile in cigarette advertising. Smoking was aligned with weight loss in the promotion of Lucky Strike cigarettes in the United States in 1928, “Reach for a Lucky instead of a sweet.” In the 1960s, with the launch of Virginia Slims, this angle was again brought to prominence with the declaration, “Fat smoke is history” (Greaves 1996). More generally, cigarettes have been associated with heterosexual attractiveness, romance, and glamour.

The association of women’s smoking with emancipation and modernity is a particular common theme and one that has been surprisingly resilient and adaptable to a wide range of cultural contexts since the early twentieth century. Following its first appearance in inter-war advertising, it reemerged in the context of the Women’s Liberation Movement of the 1960s and 1970s. Olivier advertisements, for example, declared to British women that “in a man’s world she smokes Olivier” (Tinkler 2001a). In the 1980s and 1990s, cigarettes have similarly been promoted as a sign of emancipation and also Western-style modernization in the former Eastern Germany and USSR, Japan, Hong Kong, China, and parts of Africa.

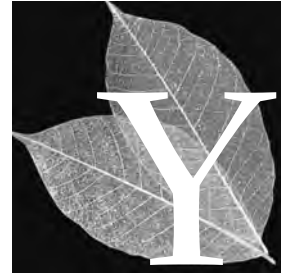
See Also Advertising; Age; Class.

■ PENNY TINKLER

BIBLIOGRAPHY

- Amos, Amanda, and Margaretha Haglund. “From Social Taboo to ‘Torch of Freedom’: The Marketing of Cigarettes to Women.” *Tobacco Control* 9 (2000): 3–8.
- Apperson, George L. *The Social History of Smoking*. London: Martin Secker, 1914.
- ASH Factsheet no.1. January 2004. Available: <<http://www.ash.uk/html/factsheets>>.
- Brandt, Allan M. “Recruiting Women Smokers: The Engineering of Consent.” *Journal of the American Women’s Association* 51, nos.1–2 (1996): 63–66.
- Dale, Edgar. *The Content of Motion Pictures*. New York: Macmillan, 1935.
- Ernster, Virginia L. “Mixed Messages for Women: A Social History of Cigarette Smoking and Advertising.” *New York State Journal of Medicine* (July 1985): 335–340.
- Goodman, Jordan. *Tobacco in History. The Cultures of Dependence*. London: Routledge, 1994.
- Graham, Hilary. *When Life’s a Drag: Women, Smoking and Disadvantage*. London: HMSO, 1993.
- Greaves, Lorraine. *Smoke Screen: Women’s Smoking and Social Control*. London: Scarlet Press, 1996.
- Hilton, Matthew. *Smoking in British Popular Culture 1800–2000: Perfect Pleasures*. Manchester, U.K.: Manchester University Press, 2000.
- Jacobson, Bobbie. *Beating the Ladykillers: Woman and Smoking*. London: Pluto, 1986.
- Jacobson, Bobbie, and Amanda Amos. *When Smoke Gets in Your Eyes*. London: British Medical Association Professional Division, Health Education Council, 1985.
- Koetzle, Michael. *Feu d’Amour: Seductive Smoke*. Koln: Benedikt Taschen, 1994.

- Mitchell, Dolores. "Images of Exotic Women in Turn-of-the-Century Tobacco Art." *Feminist Studies* 18, no. 2 (1992): 327–350.
- Schivelbusch, Wolfgang. *Tastes of Paradise: A Social History of Spices, Stimulants, and Intoxicants*. Translated by David Jacobson. New York: Pantheon Books, 1992.
- Schudson, Michael. *Advertising: The Uneasy Persuasion: Its Dubious Impact on American Society*. New York: Basic Books, 1985.
- Shafey, Omar et al., eds. "Tobacco Control Country Profiles 2003." Online. 2003. Available: <<http://www.globalink.org.tccp>>.
- Tate, Cassandra. *Cigarette Wars: The Triumph of "the Little White Slaver."* New York: Oxford University Press, 1999.
- Tinkler, Penny. "'Red Tips for Hot Lips': Advertising Cigarettes for Young Women in Britain, 1920–1970." *Women's History Review* 10 (2001a): 249–272.
- . "Rebellion, Modernity and Romance: Smoking As a Gendered Practice in Popular Young Women's Magazines, Britain 1918–1939." *Women's Studies International Forum* 24 (2001): 1–12.
- . "Refinement and Respectable Consumption: The Acceptable Face of Women's Smoking in Britain, 1918–1970." *Gender & History* 15, no. 2 (2003): 342–360.
- Tyrrell, Ian. *Deadly Enemies. Tobacco and Its Opponents in Australia*. Sydney: University of New South Wales Press, 1999.
- Wald, Nicholas et al., eds. *UK Smoking Statistics*. New York: Oxford University Press, 1988.
- Warsh, Cheryl K. "Smoke and Mirrors: Gender Representation in North American Tobacco and Alcohol Advertisements before 1950." *Social History* XXXI, no. 62 (1998): 183–222.



Youth Marketing

Publicly the tobacco companies have always maintained that their advertising does not target youth. However, beneath the layers of public relations rhetoric, one cannot escape the essential fact that cigarette makers are in business to make a profit, and their profits depend on their ability to recruit new smokers to replace those who quit or die annually. Surveys show that in the United States 60 percent of smokers start by age sixteen, and fully 90 percent begin their smoking careers by age twenty. Few smokers begin smoking after age twenty-five. Brand loyalties are usually established during the first few years of smoking, with relatively few smokers switching brands annually.

Get 'em While They're Young

Internal industry documents reveal a clear understanding that the financial success of companies and given cigarette brands historically have depended in large measure on the percentage of new, primarily teenage, smokers that could be captured annually. A 1984 report from R.J. Reynolds stated the importance of young smokers as follows:

Young adult smokers have been the critical factor in the growth and decline of every major brand and company over the last 50 years. They will continue to be important to brands/companies in the future for two simple reasons: 1) the renewal of the market stems almost entirely from 18-year-old smokers, no more than 5% of smokers start after age 24; and 2) the brand loyalty of the 18-year-old smokers far outweigh any tendency to switch with age

(BURROWS).

Industry documents show that each company carefully researched and knowingly implemented marketing strategies to appeal to a teenager's normal desires to experiment, relieve stress, enhance self-confidence, rebel against authority, and be accepted among peers. According to a 1969 draft report to the Philip Morris Board of Directors, "a cigarette for the

beginner is a symbolic act. I am no longer my mother’s child, I’m tough, I am an adventurer, I’m not square” (Wakeham).

Saturate the Airways

Cigarette companies have always been among the earliest to pick up on new trends and exploit them through the mass media. In the 1930s, they were among the major advertisers on the radio. The American Tobacco Company promoted its Lucky Strike brand through the sponsorship of many musical and comedy shows, including the *Jack Benny Show* and the *Lucky Strike Hit Parade*. R.J. Reynolds sponsored the *Camel Pleasure Hour*, *Camel Caravan* and the *All-Star Radio Review*, all shows that had a large following among young people. From 1930 to 1950, it was common for public figures to endorse cigarette brands. For example, a 1934 advertisement for Camel cigarettes proclaimed that twenty-one out of twenty-three of the World Series Champion St. Louis Cardinals smoked Camels.

In the 1950s, cigarette companies began to move their advertising dollars from radio to television. In 1950 the industry sponsored over seven hours of television per week, which increased to 125 hours by 1963. In 1963 cigarette companies sponsored fifty-five television programs. Many of these shows had a large percentage of young viewers, as evident from the percentages of viewers less than twenty-one years of age:

TV Show	Sponsor	Percent
<i>McHale’s Navy</i>	R.J. Reynolds	40
<i>The Beverly Hillbillies</i>	R.J. Reynolds	38
<i>The Jackie Gleason Show</i>	Philip Morris	38
<i>The Red Skelton Show</i>	Philip Morris	37
<i>Wide World of Sports</i>	Lorillard	38
<i>The Dick Van Dyke Show</i>	Lorillard	33
<i>The Outer Limits</i>	Liggett & Myers	46
<i>The Price Is Right</i>	Liggett & Myers	32
<i>Combat</i>	American Tobacco	46
<i>The Twilight Zone</i>	American Tobacco	30

(POLLAY).

Industry sponsorship of televised sports was also common. In 1963 R.J. Reynolds sponsored eight and American Tobacco sponsored six major league baseball teams. Philip Morris sponsored NFL games, and Brown & Williamson sponsored college football bowl games. In 1964



Camel Cigarette advertisement on a billboard, showing Joe Camel playing pool, a pack of Camel Lights prominently displayed in the foreground of the pool table. Launched in 1988 by R.J. Reynolds, the Joe Camel campaign met with immediate success, and controversy, in increasing sales in the 18–24 age group. When the campaign finally was phased out, sales fell dramatically. © JOEL W. ROGERS/CORBIS

Lorillard sponsored the Olympics and was a sponsor of the popular *Wide World of Sports* show on ABC. Overall, the switch to television helped transform cigarette advertising from words into pictures and information into images. Part of the tremendous success of Marlboro cigarettes has been attributed to the use of the cowboy image, which when it was first used in the 1960s, captured the youth market's desire for a symbol of independence and rebellion.

Sports, Movies, and MTV

A 1971 federal law prohibiting broadcast advertising of cigarettes merely caused cigarette makers to redirect their advertising to other media, including newspapers, magazines, billboards, and motion pictures, along with direct sponsorship of sporting and musical events. ♦ Cigarette makers quickly learned that sponsorship of sporting and cultural events could be more cost-effective than any thirty-second television spot had ever been, especially since the association with sporting events conveyed a healthy, youthful image. For example, a 1987 Philip Morris report discussed the value of sponsoring auto racing:

Marlboro 500 at Michigan International Speedway was highly successful in creating brand awareness and generating positive publicity. The PM Sales Force did an exceptional job in placing banners and P.O.S. [point of sale] material in the surrounding area, as well as conducting sampling activities at the track itself. The race was broadcast live on ABC-TV, and Marlboro signage was visible throughout the 4 hour telecast

(PHILIP MORRIS COMPANIES).

Industry documents also reveal a strategic interest in placing youth-oriented cigarette brands, promotions, and advertising in locations where young people congregate, like the movies. A 1979 Philip

♦ See "Sponsorship" for photographs of sporting and cultural events sponsored by tobacco companies.

Most popular cigarette brands with U.S. teenagers, 1953–2002

Year	Brand	Market share among teenage smokers*	Cigarette company
1953	Lucky Strike	33%	American Tobacco
	Camel	17%	R.J. Reynolds
	Pall Mall	12%	American Tobacco
1959	Winston	12%	R.J. Reynolds
	Kent	11%	Lorillard
	Pall Mall	10%	American Tobacco
1964	Winston	32%	R.J. Reynolds
	Marlboro	13%	Philip Morris
	Pall Mall	12%	American Tobacco
1974	Marlboro	39%	Philip Morris
	Kool	24%	Brown & Williamson
	Salem	10%	R.J. Reynolds
1983	Marlboro	58%	Philip Morris
	Newport	13%	Lorillard
	Salem	7%	R.J. Reynolds
1993	Marlboro	61%	Philip Morris
	Camel	13%	R.J. Reynolds
	Newport	13%	Lorillard
2002	Marlboro	50%	Philip Morris
	Newport	25%	Lorillard
	Camel	10%	R.J. Reynolds

*Data come from industry tracking studies and government reports

Morris document discusses the placement of the Marlboro brand name in the children’s movie *Superman II*, and a 1983 agreement between Associated Film Promotions and the actor Sylvester Stallone guarantees the usage of Brown & Williamson products in no less than five movies for a payment of \$500,000 (Ripslinger). Another Brown & Williamson memorandum from 1983 discusses the “Kool record continuity promotional concept,” suggesting that the program be tied-in with the RCA record club, which at the time offered records at a 50 percent discount. The memorandum explains that “smokers can order from a special Kool catalog and imagines that this will reach the Kool target audience, with the benefit of possible tie-ins such as MTV” (Hendricks).

A Philip Morris report from 1984 reviewing possible locations for the “Marlboro Spring Vacation Program” identifies places where young people congregate to offer free samples and brand promotions. The report describes ski resorts and ninety-eight different beach locations (Philip Morris Companies). In the 1990s, internal documents reveal that R.J. Reynolds sales representatives discussed ways to market its Joe Camel cigarette brand by identifying high-volume cigarette outlets in close proximity to colleges and high schools (McMahon). R.J. Reynolds launched Joe Camel in 1988. Between 1987 and 1992 Camel sales in the 18–24 age group rose more than 400% from 2.5% to 10.1% after being flat for the previous five years (R.J. Reynolds). In 1993, R.J. Reynolds commissioned a study to assess awareness of the Joe Camel character and slogan among children ages 10 to 17. The results of the survey revealed that, even though Joe Camel was not on TV, his total score of 86% awareness was not far behind the virtual 100%

awareness of the Energizer Bunny, Ronald McDonald, Tony the Tiger, and the Trix Rabbit (Roper Starch). Despite this alarming information, R.J.R. did not begin to phase out the Joe Camel advertising and promotional campaign until 1997. Almost immediately sales began to plummet.

The result of marketing to beginning smokers has been that they tend to smoke the cigarette brands that are among the most heavily advertised. Like other fads, the cigarette brands popular with teenagers have changed over time, and with these changes have ridden the fortunes of the cigarette makers (see table). Competition for the teenage smoker market remains keen even today as the lessons of the past clearly indicate that profitability and survival depend upon the concept “get’ em while they’re young.”

See Also Advertising; Ethnicity; Marketing; Women; Youth Tobacco Use.

■ K. MICHAEL CUMMINGS
 ■ ANTHONY BROWN
 ■ CRAIG STEGER

BIBLIOGRAPHY

- Burrows, D. “Younger Adult Smoker: Strategies and Opportunities.” 29 February 1984. R.J. Reynolds Tobacco Company. Bates Number: 501928462–501929550.
- Cummings, K. M., et al. “Marketing to America’s Youth: Evidence from Corporate Documents.” *Tobacco Control* 11 (1 March 2002): 5–17.
- Cummings, K. M., and A. Brown. “History of Youth Brands.” Roswell Park Cancer Institute. Available: <http://roswell.tobaccodocuments.org/media/youth_brand_chart_1950s-2000.pdf>.
- Hendricks, J. L. “KOOL Record Continuity.” 7 September 1983. Brown & Williamson Tobacco Corporation. Bates Number: 676026171–676026172.
- Lynch, Barbara S., and Richard J. Bonnie, eds. *Growing Up Tobacco Free: Preventing Nicotine Addiction in Children and Youths*. Washington, D.C.: National Academy Press, 1994.
- Philip Morris Companies, Inc. “840000 Marlboro Spring Resort Field Marketing Opportunities.” 1984. Philip Morris Companies, Inc. Bates Number: 2044390059–2044390073.
- Pollay, Richard W. “Promises, Promises: Self-Regulation of U.S. Cigarette Broadcast Advertising in the 1960s.” *Tobacco Control* 3, no. 2 (June 1994): 134–144.
- Pollay, Richard W., et al. “The Last Straw? Cigarette Advertising and Realized Market Shares among Youths and Adults, 1979–1993.” *Journal of Marketing* 60 (April 1996): 1–16.
- Ripslinger, J. F. Associated Film Promotions. [Re: Stallone Tobacco Use Agreement.] 14 June 1983. Brown & Williamson Tobacco Corporation. Bates Number: 685083120.
- R.J. Reynolds. Camel: Crisis-Vision. 1993. R.J. Reynolds Company. Bates Number: 521896268–521896289.
- Roper Starch. Advertising Character and Slogan Survey. November 1973. R.J. Reynolds Company. Bates Number: 517146060–517145108.
- Wakeham, H. “Smoker Psychology Research.” 26 November 1969. Philip Morris. Bates Number: 1000273741–1000273770.
- Zollo, Peter. *Wise Up to Teens: Insights into Marketing and Advertising to Teenagers*. Ithaca, N.Y.: New Strategist Publications, 1995.





Youth Tobacco Use

Research published in 2001 indicates that most smokers worldwide start young, before the age of eighteen. In the United States, for example, some 3,000 children and young people begin to smoke each day. Thus research and public health efforts since the 1970s have focused on why young people start to smoke and how smoking initiation can be prevented. While there have been healthy changes in the attitudes of youth and adults toward tobacco since the early twentieth century, some of the same concerns about youth smoking voiced at that time continue to persist into the twenty-first century.

Smoking and Empire

Smoking among children and young people only began to be seen as a social issue with the appearance of cheap, attractively packaged cigarettes in the 1880s. In the early 1900s, smoking among children and young people was interpreted against a background of fears about national fitness, physical deterioration, and urbanization. In Britain, observers had been concerned during the Boer War (1899–1902), between the British Army and the Boer farmers in South Africa, about the high numbers of military recruits rejected on medical grounds, and by the poor health of soldiers in South Africa. The issue of juvenile smoking therefore had a wide appeal: It was attractive to observers concerned about health and physical deterioration, about hooliganism, and about working-class youth. It therefore was an issue with both health and moral implications.

In Britain, the main attempt to legislate against smoking came in the 1908 Children's Act, which prohibited the sale of tobacco to children under age sixteen and gave police power to seize tobacco from children caught smoking in public. However despite the 1908 Children's Act, smoking continued to form part of the vocabulary and activity of social reformers. Robert Baden-Powell, for example, wrote in *Scouting for Boys* (1908) that smoking harmed the sight and smell of boys who might become Scouts, and made them "shaky and nervous." Smoking was added to a list of moral failings that included getting up late, masturbation, drinking, and betting. In *Scouting for Boys*, the smoker was a "loafer," while the nonsmoker "has the ball at his feet" (Welshman 1996). Other contemporary observers drew smoking into their depiction of working-class youth and commented on the alleged dangers of juvenile smoking among girls. Smoking was also used as a badge of identity for working-class youth. While the 1908 Children's Act prohibited the sale of tobacco to children, middle-class youth movements continued to use smoking to define working-class children and adolescents up to World War I.

In the period between 1880 and 1914, therefore, the issue of smoking and young people had more to do with wider debates about urbanization and physical deterioration. The connection between smoking and lung cancer was yet to be made at the time. Rather than being linked to specific diseases, smoking was viewed as having general effects that compromised physical performance, especially in the context of work or



Youth tobacco use continues to be a major public health concern in the twenty-first century. According to some studies, smoking is part of a process of identity building and seems to be socially learned.

AP/WIDE WORLD PHOTOS



military service. For example, it was alleged that the sense of smell of boys who smoked would be impaired. Similarly the potential effects of smoking on eyesight, and by extension on the accuracy of rifle shooting, was highlighted as an issue for potential soldiers. In the period up to 1914, therefore, those concerned about smoking and young people were interested more in morality than in health. Even after substantial publicity about the health hazards of smoking in the early 1950s, smoking among young people remained widespread. A survey in Britain in 1957 found that in a secondary modern school, 30 percent of the boys and 15 percent of the girls were regular smokers, despite the legal prohibition on the sale of tobacco to this age group.

Boys smoking cigars and pipes, 1906. Smoking among children and young people only began to be seen as a social issue with the appearance of cheap, attractively packaged cigarettes in the 1880s. © CORBIS

Smoking in the Early Twenty-First Century

Youth tobacco use continues to be a major public health concern in the twenty-first century. However, researchers have proposed differing explanations for why young people start smoking and how tobacco use can be prevented among youth. Studies by psychologists on risk perception show that young people believe they can escape with a reduced amount of smoking before that risk becomes a reality. Young smokers are not informed about, and underestimate, the difficulties in stopping smoking. Moreover, young people do not process information and access results logically, and in fact calculate risks in ways that have more to do with emotion, deeply held beliefs, the views of people around

"The remaining source of amusement is the street. The boy spends a large part of his spare time in loafing about the streets with his pals, playing games, singing, exchanging witticisms, and generally making himself obnoxious to the police and the public . . . Most boys seem to keep clear of the public-house for the first few years after leaving school; almost all of them smoke Woodbines or 'Coffin-Nails' as they facetiously term them" (Freeman 1914).

"'Programmed' learning and visual aid, too, came to the child in the shape of cigarette card series. The value of the 'fag' card, from 1900 onwards, as a conveyor of up-to-date information was enormous . . . Before 1914 it would have been hard indeed to have found a boy in the working class without at least a few dog-eared cards about his person, dreaming of making up, by swap and gambling games, that complete set of fifty" (Roberts 1973).

"I think I was about twelve and my granny used to smoke. I had one of my really good friends from school over and we stole one of her cigarettes and went to the bike shed and I hated every minute of it. I hated it. I tried to tell her how you do it, showed her . . . I hated it, really did not like it" (Hughes 2003).

them, and an inability to calculate simple odds. On the other hand, the economist Kip Viscusi has argued that young people overestimate the risks posed by smoking. He has portrayed young people as weighing up the benefits against the risks before deciding to light up. His arguments support the conventional defense of the tobacco companies in lawsuits brought by smokers, which is that smokers knew the risks involved and made an informed decision to smoke.

In addition to the pharmacological effects of nicotine, psychological studies suggest that social and personal attitudes toward smoking also affect the way people experience tobacco. Jason Hughes, for example, has studied why people smoke by conducting detailed interviews with individual smokers, nonsmokers, and ex-smokers. His interviews suggest that smoking is part of a broader process of identity building, and that smoking seems to be socially learned. Hughes argues that what might be called a "nicotine self-replacement model of smoking" is too static and that the scientific tendency to reduce the effects of tobacco to biological processes overlooks variations in how tobacco has been experienced in different socio-cultural environments (Hughes).

Additionally, he argues that, historically, tobacco use emerged in relation to broader trends that included medicalization, mass-consumerism, individualization, and informalization. The implications of all this for public policy are that policy makers should address motivations for starting smoking, and giving up may be as much social as biological conditioning. The development of tobacco use in individuals seems to follow a similar pattern to its broader development in the West: an initial period of civilization; a period of increasing opposition; and a third stage of habituation. Hughes argues from this that people need not just to stop smoking, but to "make the much broader transition involved in becoming a nonsmoker" (Hughes).

Over the course of the twentieth century there have been changes in the way that tobacco use among young people has been viewed. In the early 1900s, the issue of smoking and young people can be located within wider debates about urbanization and physical deterioration, rather than concern about specific health effects. In contrast, in the early twenty-first century the discourses around physical deterioration are much less apparent. Research is focused on identifying and understanding the factors that lead young people to start smoking. While a pharmacological explanation (that is, people continue to smoke because they are addicted to nicotine) came to dominate in the late twentieth century, it was not a complete explanation. Understanding why young people start smoking involves a complex web of social and environmental influences, including peer pressure, advertising, and popular culture.

See Also Advertising; Ethnicity; Marketing; Women; Youth Marketing.

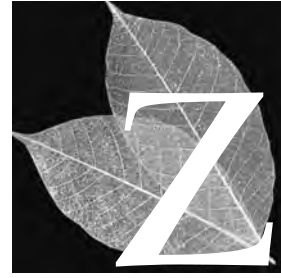
■ JOHN WELSHMAN

BIBLIOGRAPHY

Baden-Powell, Sir Robert. *Scouting for Boys: A Handbook for Instruction in Good Citizenship*, 2nd ed. London: Arthur Pearson, 1909.

Freeman, Arnold J. *Boy Life and Labour: The Manufacture of Inefficiency*. London: P. S. King and Son, 1914. Reprint, New York: Garland, 1980.

- Hilton, Matthew. "'Tabs,' 'Fags' and the 'Boy Labour Problem' in late Victorian and Edwardian England." *Journal of Social History* 28, no. 3 (1995): 586–607.
- Hughes, Jason. *Learning to Smoke: Tobacco Use in the West*. Chicago: University of Chicago Press, 2003.
- Roberts, Robert. *The Classic Slum: Salford Life in the First Quarter of the Century*. Manchester, England: University of Manchester Press, 1971. Reprint, Harmondsworth, England: Penguin, 1973.
- Slovic, Paul, ed. *Smoking: Risk, Perception, & Policy*. London: Sage, 2001.
- Webster, Charles. "Tobacco Smoking Addiction: A Challenge to the National Health Service." *British Journal of Addiction* 79 (1984): 7–16.
- Welshman, John. "Images of Youth: The Issue of Juvenile Smoking 1880–1914." *Addiction* 91, no. 9 (1996): 1,379–1,386.



Zimbabwe

The production and sale of tobacco has been a dynamic feature of Zimbabwe's colonial and post-colonial history just as Zimbabwe has been an important contributor to the global tobacco market in the last half of the twentieth century. But as events at the start of the twenty-first century demonstrate, the durability of tobacco as a key feature of Zimbabwe's political economy and the role of Zimbabwe in global markets are not guaranteed.

Colonial Period

Portuguese explorers and settlers brought tobacco to what is now Zimbabwe in the sixteenth century. This variety of *nicotiana rustica*, or *inyoka* tobacco (as it was called in the colonial period), was **air-cured**, mixed with water and other plants, and dried as loaves or cones. It was consumed as **snuff**, traded, or used as tribute payments to political or spiritual leaders.

In 1890 the British South African Company (BSAC) took control of the land that was to become Zimbabwe for the British Crown. White settlers swarmed into the newly named colony of Southern Rhodesia. By the early 1900s, the BSAC saw agriculture as the primary means for economic growth and for providing returns to its investors. Colonial governments allowed Europeans to settle on the land with the best soils and rainfall and displaced indigenous Africans into native reserves.

For the first three decades of colonial rule, however, the predominantly African farmers of the *inyoka* tobacco found a growing market as more and more Africans began working for European settlers in the new towns, mines, and farms. Government figures show that in the area that grew the most *inyoka* tobacco, African farmers sold over 25,000 pounds of their tobacco in 1906 and 300,000 pounds by 1923, the year when BSAC rule ended and self-rule for the white settlers began.



air-cured tobacco leaf tobacco that has been dried naturally without artificial heat.

snuff a form of powdered tobacco, usually flavored, either sniffed into the nose or "dipped," packed between cheek and gum. Snuff was popular in the eighteenth century but had faded to obscurity by the twentieth century.



This farm worker stands with reaped tobacco in a field. Tobacco is reaped by hand in Zimbabwe, using a variety of tools to cut and carry the leaves. PHOTOGRAPH BY JASON LAURE



flue-cured tobacco also called Bright Leaf, a variety of leaf tobacco dried (or cured) in air-tight barns using artificial heat. Heat is distributed through a network of pipes, or flues, near the barn floor.

By the early 1900s, and with BSAC encouragement, Europeans started to grow different varieties of *nicotiana tabacum* such as Turkish, Burley, and, especially, Virginia. Heavy marketing helped to make European-style cigarettes more popular than *inyoka* tobacco in urban areas by the mid-1920s. The majority of this tobacco was consumed in South Africa and, increasingly, in the United Kingdom.

Flue-cured tobacco production fluctuated along with demand and labor supply as different producer organizations and marketing arrangements materialized and declined until the 1940s when Virginia tobacco emerged as the primary export for the colony. This was due to extensive government support for European agriculture at large and general lack of support for African farmers, who were discouraged from growing Virginia tobacco in the colonial period. The state provided land and loans to returning European soldiers, leading to several thousand new tobacco farmers. The government also ensured a cheap supply of African workers, often from neighboring colonies, who were legally treated as “servants” and not as “workers” by the European farmers. Moreover, the government facilitated the emergence of a strong tobacco farmer association (the Rhodesia Tobacco Association), which in turn effectively lobbied the government on many issues. One great accomplishment of this lobbying was the creation of a tobacco research board in 1950, with the farmers providing three times more of its funding than the government. The research and its dissemination to the farmers improved the yield and quality of tobacco in the region. Starting in 1948, long-term preferential purchase agreements with British tobacco manufacturers also helped considerably, as is shown in the following table. The table, based on Weinmann and Zimbabwe Tobacco Association, shows flue-cured acreage planted and the yield (in pounds per acre) of tobacco sold from 1924 to 2002.

Year	Acreage planted	Yield (lbs/acre) of tobacco sold
1924	7,001	489
1930	9,681	568

1940	61,283	572
1950	154,511	691
1960	212,239	1,029
1970	101,798	1,116
1980	158,910	1,701
1990	146,780	2,006
2000	206,146	2,526
2002	170,430	2,139

The situation changed dramatically after the Rhodesian government unilaterally declared independence from the United Kingdom in 1965. Many governments imposed sanctions that led to covert sales of Rhodesian tobacco and increased governmental controls over the industry. Intensifying fighting between African nationalist groups and Rhodesian forces throughout the 1970s further destabilized farming operations.

Post-Colonial Period

The start of post-colonial rule of Zimbabwe in 1980 brought greater stability for the industry. Tobacco again became the nation's chief export, and Zimbabwe resumed its place as one of the top three exporters of flue-cured tobacco in the world. Additionally, the white tobacco farmers actively sought to increase production of Burley and Virginia tobacco among African smallholder farmers as a way to entrench further the industry in the new post-colonial nation.

Although the worldwide antismoking movement influenced Zimbabwean tobacco farmers to diversify into other crops throughout the 1990s, a much greater threat to the industry has emerged in the highly politicized large-scale land acquisition movement unleashed by the government in 2000. The massive land redistribution from white farmers to black farmers increased the number of small-scale tobacco farmers. Yet there has been a dramatic decrease in tobacco production as many white tobacco producers lost their land, and the resulting economic chaos has led to a scarcity of many tobacco inputs, such as fertilizer, herbicides and pesticides. There was a 30-percent drop in flue-cured tobacco sold in the year 2002 compared to the year 2000, making Zimbabwe's future place in the global market uncertain.

See Also Africa; Antismoking Movement From 1950; British Empire.

■ BLAIR RUTHERFORD

BIBLIOGRAPHY

- Clements, Frank, and Edward Harben. *Leaf of Gold: The Story of Rhodesian Tobacco*. London: Methuen, 1962.
- Kosmin, Barry. "The Inyoka Tobacco Industry of the Shangwe People: The Displacement of a Pre-Colonial Economy in Southern Rhodesia, 1898–1938." In *The Roots of Rural Poverty in Central and Southern Africa*. Edited by Robin Palmer and Neil Parsons. Berkeley: University of California Press, 1977.



Rubert, Steven C. *A Most Promising Weed: A History of Tobacco Farming and Labor in Colonial Zimbabwe, 1890–1945*. Athens: Ohio University Center for International Studies, 1998.

Weinmann, H. *Agricultural Research and Development in Southern Rhodesia, 1924–1950*. Salisbury: University of Rhodesia, 1975.

Zimbabwe Tobacco Association. "Zimbabwe Tobacco Statistics." 12 April 2004. Available: <<http://www.zta.co.zw/otherimages/ZIM%20STATS%206a.htm>>



Contributors List

VIRGINIA BARTOW
New York Public Library
New York, New York
Arents Collection

Air Travel
Antismoking Movement From
1950
Philip Morris

SIMON CHAPMAN
University of Sydney
Sydney, Australia
Tobacco Control in Australia

MICHIEL BAUD
CEDLA
Amsterdam, The Netherlands
Brazil
South and Central America

ANTHONY BROWN
Roswell Park Cancer Institute
Buffalo, New York
Documents
Youth Marketing

JAMES COLGROVE
Columbia University
New York, New York
Advertising Restrictions
Smoking Restrictions

CARA BAYLUS
University of Chicago
Chicago, Illinois
Intellectuals

IAN W. BROWN
University of Alabama
Tuscaloosa, Alabama
Calumets

JEFF COLLIN
London School of Hygiene and
Tropical Medicine
London, England
Developing Countries

CAROL BENEDICT
Georgetown University
Washington, D.C.
Therapeutic Uses

JOHN C. BURNHAM
Ohio State University
Columbus, Ohio
Bad Habits in America
Doctors

FRANCISCO COMÍN
Universidad de Alcalá
Madrid, Spain
State Tobacco Monopolies

LISA BERO
University of California–San Francisco
San Francisco, California
Tobacco Industry Science

DAVID M. BURNS
University of California–San Diego
School of Medicine
San Diego, California
“Light” and Filtered Cigarettes

B. LEE COOPER
Newman University
Wichita, Kansas
Music, Popular

VIRGINIA BERRIDGE
London School of Hygiene and Tropical
Medicine
London, England
Tobacco Control in the United
Kingdom

TRACY CAMPBELL
University of Kentucky
Lexington, Kentucky
Architecture
Black Patch War
Kentucky

ANDREW M. COURTWRIGHT
University of North Carolina,
Chapel Hill
Chapel Hill, North Carolina
Alcohol, Tobacco, and Other
Drugs

FRANCISCO BETHENCOURT
Universidade Nova de Lisboa
Lisbon, Portugal
Portuguese Empire

DAVID CANTOR
National Cancer Institute
Bethesda, Maryland
Lung Cancer
Nazi Germany

DAVID T. COURTWRIGHT
University of North Florida
Jacksonville, Florida
Alcohol, Tobacco, and Other
Drugs

ALAN BLUM
University of Alabama
Tuscaloosa, Alabama

CONTRIBUTORS LIST

- HOWARD COX**
South Bank University Business School
London, England
American Tobacco Company
British American Tobacco
Globalization
- K. MICHAEL CUMMINGS**
Roswell Park Cancer Institute
Buffalo, New York
Documents
Youth Marketing
- KRISTEN DALEY**
Northeastern University School of Law
Boston, Massachusetts
Litigation
- RICHARD DAYNARD**
Northeastern University School of Law
Boston, Massachusetts
Litigation
- SUSAN DEANS-SMITH**
University of Texas at Austin
Austin, Texas
Mexico
- TIMOTHY DEWHIRST**
University of Saskatchewan
Saskatoon, Saskatchewan, Canada
Public Relations
Sponsorship
- FRANK DIKÖTTER**
School of Oriental and African Studies
London, England
China
Opium
- ELLIOT N. DORFF**
University of Judaism
Bel Air, California
Judaism
- JOSHUA DUNSBY**
University of California–San Francisco
San Francisco, California
Genetic Modification
Secondhand Smoke
- RUTH DUPRÉ**
HEC Montréal
Montreal, Quebec, Canada
Prohibitions
- ROSEMARY ELLIOT**
University of Glasgow
Glasgow, Scotland
- Appetite
Body
Product Design
Soldiers
- KARL FAGERSTRÖM**
Smokers Information Centre
Helsingborg, Sweden
Quitting Medications
- PETER T. FURST**
University of Pennsylvania Museum of
Archaeology and Anthropology
Philadelphia, Pennsylvania
Shamanism
- ANNA B. GILMORE**
London School of Hygiene and Tropical
Medicine
London, England
Developing Countries
- TAMIKA GILREATH**
Pennsylvania State University
University Park, Pennsylvania
Ethnicity
- STANTON A. GLANTZ**
University of California–San Francisco
San Francisco, California
Politics
- MASAYUKI HANDA**
Tobacco and Salt Museum
Tokyo, Japan
Japan
- MARK HANUSZ**
Equinox Publishing
Jakarta, Indonesia
Kretek
- TERENCE E. HAYS**
Rhode Island College
Providence, Rhode Island
Missionaries
Oceania
- JACK E. HENNINGFIELD**
Johns Hopkins University School of
Medicine
Baltimore, Maryland
Addiction
Nicotine
- MATTHEW HILTON**
University of Birmingham
Birmingham, England
Age
- Class
Smoking Clubs and Rooms
- MAI-ANH HOANG**
Johns Hopkins Bloomberg School of
Public Health
Baltimore, Maryland
Disease and Mortality
- JASON HUGHES**
University of Leicester
Leicester, England
Snuff
Social and Cultural Uses
- JENNIFER K. IBRAHIM**
University of California–San
Francisco
San Francisco, California
Politics
- LORI JACOBI**
University of Alabama
Tuscaloosa, Alabama
Philip Morris
- JON D. KASSEL**
University of Illinois at Chicago
Chicago, Illinois
Psychology and Smoking
Behavior
- JORDAN KELLMAN**
University of Louisiana at Lafayette
Lafayette, Louisiana
French Empire
- JEFFREY R. KERR-RITCHIE**
University of North Carolina at
Greensboro
Greensboro, North Carolina
Slavery and Slave Trade
- GARY KING**
Pennsylvania State University
University Park, Pennsylvania
Ethnicity
- ROBERT KLINE**
Northeastern University School
of Law
Boston, Massachusetts
Litigation
- WIM KLOOSTER**
Clark University
Worcester, Massachusetts
Dutch Empire

KELLEY LEE
*London School of Hygiene and Tropical
 Medicine*
London, England
 Lobbying

CARLOS FRANCO LIBERATO
Federal University of Sergipe
Aracaju, Sergipe, Brazil
 Plantations

MICHAEL J. LICARI
University of Northern Iowa
Cedar Falls, Iowa
 Taxation

JOYCE LORIMER
Wilfrid Laurier University
Waterloo, Ontario, Canada
 Smuggling and Contraband

EVA MANTZOURANI
*Canterbury Christ Church
 University College*
Canterbury, England
 Music, Classical

DAWN MARLAN
University of Illinois at Chicago
Chicago, Illinois
 Film

ROBERT L. MARTENSEN
Tulane Health Sciences Center
New Orleans, Louisiana
 Therapeutic Uses

RUDI MATTHEE
University of Delaware
Newark, Delaware
 Iranian Tobacco Protest
 Movement
 Islam

J. ROSSER MATTHEWS
Virginia Tech
Blacksburg, Virginia
 Insurance
 Medical Evidence (Cause and
 Effect)

RUSSELL R. MENARD
University of Minnesota, Twin Cities
Minneapolis, Minnesota
 British Empire

ROBERT H. MILLER
*United States Department of
 Agriculture, retired*

Alexandria, Virginia
 Trade

DOLORES MITCHELL
California State University-Chico
Chico, California
 Visual Arts

HENEAGE MITCHELL
Bangkok, Thailand
 South East Asia

STEPHANIE MOLLER
Pennsylvania State University
University Park, Pennsylvania
 Ethnicity

GREGORY J. MORGAN
Johns Hopkins University
Baltimore, Maryland
 Tobacco Mosaic Virus

LUCY MUNRO
Keele University
Keele, England
 English Renaissance Tobacco

LAURA NÁTER
San Juan, Puerto Rico
 Caribbean
 Cuba

MICHAEL NEE
New York Botanical Garden
Bronx, New York
 Origin and Diffusion

MIMI NICTER
University of Arizona
Tucson, Arizona
 South Asia

MARCY NORTON
George Washington University
Washington, D.C.
 Christianity
 Sailors

DIDIER NOURRISSON
*Institut Universitaire de Formation
 des Maîtres de Lyon*
Saint-Galmier, France
 Antismoking Movement in
 France
 Gitanes/Gauloises

JOHN PARASCANDOLA
Silver Spring, Maryland
 Warning Labels

MARK PARASCANDOLA
National Institutes of Health
Bethesda, Maryland
 "Safer" Cigarettes

JOSÉ; PARDO-TOMÁS
Institució "Milà i Fontanals" CSIC
Barcelona, Spain
 Botany (History)

JOSEPH PARKER
Broomes Island, Maryland
 Camel
 Chewing Tobacco
 Lucky Strike
 Marlboro
 Virginia Slims

CHRISTINA A. S. PERRON
Portland, Oregon
 Tobacco as an Ornamental Plant

ADRIENNE PETTY
Columbia University
New York, New York
 Labor
 Sharecroppers

JOHN PIERCE
University of California-San Diego
Cancer Center
San Diego, California
 Consumption (Demographics)

TANYA POLLARD
Montclair State University
Montclair, New Jersey
 English Renaissance Tobacco

ELDRED E. PRINCE JR.
Coastal Carolina University
Conway, South Carolina
 Processing
 United States Agriculture

SEAN M. RAFFERTY
University of Albany
Albany, New York
 Archaeology
 Hallucinogens

BEN RAPAPORT
Reston, Virginia
 Connoisseurship
 Pipes

KURT RIBISL
*University of North Carolina at
 Chapel Hill*

CONTRIBUTORS LIST

Chapel Hill, North Carolina
Retailing

FRANCIS ROBICSEK
Carolinas Heart Institute
Charlotte, North Carolina
Mayas

JOSE MANUEL RODRÍGUEZ GORDILLO
University of Seville
Seville, Spain
Spanish Empire

STEVEN C. RUBERT
Oregon State University
Corvallis, Oregon
Africa

THEO RUDMAN
Good Living Publishing
Helderberg, South Africa
Cigars

JARRETT RUDY
McGill University
Montreal, Quebec, Canada
Cigarettes
Industrialization and
Technology

BLAIR RUTHERFORD
Carleton University
Ottawa, Ontario, Canada
Zimbabwe

JONATHAN M. SAMET
Johns Hopkins Bloomberg School of
Public Health
Baltimore, Maryland
Disease and Mortality

PATRICIA B. SANTORA
Johns Hopkins University School of
Medicine
Baltimore, Maryland
Addiction
Nicotine

STEVE SARSON
University of Wales Swansea
Swansea, Wales
Chesapeake Region

RELLI SHECHTER
Ben-Gurion University
Beer Sheva, Israel
Middle East

SAUL SHIFFMAN
University of Pittsburgh
Pittsburgh, Pennsylvania
Psychology and Smoking
Behavior

SIMON SMITH
University of York
Heslington, York, England
Trade

ERIC SOLBERG
Anderson Cancer Center
Houston, Texas
Antismoking Movement From
1950

GEORGE BRYAN SOUZA
University of Texas-San Antonio
San Antonio, Texas
Philippines

CRAIG STEGER
Roswell Park Cancer Institute
Buffalo, New York
Documents
Youth Marketing

COLIN TALLEY
Columbia University
New York, New York
Quitting

CASSANDRA TATE
www.historylink.org
Seattle, Washington
Antismoking Movement Before
1950
Ostracism

CARSTEN TIMMERMANN
University of Manchester
Manchester, England
Lung Cancer

PENNY TINKLER
University of Manchester
Manchester, England
Advertising
Women

KEITH VOLANTO
Collin County Community College
Dallas, Texas
New Deal

CHERYL KRASNICK WARSH
Malaspina University-College
Nanaimo, British Columbia, Canada
Marketing

GEOFFREY FERRIS WAYNE
Massachusetts Department of Public
Health
Boston, Massachusetts
Additives
Chemistry of Tobacco and
Tobacco Smoke
Fire Safety
Menthol Cigarettes
Product Design
Toxins

JOHN WELSHMAN
Lancaster University
Lancaster, England
Sports
Youth Tobacco Use

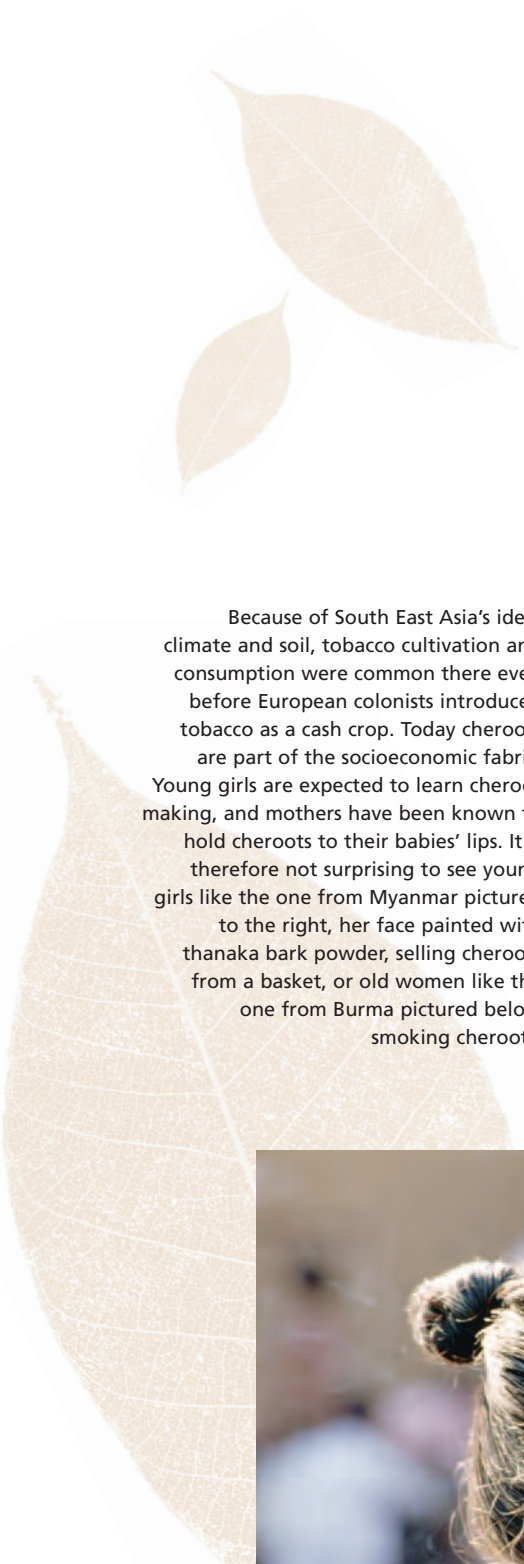
JOSEPH WINTER
Native American Plant Cooperative
Cuba, New Mexico
Native Americans

MITCHELL ZELLER
Pinney Associates
Bethesda, Maryland
Regulation of Tobacco Products
in the United States



An elderly Hakka Chinese woman smokes a pipe in Hong Kong. China is the largest market for cigarettes and the world's leading tobacco producer. However, the majority of tobacco smokers in China are men; fewer than ten percent of smokers are women. © DAVE BARTRUFF/CORBIS





Because of South East Asia's ideal climate and soil, tobacco cultivation and consumption were common there even before European colonists introduced tobacco as a cash crop. Today cheroots are part of the socioeconomic fabric. Young girls are expected to learn cheroot making, and mothers have been known to hold cheroots to their babies' lips. It is therefore not surprising to see young girls like the one from Myanmar pictured to the right, her face painted with thanaka bark powder, selling cheroots from a basket, or old women like the one from Burma pictured below smoking cheroots.



© NEVADA WIER/CORBIS

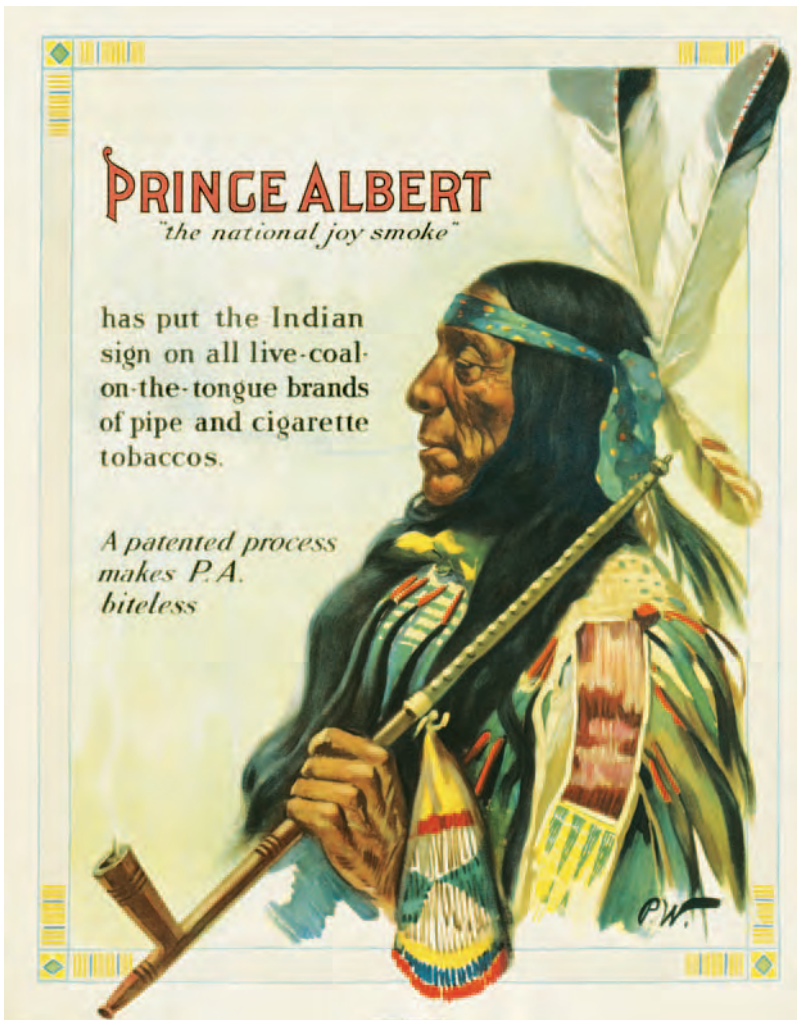


© CHRISTOPHE LOVINY/CORBIS





Tobacco must be dried and cured before manufacturing can begin. On this modern-day tobacco plantation in the Philippines, rows of tobacco leaves hang from poles to dry in the open air. © PAUL ALMASY/CORBIS



Native Americans were commonly depicted in tobacco advertisements, like this one of a chief holding a calumet (ceremonial pipe), from Prince Albert. Commercial artists often adapted images of people, including Native Americans, from files of prints or from photographs. They seldom used live models, because copying and adapting an existing image was easier than working from life. © SWIM INK/CORBIS



This eighteenth-century illustration "Faiseur de tabac" by Engelbrecht is an imaginative depiction of what appears to be a tobacconist, or tobacco shopkeeper. The man has a tobacco plant on his head and a pipe in his hand, and is wearing a tobacco-leaf kilt.

In the background, two men are processing tobacco. © GIANNI DAGLI ORTI/CORBIS



Advertising in the last decade of the twentieth century increasingly used people and vehicles as mobile advertisements. This baby in Senegal, wearing a Marlboro sweatshirt, is typical of women and children in third-world nations who are frequent targets of multinational tobacco companies.

PHOTO BY ANNA WHITE





By the early 1500s, European colonists and African slaves in the Caribbean adopted the indigenous custom of smoking cigars. Before the nineteenth century, there was no particular association between masculinity and cigars. This woman in Havana carries on the cigar-smoking tradition. © DAVE G. HOUSER/CORBIS



The brilliant colors of this cigarette paper advertisement poster by Galicello (c. 1930) are characteristic of French commercial art of the period, which tended to use humor and playful style. France was a style setter in the visual arts, whether fine arts or commercial, during the nineteenth century and part of the twentieth. Another major center for lithography, commercial art, and printing techniques was Germany, whose style was known especially for its bold design and simplicity. © SWIM INK/CORBIS



Harvesting and drying tobacco is done much the same way today as it was centuries ago. Here a boy in Maryland places tobacco leaves on a chestnut spear. They will later be hung to dry, probably in a barn or a shelter. © LOWELL GEORGIA/CORBIS



Many ethnic groups throughout Asia have long traditions of smoking tobacco, either hand rolled, as in a cheroot, or in a simple pipe, as this Akha tribe woman from northern Thailand demonstrates. © CHRISTINE KOLISCH/CORBIS





Tobacco merchants sell tobacco products tailored for specific uses, including in pipes, in hand-rolled cigarettes, and in flavored bidis. Here tobacco is being sold loose in a market in Meghalaya, India. © EARL AND NAZIMA KOWALL/CORBIS



European and European-style pipes of the eighteenth and nineteenth centuries were made from materials such as wood, clay, and meerschaum, a fine, white clayey material. This Massachusetts man smokes a pipe whose bowl appears to be a meerschaum bust of a New England fisherman. © DAVE G. HOUSER/CORBIS



Tobacco was introduced by the Spanish, Portuguese, and, principally, Dutch to various parts of the Pacific Islands beginning in the early seventeenth century.

Today, cigarette smoking has largely replaced more traditional forms of tobacco use. This Huli tribesman in traditional costume takes a cigarette break during a 1990s performance in Papua, New Guinea. © BOB KRIST/CORBIS





Index

Page references for major articles are in **boldface**. Illustrations are indicated by page references in italics. Tables are indicated by page references followed by t.

A

- À bout de souffle/Breathless* (film), 1: 235
- AAA (Agricultural Adjustment Administration), 2: 385–387
- Absinthe, tobacco use with, 1: 37
- Accessories
- cigar accessories, 1: 159, 159–160
 - cigarette accessories, 1: 159, 160; 2: 568
 - pipe accessories, 1: 156–159, 157, 158, 165
 - references to, in popular music, 1: 370–371
 - snuff accessories, 1: 160–163, 161; 2: 549–550, 560, 667
 - used by gallants, 2: 559, 560
- Accord (cigarette brand), 2: 493
- Acetaldehyde, in Marlboro cigarettes, 1: 10
- Acquisition, definition of, 1: 43
- ACS (American Cancer Society), 1: 53; 2: 484–485
- “Action against Access” campaign, by tobacco industry, 2: 477, 478
- Action on Smoking and Health (ASH), 2: 624
- Addiction to nicotine, **1: 1–6**
- additives and nicotine effects, 1: 8–9
 - alcohol and drug use associated with, 1: 35–41; 2: 468
 - cigarettes as most addictive form of, 1: 1, 3–5
 - criteria for, 2: 468
 - FDA evidence on, 2: 493
 - history of nicotine science and, 1: 1–3; 2: 388
 - nicotine research and concepts of, 1: 2–3; 2: 467–468
 - physiologic and behavior effects of, 2: 389–390
 - popular music references to, 1: 370
 - prevention of, 2: 391
 - smoking behavior driven by, 2: 390–391
 - tobacco “chippers” and, 2: 469
 - tobacco industry documents on, 1: 4; 2: 494, 627
 - treatment of, 1: 5–6
 - withdrawal symptoms related to, 1: 3; 2: 391, 468, 486
- See also* Chemistry of tobacco and tobacco smoke
- See also* Nicotine
- See also* Psychology and smoking behavior
- See also* Quitting
- Additives, **1: 6–10**
- ammonia and acetaldehyde as, 1: 10
 - cigarette paper coated with, 2: 455
 - health risks and regulation of, 1: 9–10
 - physiological and behavioral effects, 1: 8–9
 - role in product design, 1: 7–8; 2: 454–455
 - in snuff, 2: 549–550
- See also* Menthol
- Adolescents. *See* Youth marketing; Youth tobacco use
- Advance (tobacco company), 2: 493
- Advertising, **1: 11–18**
- of alcohol, with tobacco, 1: 36
 - antismoking advertising, 1: 19–20, 21, 53–54, 83, 345; 2: 430
 - brand loyalty linked to age, 2: 689
 - branding in, 1: 11; 2: 564
 - Camel cigarettes, 1: 106, 106–107, 172; 2: 670, 690
 - in China, 1: 15, 132–133, 133
 - cigarettes as appetite suppressants, 1: 62–63, 64, 172, 336
 - classical music in, 1: 368
 - dominance of cigarette use due to, 1: 171, 171–173
 - early tobacco promotions, 1: 11–12
 - exoticism in, 2: 669–670, 681
 - globalization of cigarette market, 1: 265
 - impact of, 1: 17–18
 - Joe Camel character in, 1: 22, 107, 173, 335; 2: 692–693
 - Kool cigarettes, 1: 332, 334–335; 2: 692
 - Lucky Strike cigarettes, 1: 62–63, 64, 172, 252, 318–320, 319, 335–336; 2: 686, 690
 - Marlboro cigarettes, 1: 337–339, 338; 2: 407, 671, 691
 - mass advertising of cigarettes, 1: 246
 - outdoor advertising displays, 1: 328
 - package inserts/coupons, 1: 327–328
 - Philip Morris, 2: 407; 2 408
 - product placement in film and television, 1: 13, 232; 2: 477–478, 691–692
 - public relations vs., 2: 474
 - in retail outlets, 2: 499–500, 501
 - shift from broadcast advertising to sponsorship, 2: 594–595
 - sports and tobacco advertising, 2: 597–599, 598, 671–672
 - targets of, 1: 14–15, 15, 228–229, 334–336; 2: 685–686, 691–692
 - themes of, 1: 15–16
 - in twentieth century, 1: 12, 12–14, 14
 - unregulated health claims for tobacco products, 2: 493
 - Virginia Slims, 1: 16, 63, 336; 2: 663, 664
 - during World War I and II, 2: 670
- See also* Advertising restrictions

- Advertising **CONTINUED**
See also Cigarette cards
See also Marketing
See also Sponsorship
See also Women, advertising targeted to
See also Women, in advertisements
See also Youth marketing
- Advertising restrictions, **1: 19–23**
 advertising effects on youth and, 1: 22
 antismoking advertising and, 1: 19–20, 21, 53–54; 2: 430
 Australia, 2: 620
 banning of tobacco advertising, 1: 19–20; 2: 463, 502, 594, 672
 economic and political constraints on, 1: 20
 European community, 2: 438
 France, 1: 60
 freedom of speech issues, 1: 21–22
 Internet tobacco advertising, 2: 502
 Japan, 1: 20
 limits of, 1: 22–23
 Nazi Germany, 1: 322; 2: 383
 during 1960s and 1970s, 1: 19–20
 politics of, 2: 430
 in retail outlets, 2: 501
- Africa, **1: 23–30**
 Angolan tobacco jar from, 1: 157
 domestic cultivation of tobacco in, 1: 26–29
 early propagation of tobacco in, 1: 24–25, 25
 French colonies in, 1: 244
 importance of tobacco trade in, 1: 25–26
 late twentieth-century effects of tobacco in, 1: 29–30
 Malawi tobacco production, 1: 28–29; 2: 647
 pipes in, 1: 28, 68; 2: 421–422
 Portuguese tobacco trade with, 1: 23, 26; 2: 442–443
 Zambian tobacco production, 1: 29
See also Zimbabwe
- African Americans
 menthol cigarettes preferred by, 1: 228, 349
 as post-Civil War tobacco workers, 1: 297
 smoking prevalence among, 1: 226–227
 as target of tobacco marketing, 1: 228, 228
- women, in nineteenth-century advertisements, 2: 670
 women union leaders, 1: 297
See also Slavery and slave trade
- Age and tobacco use, **1: 31–33**
 early twentieth century, 1: 31–33
 initiation of smoking related to age, 2: 689–690
 later twentieth century, 1: 32, 33
See also Children
See also Youth tobacco use
- Agricultural Adjustment Act of 1933, 1: 287; 2: 385, 524, 660
 Agricultural Adjustment Act of 1938, 2: 387
 Agricultural Adjustment Administration (AAA), 2: 385–387
- Agriculture. *See* Processing; Production of tobacco; Sharecroppers and sharecropping; Slavery and slave trade; Tenant farmers and farming; United States agriculture
- AHA (American Heart Association), 2: 484–485
- Air-cured tobacco
 in Africa, 1: 27
 chemistry of, 1: 113
 definition of, 1: 27
 in modern cigarettes, 2: 454
 process of curing, 1: 27; 2: 448, 448–449, 655
- Air travel, **1: 33–35**
 airline flight attendants class action lawsuit, 1: 34, 312
 banning of smoking during, 1: 34; 2: 537, 539
- al-Din Shah, Nasir, 1: 272, 273, 273
- ALA (American Lung Association), 2: 484–485
- Alaska Natives
 diffusion of tobacco to, 2: 522
 Inuit ash and quid boxes of, 1: 69
 smoking and tobacco use of, 1: 229
- Alcohol
 depressant effect of, 1: 40
 tobacco use combined with, 1: 35–36, 36, 37, 38–39
- Alice in Wonderland* (Carroll), 1: 304
- Alkaloids
 in Chinese tobacco, 1: 130
 definition of, 1: 114
 formation of toxic compounds from, 2: 632
 in hallucinogens, 1: 259; 2: 518
 in *Nicotiana rustica*, 2: 519
- Allen & Ginter (tobacco company), 1: 251
- Altadis (French/Spanish tobacco company), 1: 244
- Altria (Philip Morris), 2: 409, 438
- AMA (American Medical Association), 1: 53
- American Baptist churches, antitobacco resolution of, 1: 142–143
- American blend cigarette
 definition of, 1: 105
 types of tobacco in, 2: 454, 644–645
- American Cancer Society (ACS), 1: 53; 2: 484–485
- American Heart Association (AHA), 2: 484–485
- American Lung Association (ALA), 2: 484–485
- American Machine and Foundry Company, 1: 266
- American Medical Association (AMA), 1: 53
- American Stop Smoking Intervention Study (ASSIST), 1: 57; 2: 435–436
- American Tobacco Company, **1: 42–44**
 acquisition by British American Tobacco, 1: 44, 95
 acquisition of Middle Eastern manufacturers, 1: 358
 advertising costs of, 1: 265
 blending of tobaccos in cigarettes, 1: 358
 diversification of, 1: 44
 foreign expansion of, 1: 43, 253, 265
 growth and dissolution of, 1: 43–44, 146–147
 origins of, 1: 42, 252–253
See also Lucky Strike cigarettes
- Amerindians. *See* Native Americans
- Ammoniation
 definition of, 1: 114
 of Marlboro cigarettes, 1: 10, 114
- Amphetamine, for weight control, 2: 484
- Anadenanthera peregrina*, 1: 259
- Angola
 tobacco jar from, 1: 157
 tobacco production in, 2: 443
- Anti-Cigarette League of America
 founding and activities of, 1: 48–49
 popular support of, 1: 32
- Antismoking legislation
 airline travel ban on smoking, 1: 34; 2: 537, 539
- Australian tobacco regulation, 2: 619–621

- banning of broadcast advertising,
1: 19–20; 2: 463, 594, 672
- California Smoke-Free Workplace Act, 2: 465
- Children's Act of 1908, 1: 334; 2: 694
- Cigarette Labeling and Advertising Act, 2: 429–430, 672, 673, 675
- clean indoor air legislation,
2: 431–432, 432, 465, 516, 537, 621
- in early twentieth-century United States, 2: 461
- Framework Convention on Tobacco Control provisions,
1: 23; 2: 438–439, 439, 495, 677–678
- French legislation, 1: 59–60; 2: 539
- Master Settlement Agreement provisions, 1: 22, 57–58, 311; 2: 436–437
- outlawing of cigarettes in U.S., 1: 32
- preemption of local tobacco control activity, 2: 429–430, 431, 433, 675
- Public Health Cigarette Smoking Act, 2: 594, 675–676
- in South East Asia, 2: 584
- state cigarette prohibition laws and, 1: 45–46
- for warning labels, 2: 675–678
- youth access laws, 2: 431–432, 477, 478
- See also* Advertising restrictions
See also Lobbying
See also Prohibitions
See also Smoking restrictions
See also Tobacco control
- Antismoking movement before 1950, **1: 45–51**
- cigarettes as gateway drug and, 1: 46–47
- cigarettes as target of, 1: 45–46, 47, 147–148
- early critics of tobacco use and, 1: 83–84
- in France, **1: 59–60**
- health risks of smoking and, 1: 50–51
- Iranian Tobacco Protest movement as, 1: 272–273
- moral basis of, 1: 48, 84, 140–141; 2: 459, 462
- in Nazi Germany, 1: 322; 2: 382
- in pre-eighteenth-century literature, 1: 303
- prohibitions in United States, 2: 461–463
- “Smokes for Soldiers” campaigns and, 1: 49–50
- social Darwinism and, 1: 47–48
- state cigarette prohibition laws,
1: 45–46
- youth smoking and, 1: 31–32, 334
- See also* Prohibitions
- Antismoking movement from 1950, **1: 51–58**
- antismoking advertising by,
1: 19, 53–54, 55
- in Australia, **2: 619–621**
- call for government action by,
1: 53–54
- Christian churches and,
1: 142–143
- emerging independent organizations in, 1: 54
- in France, **1: 59–60**
- India, 2: 578
- litigation as strategy of,
1: 56–58
- moral and scientific basis of,
1: 52–53
- ostracism of smokers and, 2: 404, 404
- successes and failures of, 1: 57–58
- tobacco industry as target of,
1: 54–57
- See also* Prohibitions
- Anxiety
smoking associated with onset of,
2: 470
- smoking for relief of, 2: 469
- Aortic aneurysm, 1: 201*t*
- Apocalypse Now* (film), 2: 477
- Appetite suppression, **1: 61–65**
- Chinese use of tobacco for, 1: 131
- historical context of, 1: 61–63
- scientific context of, 1: 63–65, 84
- shamanistic tobacco use and,
2: 521
- tobacco advertising and,
1: 62–63, 64, 172, 336; 2: 686
- Apprentice cigar makers, 1: 266
- Archaeology of tobacco, **1: 66–70**
- direct and indirect evidence in,
1: 66–67, 69
- in Europe and Africa, 1: 68
- in Mayan culture, 1: 340, 341–342, 342
- Native American tobacco use and,
2: 376–377
- in North and South America,
1: 68
- pipes and, 1: 68–70
- tobacco-related accessories and,
1: 67, 67, 69
- Architecture, **1: 71–73**
- Arents Collection, **1: 73–76, 74**
- Arents, George, Jr., 1: 73, 305
- Argillite
definition of, 1: 104
- pipes made from, 1: 104; 2: 415
- Queen Charlotte Islands, pipe of,
1: 157
- ARIC (*Asociación Rural de Interés Colectivo*), 1: 354
- Ariva (noncombusting cigarette),
2: 493
- Arizona, smoking restriction legislation in, 2: 537
- Aromatic hydrocarbons,
polynuclear (PAH), 2: 632, 633
- Art. *See* Film; Music, classical; Music, popular; Visual arts
- Art Deco
in cigarette cases, 2: 667
- definition of, 1: 163
- in French cigarette packaging,
1: 248
- Art Nouveau
definition of, 2: 667
- Job cigarette poster as, 2: 668, 668
- Arts events, tobacco industry sponsorship of, 1: 331–332, 333
- ASH (Action on Smoking and Health), 2: 624
- Ash stand, 1: 163
- Asia. *See* China; Japan; South Asia; South East Asia
- Asian Americans
smoking prevalence among,
1: 227
- as target of tobacco marketing,
1: 228
- Asociación Rural de Interés Colectivo* (ARIC), 1: 354
- ASSIST (American Stop Smoking Intervention Study), 1: 57; 2: 435–436
- Atelier, definition of, 2: 419
- Atherosclerosis, 1: 201*t*
- Australia
Aboriginal smokers in, 2: 619
- advertising of tobacco in, 1: 13, 14, 15
- advertising restrictions in, 1: 20
- origin of tobacco in, 2: 398
- tobacco consumption in, 2: 619
- tobacco control by, **2: 619–621, 620**
- Authoritarian, definition of, 1: 80
- Auto racing
Philip Morris sponsorship of,
2: 691
- tobacco industry sponsorship of,
1: 333–334; 2: 594, 594, 691
- youth tobacco marketing and,
1: 335; 2: 691
- Aversion therapy, for quitting,
2: 485–486

Ayahuasca (*Banisteriopsis caapi*),
1: 259; 2: 518
Azores, tobacco production in,
2: 443

B

Bad habits in America, **1: 77–79**
consumer culture and, 1: 79
relationship of tobacco use to
vice, 1: 78–79
stereotypical behavior associated
with, 1: 77–78
See also Psychology and smoking
behavior

Baden-Powell, Robert, 2: 597, 694

Bahian tobacco, 1: 26, 89–91

Bal Tiga Nitisemito (*kretek*
manufacturer), 1: 288

Ballet performances, tobacco
consumption during, 1: 365

Banisteriopsis caapi, 1: 259; 2: 518

Banning of smoking. *See*

Advertising restrictions;
Antismoking legislation;
Prohibitions; Tobacco control

Banzhaf, John, 1: 19, 53–54

Bara, Theda, 1: 233

Barns, 1: 71–72, 72; 2: 448

Barrie, James M., 1: 304; 2: 422, 534

Barrymore, Maurice, 1: 162

Bars

banning of smoking in, 2: 465,
540, 623

cigar bars, 2: 535

One Double Oh Seven Club and
Smoking Parlor, 2: 465

Basic Instinct (film), 1: 235–236;
2: 566

BAT. *See* British American Tobacco
(BAT)

Beans, cultivation by Native
Americans, 2: 379, 380

Behavior. *See* Bad habits in America;
Psychology and smoking
behavior

Belmondo, Jean-Paul, 1: 235

Benzo(a)pyrene, 2: 633

Bermuda, contraband trade in,
2: 544

Bernays, Edward, 1: 335; 2: 474,
475

Betel quid

pan, in India, 2: 577–578

in Philippines, 2: 411–412

tobacco combined with, 1: 36–37

Bidi cigarettes

additives in, 1: 8

competitive price of, 1: 169

popularity of, in South Asia,
1: 195; 2: 576, 577

production of, in India,
2: 576–577

toxic substances in, 2: 577
women smokers of, 2: 685

The Big Heat (film), 1: 231

Biotechnology

definition of, 1: 245

See also Genetic modification

Birth weight, smoking effects on,
1: 209, 210t

Bizet, Georges, 1: 365; 2: 670

Black market for tobacco products
definition of, 2: 492

prohibition as cause of, 2: 492

See also Smuggling and
contraband

Black Patch War, **1: 80–81**; 1: 285

Black tobacco

Black Patch area of Kentucky,
1: 80, 285

cultivation in South America,
2: 572

in Gitanes and Gauloises
cigarettes, 1: 248, 249

Blacks. *See* African Americans;

Slavery and slave trade

Blade Runner (film), 1: 236

Blending of tobaccos in cigarettes,
1: 358; 2: 454, 644–645

Blonde Venus (film), 1: 233–234,
236

Blum, Alan, 1: 55

Body, **1: 81–85**

advertising themes related to,
1: 16

body weight set-point, 1: 65

health effects of tobacco, 1: 82,
84

methods of tobacco consumption
and, 1: 81–83

See also Appetite suppression

See also Disease

See also Disease risk

Bogart, Humphrey, 1: 235, 236,
330

Bonsack, James A., cigarette
machine of, 1: 145–146, 171,
252, 264; 2: 452

Books about tobacco. *See* Arents
Collection; Literature of tobacco

Botany (history), **1: 85–88**

early European classifications of
tobacco, 1: 85–87, 86

Linnaeus's classification of
tobacco, 1: 87–88

origination of *Nicotiana*, 1: 85

tobacco as an ornamental plant,
2: 616–618; 2: 617, 618

Boycott, definition of, 1: 94

Branding

advertising value of, 1: 11; 2: 564

brand loyalty linked to age,
2: 689

brand-stretching, 1: 14
as objective of sponsorship,
2: 595

purpose of, 1: 11

Brando, Marlon, 1: 231

Brazil, **1: 88–92**

Bahian tobacco, 1: 26, 89–91

British American Tobacco
expansion in, 1: 254

chewing tobacco use by Brazilian
warrior, 2: 572

contraband trade in, 2: 543

plantations in, 2: 427–428

sharecropping in, 1: 294

slave labor in, 1: 292

southern states of, 1: 91–92

tobacco consumption in,
2: 441–442

tobacco exports of, 2: 646, 647

tobacco production in, 1: 91–92;
2: 442–443

warning labels on cigarette packs,
1: 90

See also Portuguese Empire

Breast cancer, 1: 202t

Breathless/À bout de souffle (film),
1: 235

Briar pipes, 1: 157, 167; 2: 418

Bright leaf tobacco

in cigarettes, 1: 149; 2: 659

flue-cured, 1: 28, 149, 251;

2: 449, 659

in Navy plug, 1: 127

New Deal support for, 2: 524

processing of, 2: 659

British American Tobacco (BAT),
1: 92–95

acquisition of American Tobacco
Company, 1: 44, 95

Brazilian tobacco interests of,
1: 91

Chinese market of, 1: 93–94,
132–133, 254

Cunliffe-Owen's leadership of,
1: 94

formation of, 1: 43, 93–94, 147,
254

growth and international

expansion of, 1: 93–94, 254

as multinational corporation,
2: 438

postwar difficulties and
diversification of, 1: 94–95

British Anti-Tobacco Society, 1: 334

British Empire, **1: 96–101**

American colonial settlements of,
1: 96–97

Colonial Debts Act of 1732,
1: 98–99

- expansion of tobacco market in, 2: 641–642
 Navigation Acts of, 1: 96
 planters' debts to tobacco merchants, 1: 98–99, 98t
 price of tobacco and importation of, 1: 98t, 99–101; 2: 638, 639, 640, 641
 productivity of tobacco growers and, 1: 99–101
 re-export of tobacco to European countries, 2: 642, 642t
 taxes on Chesapeake tobacco, 1: 97; 2: 641
 Zimbabwe tobacco production and, 2: 699–701, 700t–701t
See also Chesapeake region
See also United Kingdom
 British South African Company, 2: 699
 Broadcast advertising
 banning of broadcast advertising, 1: 19–20; 2: 463, 594, 672
 shift from broadcast advertising to sponsorship, 2: 594–595, 691–693
 youth tobacco marketing on, 2: 690–691
See also Television
Broin v. Philip Morris Companies, 1: 312
 Brooks, Louise, 1: 231
 Brown & Williamson Tobacco Corporation
 advertising of Kool cigarettes, 1: 332
 confidential documents of, 1: 216, 310
 genetically modified Y-1 tobacco and, 1: 247
 product placement by, 2: 477–478, 692
 protection of documents by lawyers, 2: 626
 settlement of lung cancer lawsuit against, 1: 218
 Brown, Chuck, 1: 333
Brugmansia (Datura arborea), 1: 259, 260; 2: 518
Die Büchse der Pandora (film), 1: 231
 Buckingham cigarettes, 1: 331
 Bull Durham Tobacco, 1: 11, 13; 2: 497, 670
 Burley barns, 1: 71
 Burley tobacco
 air-curing of, 2: 448, 449
 expansion of, in United States, 2: 660
 Latin American production of, 2: 574
 in Navy plug, 1: 127
 White Burley variety of, 1: 246
 Burma (Myanmar), 2: 580, 581, 582
 Burney, Leroy, 1: 53
- C**
 Cabaret image, 1: 79
 Caffeine
 ban on coffee, in Ottoman Empire, 1: 355
 nicotine use related to, 1: 40
 smoking and coffee drinking, 1: 35–36
 Cage, Nicholas, 1: 235
 Califano, Joseph, 1: 54–55
 California
 clean indoor air legislation in, 2: 431, 537
 large-scale state tobacco control program of, 2: 434–435
 Smoke-Free Workplace Act, 2: 465
 warning label requirements, 2: 678
 California Environmental Protection Agency (CalEPA), 2: 514
 “Call for Philip Morris” slogan, 2: 407, 408
 Calumets, **1: 103–105**
 for cementing alliances, 1: 105; 2: 554
 ceremonial use of, 1: 103–104; 2: 553
 definition of, 1: 105
 examples of, 1: 104, 169
 prehistoric pipes associated with, 1: 69–70
 short-stemmed bowl of, 1: 105
 Calvert, George, 1: 120–121
 Camel cigarettes, **1: 105–107**
 advertising and marketing of, 1: 106, 106–107, 172; 2: 670, 690
 “Camel Scoreboard” promotion, 1: 332
 health concerns and marketing of, 1: 331
 Middle Eastern images in packaging of, 1: 359
 youth marketing of, 2: 690
See also Joe Camel
 Campaign for Tobacco-Free Kids, 1: 56
 Canada
 banning of tobacco sponsorships in, 1: 335
 freedom of speech and advertising restrictions in, 1: 21
 warning label requirements, 2: 677
- Canadian tobacco industry
 arts events sponsored by, 1: 331
 sports events sponsored by, 1: 332, 334
 Cancer
 additives and, 1: 9
 case control studies of, 1: 205–206
 early research on risk of, 1: 267–268
 insurance rates based on risk of, 1: 268–269
 mortality rates related to, 1: 205–207, 206
 relative risk of, 1: 200
 secondhand smoke as cause of, 1: 346; 2: 209–210, 210t, 513, 514, 538, 627
 smoking cessation for risk reduction, 1: 5–6
 tobacco combined with drugs and, 1: 41
 tobacco industry's response to evidence of, 1: 206–207, 298–299, 307–308, 323
 U.S. Surgeon General reports/statements on, 1: 53, 201, 201t–203t, 207, 208, 323; 2: 506
See also Carcinogens
See also Disease risk
See also Lung cancer
 “Cancer by the Carton” (Norr), 1: 208, 337; 2: 429
 Cannabis
 African consumption of, 1: 24
 cancer risk related to, 1: 41
 definition of, 1: 24
 tobacco smoking with, 1: 37, 41
 Cape Verde islands, tobacco production in, 2: 443
 Capital investment, definition of, 2: 530
 Caporal tobacco, 1: 248
 Caracas, tobacco trade of, 1: 110
 Carbon monoxide
 from bidi cigarettes, 2: 632
 in tobacco smoke, 2: 632
 Carcinogens
 additives as, 1: 9
 in chemically changed tobacco products, 1: 116
 definition of, 1: 9
 polynuclear aromatic hydrocarbons (PAHs) as, 2: 632, 633
 in secondhand smoke, 1: 209; 2: 512, 514, 538
 in smokeless tobacco, 2: 632
 tar as, 2: 506, 631, 631
 in tobacco smoke, 2: 632

- Carcinogens **CONTINUED**
 tobacco-specific nitrosamines (TSNAs) as, 1: 113; 2: 632
- Cardiovascular diseases
 links between smoking and, 1: 207–209
 mortality with, 2: 513
 secondhand smoke and, 1: 210; 2: 513
 Surgeon General's findings on, 1: 202*t*
- Caribbean, **1: 107–111**
 Caracas and Puerto Rican trade, 1: 110
 contraband trade in, 2: 542–544
 control of tobacco production by Spain, 1: 108–111; 2: 586
 crisis of late eighteenth-century trade and, 1: 111
 French tobacco colonies in, 1: 240–241
 non-Hispanic islands in, 1: 108
 plantations in, 2: 427–428
 Santo Domingo tobacco trade, 1: 109–110
See also Cuba
- Carmen* (Bizet), 1: 365; 2: 670, 681
- Carotte (carrot)-shaped tobacco, for nasal snuff, 1: 261–262; 2: 549
- Cartel
 American Tobacco Company as, 1: 42–43
 definition of, 1: 42
 Imperial Tobacco Company as, 1: 253–254
- Carter, Helena Bonham, 2: 672–673, 680
- Casablanca* (film), 1: 236, 330
- Casals, Pablo, 1: 367
- Castano group, class action litigation by, 1: 311–312
- Catherine de Medici, 2: 388, 611
- Catholic church
 banning of smoking in church, 1: 138, 168, 361; 2: 458
 communion and tobacco use, 1: 137–138
 condemnation of smoking, 2: 403
 conversion of Amerindians to Christianity, 1: 136–137
 financial support from tobacco, 1: 141–142, 187
 prohibition of smoking in Brazil, 2: 441
 tobacco use by clergy, 1: 137–138
See also Missionaries
- Catlin, George, catlinite named for, 1: 104
- Cause and effect. *See* Medical evidence (cause and effect)
- CDC (Centers for Disease Control and Prevention), 2: 495
- Celebrities
 on cigarette cards, 1: 14
 endorsement of tobacco products by, 2: 665, 690
 health-oriented testimonials by, 2: 671
 influence on smoking initiation, 1: 32
 lung cancer in, 2: 672
See also Film
See also Visual arts
- Center for Indoor Air Research (CIAR), 2: 516, 539, 626
- Centers for Disease Control and Prevention (CDC), functions of, 2: 495
- Central America. *See* South and Central America
- Cerebrovascular disease, 1: 202*t*
- Cervical cancer, 1: 202*t*
- Chairs, for smokers, 1: 163
- The Changing Cigarette: A Report of the Surgeon General*, 2: 507
- Chattel, definition of, 1: 124
- Chemistry of tobacco and tobacco smoke, **1: 111–116**
 in bidi cigarettes, 2: 577
 chemical analysis and product design, 1: 114–115; 2: 632–633
 chemical compounds in smoke, 1: 112, 112; 2: 390, 632
 curing method effect on, 1: 113
 health effects of product changes, 1: 115–116
 manufacturing and processing effects on, 1: 113–114
See also Additives
See also Toxins
- Cheroots, 2: 579, 580, 581
- Chesapeake region, **1: 117–124**
 absence of large towns in, 1: 123; 2: 640
 British taxes on tobacco in, 1: 197
 Civil War and end of slavery in, 1: 124; 2: 531
 contraband trade in, 2: 543–544, 544
 creole population in, 2: 638
 difficulties faced by colonizers of, 1: 118–119; 2: 637–638
 diversification of crops in, 2: 529, 640
 Dutch tobacco imports from, 1: 221
 expansion and contraction of production in, 2: 529–531
 export of tobacco from, 1: 121; 2: 525, 635, 636
 foundations of success in, 1: 119–120
 human cost of tobacco trade in, 2: 642–643
 indentured servants in, 1: 99, 123, 291–292; 2: 424, 637–638
 Maryland colony, 1: 120–121
 Navigation Acts and, 1: 96, 121
 overdependency on tobacco, 2: 640
 plantation model in, 2: 424, 427
 planters' debts to British merchants, 1: 98, 98–99
 political institutions in, 1: 119
 population of, 1: 122
 price of tobacco in, 1: 98*t*, 99–101; 2: 2: 640, 638, 639, 641
 private property (headrights) in, 1: 119
 productivity of tobacco growers in, 1: 99–101; 2: 638–639
 rivers in, for transporting tobacco, 2: 426
 settlement patterns in, 1: 122–123
 slavery in, 1: 99, 123–124, 292–293; 2: 526, 526–527
 tobacco cultivation in, 1: 121–122
 tobacco trade as basis for settlement of, 1: 96–97, 122–124; 2: 637–638
 Virginia colony, 1: 117–119, 118
- Chewing tobacco, **1: 125–128**
 baseball players and, 1: 126, 126, 173
 Brazilian warrior with, 2: 572
 carcinogens in, 2: 632
 current brands of, 1: 128
 in developing countries, 1: 195
 expectoration associated with, 2: 655–666
 fine-cut and long-cut tobacco for, 1: 128
 forms of, in India, 2: 577–578
 graduated product marketing by U.S. Tobacco, 1: 115–116
 Indian women's use of, 1: 195
 plug form of, 1: 126, 127
 popularity in United States, 1: 168; 2: 655
 references to, in popular music, 1: 372
 scrap tobacco in, 1: 127–128
 twist form of, 1: 127
 warning labels required for, 2: 676
 working-class use of, 1: 153–154
 youth marketing of, 1: 334
See also Smokeless tobacco

- Chibouk (Middle Eastern pipe), 1: 355; 2: 420
- Children
 advertising targeted to, 1: 15, 15, 334–335
 Campaign for Tobacco-Free Kids, 1: 56
 secondhand smoke effects on, 1: 209, 210*t*; 2: 513
 smoking by Indonesian Dani child, 1: 198
 as tobacco workers, 1: 263, 354; 2: 658
See also Youth marketing
See also Youth tobacco use
- Children's Act of 1908, 1: 334; 2: 694
- China
 advertising of tobacco in, 1: 15
 British American Tobacco market in, 1: 93–94, 132–133, 254
 cigarette smoking in, 1: 132–135, 133
 Communist Party and tobacco production in, 1: 134
 Jesuit missionaries in, 1: 362
 map of, 1: 130
 mortality due to tobacco in, 1: 205, 211
 names for tobacco, 1: 129
 opium use and anti-opium movement in, 1: 132–135
 pipes used in, 1: 131–132; 2: 420–421
 snuff usage in, 1: 131–132; 2: 550, 613
 tobacco epidemic in, 1: 211
 tobacco imports for blending, 2: 645
See also Chinese medicine
- Chinese medicine
 debates over therapeutic use of tobacco, 2: 613–614
 materia medica of eighteenth and nineteenth century, 2: 613
 perceived benefits of tobacco in, 1: 130–131
 seventeenth century, 2: 612–613
 twentieth century, 2: 614–615
 yin and yang cosmology in, 2: 612
- “Chippers,” and resistance to tobacco addiction, 2: 469
- Christianity, **1: 135–143**
 changing views on tobacco, 1: 360–361
 condemnation of smoking, 2: 403
 contemporary antitobacco efforts, 1: 142–143
 conversion of Amerindians to, 1: 136–137
- financial benefits of tobacco for, 1: 141–142, 187
 Protestant stance on tobacco use, 1: 139–141
 tobacco as diabolical idolatry, 1: 136–137
See also Catholic church
See also Missionaries
- Chronic obstructive lung disease (COPD), 1: 202*t*
- Chutta
 in India, 2: 579
 reverse-*chutta* smoking, 2: 583, 684
- CIAR (Center for Indoor Air Research), 2: 516, 539, 626
- Cigamod (*Cigarrera La Moderna*), 1: 353
- Cigar. *See* Cigars
- Cigar bars, definition of, 2: 535
- Cigar boxes
 advertising on, 1: 11; 2: 669
 Good Shot cigars, 1: 78
- Cigar Makers International Union, 1: 266
- Cigar-store figures, 1: 163–164, 164; 2: 497
- Cigarette cards
 as advertising medium, 1: 11–12
 of Allen and Ginter firm, 1: 73
 athletes on, 2: 597
 classical music celebrities on, 1: 368
 as collectibles, 1: 327; 2: 696
 definition of, 1: 11
 Duke, Buck, advertising use by, 1: 79, 327
 scantily clad women on, 1: 11–12, 32, 79; 2: 681
 women theatre stars on, 1: 14
- Cigarette Labeling and Advertising Act
 ban on radio and television advertising, 2: 672
 bypassing of, by tobacco industry, 2: 673
 preemption of other regulations by, 2: 429–430, 675
 warning label required by, 2: 429, 672, 675
- Cigarette warning labels. *See* Warning labels
- Cigarettes, **1: 144–149**
 accessories for, 1: 159, 160; 2: 568
 addiction due to, 1: 3–5
 additives in, 1: 6–10
 advantages (convenience) of, 1: 168–169
 Bright leaf tobacco in, 1: 149; 2: 659
- China, 1: 132–135, 133
 class differences among smokers, 1: 154
 cost of, consumption related to, 1: 184, 184*t*
 disclosure of tar and nicotine levels in, 2: 506, 619
 as dominant mode of consumption, 1: 171, 171–173
 as drug delivery system, 1: 3–5, 82
 effeminacy associated with, 2: 452, 562–563
 feminized versions of, 2: 452, 453, 685
 fire-safe cigarettes, **1: 238–239**; 2: 493
 as gateway to alcohol/drug use, 1: 39, 40, 46–47
 Gitanes/Gauloises, 1: 241, 248–250, 249, 250
 global marketing and sales of, 1: 146–147, 251–256, 265
 hand-rolled, 1: 144–145, 169; 2: 452
 immigrants associated with, 2: 452
 Indian production of, 2: 577
kretek, 1: 195, 287–289; 2: 581
 mass production and consumption of, 1: 145–146, 251–253, 264; 2: 452–454, 453, 564, 659
 mental functions enhanced by, 2: 562, 669
 menthol cigarettes, 1: 63, 228, 348–349; 2: 584
 Middle Eastern consumption of, 1: 358–359
 mildness as selling point for, 2: 453
 modern cigarettes, 2: 454–455
 Native American types of, 2: 379
 noncombusting types of, 2: 493
 opposition to, by antismoking movement, 1: 45–47, 47, 147–148
 origins of, 1: 144–145, 168
 ostracism of smokers, 2: 404, 404
 purchase of, by pack vs. carton, 2: 497, 499
 smoking by soldiers during world wars, 1: 32, 49–50, 148, 172; 2: 568–569, 569
 as supplementary tool, 2: 562
See also Bidi cigarettes
See also Camel cigarettes
See also “Light” and filtered cigarettes
See also Lucky Strike cigarettes
See also Marlboro cigarettes

- Cigarettes **CONTINUED**
 See also Product design
 See also Prohibitions
 See also "Safer" cigarettes
 See also Smoking restrictions
 See also Virginia Slims
Cigarrera La Moderna (Cigamod), 1: 353
Cigarrera La Tabacalera Mexicana (Cigatam), 1: 353
 Cigars, **1: 150–153**
 accessories for, 1: 159, 159–160
 American production of, 1: 151–152
 apprenticeships for
 manufacturing of, 1: 266
 British production of, 1: 151
 cigar-store figures, 1: 163–164, 164
 companion set for, 1: 160
 Connecticut Valley leaf for, 2: 449, 655
 current consumption of, 1: 152–153
 dispensers for, 1: 160
 European import of South American tobacco for, 2: 573
 humidors for, 1: 163
 Indonesian cigar wrappers, 2: 580
 Kipling, Rudyard, comparison of cigars to harem, 2: 669, 680–681
 lighters (lamps) for, 1: 159, 159–160
 machine-production of, 1: 266
 manufacturing of, 1: 265–266
 in Mayan artifacts, 1: 340, 341
 McCall, June, as "Miss Perfecto," 2: 682
 origins of, 1: 150–151, 167–168
 in popular music, 1: 372
 popularity after Napoleonic wars, 2: 644
 resurgent popularity of, in England, 2: 561
 sexual images associated with, 1: 78; 2: 669, 680–681, 682
 sik'ar as origin of "cigar," 1: 150, 167
 smoking of lit end of (reverse-*chutta*), 2: 583, 684
 South and Central American cigar makers, 2: 573
 warning labels requirements, 2: 676, 678
Cigatam (*Cigarrera La Tabacalera Mexicana*), 1: 353
 Ciliatotoxic agents
 definition of, 1: 114
 in tobacco smoke, 2: 632
 Cipollone, Rose, 1: 310
Cipollone v. Liggett Group, Inc., 1: 309–310
 Citrate, definition of, 1: 238
 Civil disobedience, against tobacco industry, Australia, 2: 620
 Civil War
 emancipated slaves as soldiers in, 2: 531
 pipes and tobacco accessories from, 1: 67
 Class, **1: 153–155**
 aristocratic snuff use, 1: 153; 2: 548, 549, 559–560
 British smoking habits and, 2: 622
 cheap cigarettes and, 1: 154, 154
 cigarette availability to lower social classes, 1: 78
 individualism and smoking, 1: 153
 Japanese tobacco consumption, 1: 279
 sailors as lower-class citizens, 2: 510, 510–511
 of women smokers, 2: 680, 683
 working-class tobacco use, 1: 153–154; 2: 694
 Class action litigation, 1: 311–312, 312
 Classical music. *See* Music, classical
 Clay pipes
 cases for, 1: 158–159; 2: 417
 colonial American, 2: 416–417
 developing countries, 1: 195
 European, 2: 416, 417
 Clean indoor air legislation in Australia, 2: 621
 California's Smoke-Free Workplace Act, 2: 465
 international politics and, 2: 438
 municipal ordinances as, 2: 431–432, 432
 states with indoor air legislation, 2: 516, 537
 Clothing, for smokers, 1: 151, 162, 163
 Clove cigarettes. *See* *Kretek*
 Coalition on Smoking OR Health, 1: 56
 Cocaine, 1: 41
 Cocoa, as tobacco additive, 1: 7
 Coffee
 ban on, in Ottoman Empire, 1: 355
 dissemination of, tobacco diffusion vs., 2: 635
 relationship between nicotine and, 1: 40
 smoking and coffee drinking, 1: 35–36
 "Coffin nails," 1: 46; 2: 462, 696
 Colbert, Jean-Baptiste, 1: 241–242
 Colonial Debts Act of 1732, 1: 98–99
 Colonialism and imperialism. *See* British Empire; Caribbean; Chesapeake region; Cuba; Dutch Empire; French Empire; Globalization; Portuguese Empire; Spanish Empire; Trade
 Columbus, Christopher, 2: 585, 586
 Comedy, in English Renaissance literature, 1: 225
Compañía Arrendataria de Tabacos (CAT), Spain, 2: 589
 Comprehensive Smokeless Tobacco Health Education Act of 1986, 2: 676
 Concerts, smoking at, 1: 366, 366–368; 2: 534
 Concessions, definition of, 1: 272
 Conestoga cigar (stogie), 1: 151
 Conglomerate, definition of, 1: 256
 Connecticut, tobacco control legislation in, 2: 433
 Connecticut Valley leaf, 2: 449, 655
 Connoisseurship, **1: 155–166**
 Arents Collection as, 1: 73–76
 cigar accessories, 1: 159, 159–160
 cigar-store figures, 1: 163–164, 164
 cigarette accessories, 1: 159, 160; 2: 568
 Civil War accessories, 1: 67
 clothing, 1: 162, 163
 definition of, 1: 155
 furniture, 1: 163
 historical significance of tobacco use, 1: 164
 Inuit ash and quid boxes, 1: 69
 lighters, 1: 164
 match safes, 1: 164
 pipes and pipe accessories, 1: 156–159, 157, 158, 165
 snuff accessories, 1: 160–163, 161; 2: 549–550, 560, 667
 types of tobacciana, 1: 156
See also Accessories
 Consolidation, definition of, 1: 85
 Consumption (demographics), **1: 167–184**
 advertising and cigarette consumption, 1: 171, 171–173
 Africa, 1: 29
 age level of smokers and, 1: 31–33
 Australia, 2: 619
 changes in per capita consumption (1990–2000), 1: 183–184, 183t, 184t
 cigar consumption, 1: 152–153

- colonial Brazil, 2: 441–442
 cost of cigarettes and, 1: 184, 184t
 demographic of quitting, 1: 176, 176–177
 developing countries, 1: 194–195
 early twentieth century, 1: 31–33; 2: 462
 England and Wales, in seventeenth century, 2: 525–526
 health considerations in, 1: 173–174, 174
 Japan, 1: 277–280
 later twentieth century, 1: 33; 2: 471, 684
 male and female differences in smoking initiation, 1: 175, 175–176
 male-female smoking rates, 1: 177t, 178–181, 178t, 180t; 2: 684
 methods of consuming tobacco, 1: 167–169
 Middle East, 1: 358–359
 Nazi Germany, 2: 384
 Oceania, 2: 395
 origins of tobacco consumption, 1: 170
 peak per capita consumption, 1: 179t, 180t, 182
 per capita consumption during 2000, 1: 181t, 182–183
 per capita consumption in U.S. (1880–1950), 1: 171, 172
 Portuguese colonies and Portugal, 2: 441–442
 prohibition effects on, 2: 462, 465
 rising proportion of women smokers, 2: 684–685
 South Asia, 2: 577–579, 578
 starting and quitting patterns in U.S., 1: 175, 175–177, 176, 177
 tobacco control events and per capita consumption, 2: 430, 430
 trends in consumption (1970–2000), 1: 179t, 180t, 181–182, 181t
 in World War I, 1: 32, 172; 2: 568–570
 worldwide patterns of smoking, 1: 177–181
 worldwide spread of tobacco consumption, 1: 170–171
 Contraband trade
 definition of, 1: 110
See also Smuggling and contraband
- Control of tobacco use. *See* Antismoking legislation; Regulation of tobacco products in United States; Smoking restrictions; Tobacco control
- Convenience stores
 tobacco sales in, 2: 498
See also Retailing
- Cooperative(s)
 African tobacco growers, 1: 27
 definition of, 1: 27
- COPD (chronic obstructive lung disease), 1: 202t
- Cope's Tobacco Plant, A Monthly Periodical, Interesting to the Manufacturer, the Dealer, and the Smoker*, 1: 304
- Coppola, Sophia, 1: 237
- Corn, cultivation by Native Americans, 2: 379, 380
- Coronary heart disease, 1: 202t, 210
- Cosmology, of Native Americans, 2: 554–555, 555
- Cotton, Charles, 1: 225
- Cotton Club cigarette girls, 1: 330
- Cotton farming, in United States, 2: 656–657
- Council for Tobacco Research (CTR), 1: 217; 2: 429, 476
- A Counterblaste to Tobacco* (King James I of England), 1: 75, 83, 139, 303; 2: 459
- Coupons, on cigarettes packages, 1: 327–328
- Covington and Burling (law firm), 2: 627
- Cowboy, in Marlboro cigarettes
 advertising, 1: 338, 338; 2: 407, 671, 691
- Crack cocaine, cancer risk related to, 1: 41
- Creation stories, of Native Americans, 2: 375
- Creoles
 in Chesapeake region, 2: 638
 definition of, 1: 137
- Crimean War, 2: 667
- Cross Cuts (cigarettes), 1: 332
- Crow Tobacco Planters, 2: 554
- Cruella De Vil (film character), 1: 234
- CTR (Council for Tobacco Research), 1: 217
- Cuba, **1: 186–190**
 cigar production in, 1: 150–151, 152, 188
 decline of tobacco industry during eighteenth century, 1: 111
 financing of Spanish purchases from, 1: 190
- land conflicts and tobacco
 production in, 1: 189–190
 protection of tobacco trade by Spain, 1: 109, 150–151, 187
 quality of tobacco from, 1: 186
 sharecropping in, 1: 294
 slave labor in, 1: 292
 Spanish monopoly of tobacco trade in, 1: 187–189
 tobacco factory labor in, 1: 295–296
See also Spanish Empire
- Cullman, Joseph F., III, 1: 21
- Cultivation of tobacco. *See* Production of tobacco; United States agriculture
- Cunliffe-Owen, Hugo, 1: 94
- Curing. *See* Processing
- Cytrel (tobacco substitute), 2: 507
- D**
- Dandies
 posturing of, 1: 162
 snuff use by, 2: 548
See also Gallants
- Dannemann (tobacco company), 1: 90, 92
- Dannemann, Gerhard (Geraldo), 1: 89
- DAP (diammonium phosphate), in Marlboro cigarettes, 1: 10
- Dark tobacco. *See* Black tobacco
- Darnel, Linda, 2: 671
- Datura arborea* (*Brugmansia*), 1: 259, 260; 2: 518
- Davies, John, 1: 224, 225
- Davis, Bette, 2: 564, 670–671
- Davis, Sammy, Jr., 1: 332
- de Jerez, Rodrigo, 2: 403
- Dead Souls* (Gogol), 2: 534
- Dealer promotions, 1: 328
- Dean, James, 1: 235, 235
- Death
 and resurrection, in shamanistic initiation rituals, 2: 519–520
 smoking as defiance of, 2: 564–566
See also Mortality
- Decroix, Émile, 1: 59
- Deer tongue extract, 1: 9
- Defiance
 smoking as act of, 2: 565–566
See also Rebelliousness
- Dekker, Thomas, 1: 224
- Delaware, tobacco control legislation in, 2: 433
- Demographics. *See* Consumption (demographics)
- Denmark, snuff use in, 2: 550

INDEX

- Depressant
 alcohol as, 1: 40
 definition of, 1: 40
- Depression, smoking associated with, 2: 470
- Developing countries, **1: 193–198**
 consumption patterns in, 1: 194–195
 cultivation of tobacco in, 1: 196–197
 forms of tobacco consumed in, 1: 195, 196, 198
 health impacts of tobacco in, 1: 195–196
 mortality due to tobacco in, 1: 193, 205, 211, 212
 street vendors as tobacco retailers, 2: 498
 tobacco control in, 1: 197–198
 tobacco industry targeting of, 1: 254–255; 2: 438
 warning labels for cigarettes, 2: 676–677
- Diammonium phosphate (DAP), in Marlboro cigarettes, 1: 10
- Dietrich, Marlene, 1: 231, 232, 234; 2: 564, 670
- Diffusion of tobacco
 Africa, 1: 24–25, 25
 to Europe, 2: 634–635
 by missionaries, 1: 362–363
 Native American tobacco, 2: 377, 378
 to Oceania, 2: 394–395
 to Philippines, 2: 410–412
 by sailors, 2: 509–511, 634
 by shamans, 2: 518–519
 worldwide spread of tobacco consumption, 1: 170–71
See also Consumption (demographics)
See also Origin of tobacco
- al-Din Shah, Nasir, 1: 272, 273, 273
- Disease, **1: 199–212**
 cardiovascular diseases, 1: 202*t*, 207–209, 210; 2: 513
 in Chesapeake settlements, 2: 637–638
 in developing countries, 1: 193, 195–196
 doctors' resistance to smoke-related disease evidence, 1: 216, 321–322
 global tobacco epidemic of future, 1: 210–212, 212
 health effects of active smoking, 1: 201–203, 201*t*–203*t*
 health expenditures for, user fees for payment of, 2: 607–608
 insurance for, 1: 267–269
 medical evidence (cause and effect) for, 1: 321, 343–347
 psychopathology related to smoking, 2: 470
 secondhand smoke as cause of, 1: 209–210, 210*t*; 2: 512–516, 515, 537–538, 624, 627
 smoking cessation for prevention of, 1: 5–6
 Surgeon General's list of smoke-related diseases, 1: 201, 201*t*–203*t*
 tobacco use by doctors and, 1: 214–215
See also Cancer
See also Disease risk
See also Lung cancer
See also Mortality
See also Toxins
- Disease risk
 additives in, 1: 9–10
 of chemically changed tobacco products, 1: 115–116
 early recognition of, 1: 50–51
 early research on cancer risk, 1: 267–268
 emerging awareness of, in U.S., 1: 208
 global tobacco epidemic and, 1: 210–212, 212
 insurance rates for nonsmokers based on, 1: 268–269
 Jewish prohibition of tobacco use due to, 1: 282–283
 main types of, 1: 84
 marketing of cigarettes and, 1: 331
 medical evidence (cause and effect) in, 1: 321, 343–347
 methods of smoking for risk reduction, 2: 506
 prohibition of tobacco use based on, 2: 464–465
 relative risk of cancer, 1: 200
 scientific verification of, 1: 52–53
 secondhand smoke in, 1: 209–210, 210*t*; 2: 346–347, 512–516, 515, 537–538, 624, 627
 smoking cessation for cancer risk reduction, 1: 5–6
 tobacco combined with drug use in, 1: 41, 46
 tobacco industry's research on, 2: 625–628
 tobacco industry's response to evidence of, 1: 206–207, 298–299, 307–308, 323
See also Disease
See also Secondhand smoke
- Dispensers, for cigars and cigarettes, 1: 160
- Dispersal of tobacco. *See* Diffusion of tobacco
- Diversification, definition of, 1: 256
- Divinity, tobacco associated with, 1: 224
- DOC (Doctors Ought to Care), 1: 55–56
- Doctors, **1: 214–216**
 resistance to smoke-related disease evidence, 1: 216, 321–322
 tobacco use by, 1: 214–215
- Doctors Ought to Care (DOC), 1: 55–56
- Documents of tobacco industry, **1: 216–219**
 addictive nature of cigarettes in, 1: 4; 2: 494, 627
 availability on Internet, 1: 218; 2: 437
 Cipollone case and access to, 1: 309–310
 as courtroom evidence, 1: 217–218
 exposure of, 1: 218–219; 2: 625
 hiding and protection of, 2: 626–627
 on industry-sponsored Websites, 1: 218
 MSA requirement for release of, 1: 218; 2: 437
See also Litigation
- Doll, Richard, 1: 199–200, 206, 207, 344
- Dominican Republic
 export of cigar tobacco from, 2: 573
 newspaper description of tobacco trade in, 2: 573
 Santo Domingan tobacco trade, 1: 109–110
 tobacco traders in, 2: 572
- Dopamine
 definition of, 1: 40
 tobacco effects on, 1: 40; 2: 389
- Douglas, Michael, 1: 235
- Doyle, Arthur Conan, 1: 270; 2: 534
- Drama, in English Renaissance literature, 1: 224
- Drugs
 addiction to, 1: 2–3
 cannabis as, 1: 24, 37, 41
 crack cocaine as, 1: 41
 hallucinogens as, 1: 259–260, 341; 2: 518, 520, 555
See also Drugs, tobacco combined with
See also Opium

- Drugs, tobacco combined with, **1: 35–41**
 alcohol use with, 1: 35–36, 36, 37, 38–39
 betel chewing with, 1: 36–37
 biosocial linkages in, 1: 38
 cannabis with, 1: 37
 difficulty of quitting tobacco vs. drugs, 2: 468
 gateway hypothesis in, 1: 39, 40, 46–47
 health consequences of, 1: 41
 history of, 1: 35–37
 opium with, 1: 37
 scientific research on, 1: 39–40
- Du Maurier (tobacco company), 1: 334, 336
- Duke, James Buchanan
 of American Tobacco Company, 1: 42, 42–45
 licensing of Bonsack Cigarette Machine by, 1: 146, 171; 2: 452
 “Plug Wars” and, 1: 127
 promotion of tobacco to retailers, 2: 497
 use of cigarette cards for advertising, 1: 79, 327
- Dupin, Armandine Aurore Lucille (George Sand), 2: 668, 680, 682
- Dutch Empire, **1: 219–222**
 African tobacco trade of, 1: 24
 Caracas and Puerto Rican tobacco exports to, 1: 110
 Caribbean contraband trade of, 2: 543
 Chesapeake tobacco trade of, 2: 544
 clay pipes made in, 2: 417
 colonial tobacco cultivation by, 1: 220, 220–221
 cultivation of tobacco in Holland, 2: 635
 decline of tobacco trade in, 1: 222
 re-export of tobacco from British ports, 2: 642, 642*t*
 taxation of tobacco by, 1: 222
 tobacco trade and industry in, 1: 221
- Duty
 definition of, 2: 502
 duty-free cigarettes in World War I, 2: 569, 569
 duty-free vendors, 2: 502
- Dysphoria, definition of, 2: 562
- E**
- Earhart, Amelia, 1: 319
 Eclipse (cigarette), 2: 493
 Ecology, definition of, 1: 246
- Econometrics, definition of, 1: 22
 Edison, Thomas, 1: 46–47
 Education, demographic differences in quitting smoking, 1: 176, 177
The Effects of Intemperance (Steen), 2: 666
Die Ehe der Maria Braun/The Marriage of Maria Braun (film), 1: 234–235
 Ejrup, Borje E.V., 2: 483–484
 Elbow pipes, 1: 69
 Emancipation
 as advertising theme, 1: 16
 manumission of slaves, 2: 529
 of slaves, 2: 531–532
 Embryonic, definition of, 1: 254
 Emphysema, 1: 203
 Endometrial cancer, 1: 202*t*
 English Renaissance literature, **1: 223–226**
 male and female smokers depicted in, 1: 225
 medical use of tobacco in, 1: 223–224
 recreational use of tobacco in, 1: 224–225
 Environmental Protection Agency report on secondhand smoke, 1: 346–347; 2: 514
 tobacco industry lawsuit against, 2: 516
 Environmental tobacco smoke. *See* Secondhand smoke
 Ephemeral, definition of, 1: 156
 Epidemiological, definition of, 1: 51
 Epidemiological studies
 case control studies in, 1: 205–206
 causality criteria for, 1: 345–346
 of “light” and filtered cigarettes, 1: 299, 300–301
 of lung cancer, 1: 200–201, 207, 323–324, 344; 2: 622–623
 of secondhand smoke, 2: 513–514
 statistical significance of, tobacco industry and, 2: 515
- Epidemiology
 causation and mid-twentieth-century epidemiology, 1: 344–346
 definition of, 1: 200
 of lung cancer, 1: 200
 “Epigram 82. Of Tobacco” (Davies), 1: 224, 225
- Epinephrine
 definition of, 2: 389
 shamanistic vision and, 2: 521
 stimulation by tobacco, 2: 389
- Eroticism. *See* Sexual symbolism of smoking
 Esophageal cancer, 1: 202*t*
- Estado da India* (Portuguese colonies), 2: 441, 445, 446
 Ethnic groups, **1: 226–229**
 smoking among, 1: 226–227
 as target of tobacco advertising, 1: 228, 228–229
- Ethnicity, definition of, 1: 226
 Ethnohistory, definition of, 1: 67
 Eugenics, and antismoking movement, 1: 48
 Eugenol
 definition of, 1: 195
 released from *kreteks*, 1: 195
- European colonialism. *See* British Empire; Caribbean; Chesapeake region; Cuba; Dutch Empire; French Empire; Globalization; Portuguese Empire; Spanish Empire
 European Common Market, 2: 646
 European Union
 Common Agricultural Policy (CAP) of, 2: 646
 warning label requirements, 2: 677
- Evin law (France), 1: 60
 Exalt (noncombusting cigarette), 2: 493
 Expanded tobacco
 definition of, 1: 238
 in modern cigarettes, 2: 454
- F**
- Factoría de Tabacos de La Habana*, 1: 187, 189
Faerie Queene (Spenser), 1: 223, 303
 Far East. *See* China; Japan
 Farm labor. *See* Labor
 Farm subsidies. *See* New Deal
 Fassbinder, Rainer Werner, 1: 234
 Fatwa
 definition of, 1: 273
 permission of tobacco use by, 1: 355
 FDA. *See* United States Food and Drug Administration (FDA)
 Federal Food, Drug, and Cosmetic Act, 2: 493
 Federal Trade Commission (FTC)
 testing method for tar and nicotine levels, 1: 5
 warning labels proposed by, 2: 675
- Females. *See* Women
 Femmes fatales
 in films, 1: 233–235, 234
 and respectability of women smokers, 2: 680
 Spanish women as, 2: 670
 Fems (cigarettes), 2: 685
 Fernö, Ove, 2: 488, 489

- Fight Club* (film), 2: 672
 Figurine pipes, 1: 69
 Film, **1: 231–237**
 acceptability of smoking
 enhanced by, 1: 79
 femme fatale role in, 1: 233–235, 234
 glamorization of smoking in, 2: 564, 670–671, 671
 humanness portrayed in, 1: 236–237
 meaning of tobacco in, 1: 231–233
 product placement as advertising in, 1: 13, 232; 2: 477–478, 691–692
 rebel role in, 1: 235, 235
 tobacco industry's influence on, 1: 232–233
 vamp as rebel in, 1: 235–236
 See also Visual arts
 Film noir
 characteristics of, 1: 231
 definition of, 1: 231
 smoking in, 2: 671, 671
 Filtered cigarettes. *See* "Light" and filtered cigarettes
 Fine arts events, tobacco industry sponsorship of, 1: 331–332, 333
 Finely cut tobacco
 for chewing tobacco, 1: 128
 kizami, in Japan, 1: 279
 Fire-curing of tobacco, 2: 449, 655
 Fires
 fire-safe cigarettes, **1: 238–239**, 239
 noncombusting types of cigarettes, 2: 493
 tobacco-related, San Nicolas Convent, Philippines, 2: 412
 Flavorants. *See* Additives
 Flight attendants, class action lawsuit by, 1: 34, 312
 Florida, clean indoor air legislation in, 2: 431, 433
 Flue-cured tobacco
 black Kentucky tobacco, 1: 285
 Bright leaf tobacco, 1: 28, 149, 251; 2: 449, 659
 chemistry of, 1: 113
 definition of, 1: 28
 Latin American production of, 2: 574
 Malawi, Africa, 1: 28
 in modern cigarettes, 2: 454
 New Deal price supports for, 2: 385
 process of curing, 1: 28; 2: 449–450, 659
 production in foreign countries, 1: 255
 tax revenues from tobacco, 1: 243
 tobacco imports from U.S., 1: 243
 See also France
 Freud, Sigmund, 1: 270; 2: 667
 FTC. *See* Federal Trade Commission (FTC)
Fumeuse (smoking chair), 1: 163
 Furniture, for smoking, 1: 163
- G**
 Gallants
 definition of, 1: 2
 in English Renaissance literature, 1: 224
 manner of smoking and tobacco accessories of, 2: 559, 560
 snuff use by, 2: 550
 See also Dandies
 Gandhi, Mahatma, 2: 575–576
 Gant, Harry, 1: 334
 Gardening, of ornamental tobacco, 2: 2: 618; **2: 616–618**; 2: 617
 Gas phase of smoking, 1: 112
 GASP (Group Against Smoking Pollution), 1: 54, 56; 2: 536
 Gaston, Lucy Page, 1: 48; **1: 49**; 1: 141
 Gauloises cigarettes, **1: 248–250**
 advertising for, 1: 241
 Disque Bleu variety of, 1: 249, 249
 Gender. *See* Masculine identity; Men; Sexual symbolism of smoking; Women
 Genetic modification, **1: 245–248**
 commercial efforts in, 1: 245–247, 246
 for controlling nicotine level, 1: 247
 hybridization in, 1: 246
 Genetic ("race") poison, tobacco as, 1: 47–48, 322; 2: 383
 Germany
 Bahian tobacco monopoly, 1: 90
 literature about tobacco, 1: 304–305
 seventeenth- and eighteenth-century music in, 1: 365
 wood *gesteckpfeife*, 2: 415
 See also Nazi Germany
 Gitanes cigarettes, **1: 248–250**; 1: 250
 Glamorization of smoking. *See* Celebrities; Film; Visual arts
 Globalization, **1: 251–256**
 British American Tobacco and, 1: 254–255
 cartels and Tobacco War in, 1: 253–254
- Food
 sacramental, tobacco as, 2: 518, 521–522
 See also Appetite suppression
 Food and Drug Administration (FDA). *See* United States Food and Drug Administration (FDA)
A Fool There Was (film), 1: 233
 Framework Convention on Tobacco Control
 advertising restriction as requirement of, 1: 23
 international politics and, 2: 438–439, 439
 provisions of, 2: 438, 495
 warning label requirements of, 2: 677–678
 Framingham Heart Study, 1: 208
 France
 antismoking movement in, **1: 59–60**
 cigarettes named by, 1: 144
 clay pipes made in, 2: 416
 Gitanes/Gauloises cigarettes, 1: 248–250, 249–250
 "le smoking" (smoking jacket) in, 1: 151
 literature about tobacco, 1: 304–305
 monopoly of tobacco as alternative to prohibition, 2: 460
 re-export of tobacco from British ports, 2: 642, 642t
 SEITA for maximizing tobacco industry in, 1: 244
 seventeenth- and eighteenth-century music in, 1: 365
 size of tobacco factories in, 1: 263
 smoking restriction in, 2: 539
 smuggling in, 2: 545–546
 snuff use in, 2: 548
 tobacco cultivation and production in, 1: 243–244
 See also French Empire
 Franciscan missionaries, 1: 361
 Fredrickson, Donald T., 2: 484
 Freebase nicotine, 1: 4, 113
 Freedom of speech, advertising restrictions and, 1: 21
 French Empire, **1: 240–244**
 African colonies of, 1: 244
 American revolution and tobacco policy of, 1: 243
 Caribbean tobacco colonies of, 1: 240–241
 local vs. colonial tobacco production, 1: 243–244
 North American tobacco colonies of, 1: 242–243
 royal monopoly of tobacco in, 1: 241–242

- cigarette marketing and,
1: 146–147, 265
- foreign investments by tobacco
companies, 1: 253
- global tobacco oligopoly in,
1: 255–256
- international politics and,
2: 438–439
- marketing methods and, 1: 254
- mass production of cigarettes
and, 1: 251–253
- modern global industry in, 1: 256
- smoke-related diseases associated
with, 1: 210–212, 212
- spread of flue-cured leaf tobacco
and, 1: 255
- See also* American Tobacco
Company
- See also* British American Tobacco
(BAT)
- See also* Industrialization and
technology
- See also* Philip Morris
- Glover, Danny, 2: 478
- Goa, tobacco trade of, 2: 445–446,
575
- Godard, Jean-Luc, 1: 235
- Gogol, Nikolay, 2: 534
- Goh, Jessica, 2: 457
- Golf, sponsorship by tobacco
industry, 1: 334
- Goodness, as theme of *Lost in
Translation*, 1: 237
- Gore, Al, 2: 457
- Great Britain. *See* United Kingdom
- Great Depression
- New Deal programs and,
2: 385–387
- sharecropping system and, 2: 524
- tobacco leaf quota during, 2: 660
- Green, John R., 2: 497
- Greer, Jane, 2: 671
- Group Against Smoking Pollution
(GASP), 1: 54, 56; 2: 536
- Guerilla warfare, definition of, 1: 80
- Gum, nicotine, 2: 488–489
- Gutkha*, 2: 578, 578
- Gutta-percha
- definition of, 1: 164
- pipes made from, 2: 415
- H**
- Hallucinogens, **1: 259–260**
- in Mayan ceremonial tobacco use,
1: 341
- Nicotiana rustica* as, 2: 555
- ritual use of, 1: 259–260
- shamanistic use of tobacco as
hallucinogen, 1: 259, 260, 341;
2: 518, 520, 555
- types of hallucinogenic plants,
1: 259
- Harem
- in cigarette advertising, 2: 669,
670
- Kipling, Rudyard, comparison of
cigars to, 2: 669, 680–681
- smoking practices in, 1: 356, 357,
358
- Hats, for smokers, 1: 163
- Havana cigars, 1: 150, 151
- Headrights, in Chesapeake colonies,
1: 119
- Health claims for tobacco,
unregulated, 2: 492, 493
- The Health Consequences of
Involuntary Smoking* (U.S.
Surgeon General), 1: 34; 2: 514
- Health insurance. *See* Insurance
- Health risks of smoking. *See*
Disease risk
- Health use of tobacco. *See*
Therapeutic use of tobacco
- Heart disease. *See* Cardiovascular
diseases
- Heathen(s)
- definition of, 1: 136
- Native Americans as, 2: 559
- slaves considered as, 2: 527
- tobacco viewed as heathen habit,
1: 361; 2: 441
- Hegemony, definition of, 1: 44
- Helmar Turkish cigarettes, 1: 145;
2: 563
- Hemminger, Graham Lee, 2: 672
- Henbane (*hyoscyamus*), tobacco vs.,
1: 86–87
- Herb of Nicot, 2: 388
- See also* Nicot, Jean
- Hill, Austin Bradford
- “Bradford Hill criteria” named for,
1: 346
- criteria for causal relationships,
1: 345–346
- epidemiologic studies of lung
cancer, 1: 206, 207, 344
- Hill, George Washington
- chairman of American Tobacco
Company, 1: 44
- Lucky Strike advertising
campaign and, 1: 318, 328,
335–336
- Hill, Percival S., 1: 44
- Hirayama, Takeshi, 2: 513–514,
515, 624, 627
- Hispanic Americans
- smoking prevalence among,
1: 227
- as target of tobacco marketing,
1: 228–229
- Hoffman, Frederick L., 1: 267–268
- Hoffmann, Dietrich, 1: 114
- Hogshead
- definition of, 1: 119
- storage and shipping of tobacco
in, 2: 655
- Holders, for cigarettes, 1: 160
- Holland. *See* Dutch Empire
- Holmes, Sherlock, 1: 270; 2: 534
- Homes, smoking restrictions and,
2: 540
- Hookahs. *See* Water pipes (hookahs)
- Hopkins, Miriam, 1: 234
- Houses, of tenant farmers, 1: 71
- Hubble-bubble (water pipes),
1: 167, 195; 2: 420
- Hughes, Lloyd “Spud,” 1: 348
- Humanness, portrayal in films,
1: 236–237
- Hume, Tobias, 1: 226
- Humidors, for cigars, 1: 163
- Humoral theory
- definition of, 1: 360
- Galen’s four humors, 2: 611, 611
- Monardes’ health claims based
on, 2: 610–611
- See also* Therapeutic use of
tobacco
- Hunger suppression. *See* Appetite
suppression
- Hybridization
- definition of, 1: 246
- of ornamental tobacco, 2: 617,
618
- Hydraulic, definition of, 1: 127
- Hydraulic tobacco presses, 1: 263
- Hydrocarbons, aromatic
- polynuclear (PAH), 2: 632, 633
- Hyoscyamus* (henbane), tobacco vs.,
1: 86–87
- Hyperbolic, definition of, 1: 231
- I**
- I Love Lucy* (television show),
1: 332
- Iconography, definition of, 1: 330
- Identity
- identity building and youth
tobacco initiation, 2: 694, 696
- See also* Masculine identity
- Immigrants, cigarette smoking
associated with, 2: 452
- Imperial Tobacco Company, 1: 43,
93, 146, 253–254
- Impotence, smoking as cause of,
1: 55, 55
- Impressionism, 2: 669
- Indentured servants
- as chief labor force in Chesapeake
region, 1: 291–292
- definition of, 2: 525

- Indentured servants **CONTINUED**
 hardships faced by, 2: 637–638
 immigration from England,
 2: 526
 interaction with slaves, 2: 527
 protection from overwork, 1: 99
 replacement by slavery, 1: 99
 terms of service of, 1: 123; 2: 424
- Independent Scientific Committee
 on Smoking and Health (ISCSH),
 2: 624
- India
 British American Tobacco
 expansion in, 1: 254
 chewing tobacco use by women
 in, 1: 195
 colonial introduction of tobacco
 in, 2: 575
 consumption of tobacco in,
 2: 577–579, 578
 cost of cigarettes vs. bidis in,
 2: 577
 forms of tobacco consumption in,
 1: 172–173
 modern cultivation and
 production of tobacco in,
 2: 576–577
 mortality due to tobacco in,
 1: 205
 Mughal rulers of, 2: 575
 Portuguese colonies in, 2: 441,
 445
 Portuguese tobacco trade with,
 2: 446
 prohibition of tobacco use in,
 2: 459
See also Bidi cigarettes
- Indian colonies of Portugal, tobacco
 trade in, 2: 441, 445–446
- Individualism
 definition of, 1: 153
 of European middle-class
 smokers, 1: 153
 link between smoking and, 1: 270
 smoking as metaphor of, 2: 565
 snuff use as mark of, 2: 559–560
 tailoring of cigarette smoking
 and, 2: 562
- Indonesia (Sumatra), 2: 580–582
kretek manufacturing in,
 1: 287–289; 2: 581
 tobacco exports of, 2: 645
 tobacco industry in, 2: 580–581
- Indoor air. *See* Clean indoor air
- Industrialization and technology,
1: 261–266
 cigar production and, 1: 265–266
 early industrial production,
 1: 263
 globalization related to, 1: 265
- mass production of cigarettes,
 1: 145–146, 251–253, 264;
 2: 452–454, 453, 564, 659
- Mexican tobacco industry,
 1: 352–353
- preindustrial production methods,
 1: 261–263, 262
- product design and, 2: 452–454,
 453
- second industrial revolution and,
 1: 263–264, 264
See also Labor
- Inhaler, for nicotine delivery, 2: 490
- Inipi* sweat lodge ceremony, 2: 382
- Initiation of smoking
 advertising and women's
 smoking initiation, 1: 17
 age-related factors in, 2: 470,
 689–690
 factors in, 2: 470–471, 472
 identity building and youth
 tobacco initiation, 2: 694, 696
 male and female differences in
 smoking initiation, 1: 175,
 175–176
 risk calculation by youth and,
 2: 695–696
 starting and quitting patterns in
 U.S., 1: 175, 175–177, 176, 177
- Virginia Slims and adolescent
 girls, 1: 173
See also Psychology and smoking
 behavior
See also Youth marketing
- Insurance, **1: 267–269**
 basic principles of, 1: 267
 smoke-related cancer research
 and, 1: 267–269
 tobacco cessation treatment
 covered by, 1: 269
 for tobacco trading losses, 2: 640
- Intellectuals, **1: 270–271**; 1: 271;
 2: 562, 669
- Internet
 prohibition of tobacco advertising
 on, 2: 502
 sale of tobacco on, 2: 501–502
- Inyoka* tobacco, Zimbabwe, 2: 699
- Ion exchanger complex, definition
 of, 2: 488
- Iranian Constitutional Revolution
 of 1905–1911, 1: 272
- Iranian Tobacco Protest movement,
1: 272–273
- Ireland, banning smoking in
 workplace, 2: 540
- Irony, definition of, 2: 664
- Iroquois, smoking by, 1: 170;
 2: 553
- Irritation of tobacco smoke,
 additives for reducing, 1: 9
- ISCSH (Independent Scientific
 Committee on Smoking and
 Health), 2: 624
- Islam, **1: 274–276**
 coffee drinking combined with
 smoking, 1: 35–36
 Iranian Tobacco Protest
 movement and, 1: 272–273
 medical use of tobacco and,
 1: 274
 on Philippine island of Mindanao,
 2: 412
 prohibition of tobacco use,
 1: 275–276; 2: 459
 theological scrutiny of tobacco
 use in, 1: 274–275
 tobacco use in Qajar period,
 1: 274, 275
- Iwaya Co., Japan, 1: 280
- J**
- Jaguar, identification of shamans
 with, 2: 518, 521
 “Jaguar stones,” 2: 518
- James I, King of England
A Counterblaste to Tobacco, 1: 75,
 83, 139, 303; 2: 459
 taxation of tobacco by, 2: 603
 vilification of tobacco by, 1: 139
- Japan, **1: 277–281**
 advertising restrictions in, 1: 20
 consumption of tobacco in,
 1: 277–280
 diffusion of tobacco into, 1: 277
 epidemiological studies of
 secondhand smoke in,
 2: 513–514
kiseru pipes in, 1: 277–279, 278;
 2: 420–421
 production and manufacturing of
 tobacco in, 1: 280–281
 prohibition of tobacco use in,
 1: 277, 280; 2: 459
 regulation of tobacco in, 1: 277,
 280–281
 smoking restriction in, 2: 538,
 539
 tobacco accessories in, 1: 278
 warning labels for cigarettes in,
 2: 676
 World War II and smoking in,
 1: 279, 279
- Japan Tobacco, Inc., 1: 281;
 2: 438
- Jars, for tobacco, 1: 157–158,
 157–158
- Jarvik, Murray, 2: 488, 489
- Jesuit missionaries, 1: 361, 362
- Job cigarette poster, 2: 668,
 668

- Joe Camel
 advertising impact on youths,
 1: 22, 173
 awareness of, among children and
 teens, 2: 692–693
 on billboard advertisement, 2: 691
 as “Joe Chemo,” 1: 200
 rejuvenation of Camel cigarettes
 by, 1: 107
 in youth marketing campaigns,
 1: 335
See also Camel cigarettes
 Johansson, Scarlett, 1: 237
 Johnson, Samuel, 1: 303
 Johnston, Frances Benjamin, 2: 669
 Jonson, Ben, 1: 224, 225
 José, Edward, 1: 233
 Joseph of Cupertino, 1: 138
 Judaism, **1: 281–283**
 health risks of tobacco and
 prohibition of, 1: 282–283
 ritual concerns with tobacco use,
 1: 281–282, 282
 tobacco manufacturing by Jews,
 1: 282
Junta da Administração do Tabaco,
 2: 443, 445, 446
Junta de Tabaco, 2: 588
- K**
 Karuk people, 2: 556
 Kent cigarettes, 2: 505–506
 Kentucky, **1: 285–287**
 Black Patch War and, 1: 80–81, 285
 tobacco consumption in, 1: 287
 tobacco production in,
 1: 285–286, 286
 Kerr-Smith Tobacco Act of 1934,
 2: 386, 387
Khaini, 2: 578
 Kidder, Margot, 1: 236
 Kidney cancer, 1: 202t
 King, Billie Jean, 1: 336; 2: 672
 Kipling, Rudyard, 2: 669, 680–681
Kiseru pipes, 1: 277–278, 278;
 2: 420–421
Kizami tobacco, 1: 279
 Koch, Robert, 1: 343
 Kool cigarettes
 advertising of, 1: 332
 Willie the penguin mascot for,
 1: 334–335
 youth marketing of, 2: 692
 Koop, C. Everett, 1: 34; 2: 463, 464
Kretek, **1: 287–289**
 as cultural signifier, 1: 289
 definition of, 1: 195
 eugenol released from, 1: 195
 manufacture of, in Indonesia,
 1: 288, 288–289; 2: 581
- L**
 Labor, **1: 291–297**
 child tobacco workers, 1: 263,
 354; 2: 658
 farm labor, 1: 291–295, 294
 indentured servants in, 1: 99,
 123, 291–292; 2: 424, 525,
 526, 527, 637–638
 manufacturing labor, 1: 295–297
 migrant labor, 1: 295
 on plantations, 2: 424, 425, 427
 racism and sexism in, 1: 297
 references to, in popular music,
 1: 370–371
 sharecropping and, 1: 293–294;
 2: 522–524, 523, 532, 572,
 657–658
 slaves in, 1: 99, 123–124,
 292–293; 2: 424, 425, 427,
 526, 526–527, 657
 smallholder farmers and, 1: 29,
 293, 295
 tenant farming and, 1: 71, 294;
 2: 524, 658–659
 tobacco cultivation requirements,
 2: 425–426, 638
 wage work, 1: 293–295
 women workers, 1: 295, 296,
 297
 Zimbabwe tobacco workers,
 2: 700
See also Industrialization and
 technology
See also Processing
 Labor unions
 Cigar Makers International
 Union, 1: 266
 Cuban cigar makers in United
 States, 1: 296
 Lakotas, *Inipi* sweat lodge
 ceremony, 2: 382
 Landscape of tobacco, 1: 71
 Langley, John Newport, 2: 388
 Laryngeal cancer, 1: 202t
 Lasker, Albert, 1: 331
 Lasker, Mary, 1: 331
 Latin America. *See* South and
 Central America
 Latter-Day Saints (Mormon
 Church), 1: 141
 Law, John, 1: 242
 Lawsuits. *See* Litigation
 Lawyers
 direction of tobacco industry
 research by, 2: 625–628
See also Litigation
 Lee, Ivy, 2: 474
 Legislation. *See* Antismoking
 legislation; Lobbying; Politics;
 Regulation of tobacco products in
 United States
- Leisure, as advertising theme, 1: 16
 Lesbians, smoking as rebellious act
 of, 2: 683
 Leukemia, 1: 202t
 Lewin, Louis, 1: 2
 Liberty, prohibition of tobacco vs.,
 2: 456–457
License to Kill (film), 2: 673
 Lichtneckert, Stefan, 2: 488
 Licorice, as tobacco additive, 1: 7
 Liggett Group
Cipollone v. Liggett Group, Inc.,
 1: 309–310
 safer cigarette development by
 (XA Project), 2: 508
 settlement of lawsuit against,
 1: 218
 “Light” and filtered cigarettes,
1: 298–301
 addiction and design of, 1: 5
 chemical analysis of smoke
 produced by, 1: 114–115
 cigarette design manipulation
 and, 1: 299–300
 compensation for reduced nicotine
 delivery with, 1: 5, 300; 2: 633
 epidemiologic studies and, 1: 299,
 300–301
 genetic modification of tobacco
 and, 1: 247
 Japanese-made filter cigarette,
 1: 279–280
 Kent cigarettes as, 2: 505–506
 lack of effectiveness of, 1: 201,
 298; 2: 493
 machine measurement of, 1: 5,
 300, 301
 menthol cigarettes positioned as,
 1: 348–349
 public health recommendations
 and, 1: 299
 for reduction of toxin delivery,
 2: 632–633
 Strickman, Robert L., filter of,
 1: 115
 tar and nicotine delivery by, 1: 5
 as tobacco industry’s response to
 health risks, 1: 298–299
 toxin reduction as goal of, 2: 630
 types of filter materials in, 2: 455
 ventilation holes in, 1: 300;
 2: 455
See also “Safer” cigarettes
 Lighters
 Chinese use of, 1: 134
 cigar lighters (lamps), 1: 159,
 159–160
 cigarette lighters, 1: 159
 connoisseurship of, 1: 164
 Linnaeus, Carl, taxonomic
 classification of, 1: 85, 87–88

- Literature of tobacco, **1: 302–306**
 Arents Collection, 1: 73–76
 early literature, 1: 302–303
 eighteenth century to present,
 1: 303–305, 304, 305
 English Renaissance literature,
 1: 223–226
 future of, 1: 3–6
 pipes in art and literature, 2: 422
 smoking rooms described in,
 2: 533, 534
 writers and tobacco use, 2: 562
- Litigation, **1: 307–313**
 airline flight attendants' class
 action lawsuit, 1: 34, 312
 American Tobacco Company
 dissolution by, 1: 44
 as antismoking movement
 strategy, 1: 56–57
 Cipollone, Rose, verdict in favor
 of, 1: 309–310
 class actions, 1: 311–312, 312
 against Environmental Protection
 Agency, 2: 516
 expensive legal tactics by tobacco
 industry, 1: 307–308
 first verdict in favor of plaintiff,
 1: 310
 first wave of (1954–1979),
 1: 307–308
 against Food and Drug
 Administration regulation of
 tobacco, 2: 494
 freedom of speech and advertising
 restrictions, 1: 21
 by nonsmoking plaintiffs,
 1: 312–313
 plaintiffs' responsibility for their
 disease and, 1: 309
 second wave of (1980s–1990s),
 1: 308–311, 310
 state Medicaid reimbursement
 actions, 1: 311
 third wave of (1990s–present),
 1: 309, 310–313
 tobacco industry documents and,
 1: 309–310; 2: 437
See also Documents of tobacco
 industry
See also Lobbying
See also Master Settlement
 Agreement (MSA)
 “Little Johnny” (Johnny
 Roventini), in Philip Morris
 advertising, 2: 407, 408
- Liver cancer, 1: 202t
- Lobbying, **1: 314–317**
 definition of, 1: 314
 direct and indirect forms of,
 1: 315
 expenditures for, 1: 315–316;
 2: 432–433
- guidelines for, in U.S., 1: 317
 in other countries, 1: 317
 by U.S. tobacco industry,
 1: 314–317, 316
See also Litigation
See also Politics
- Lobeline, as quitting medication,
 2: 482, 483
- Lost in Translation* (film), 1: 237
- Lozenges
 for nicotine delivery, 2: 490
 powdered tobacco in, 2: 508
- Lucky Strike cigarettes,
1: 318–320; 1: 319
 advertised as appetite
 suppressant, 1: 62–63, 64, 172;
 2: 686
 declining market share of,
 1: 319–320
 green packaging of, women's
 dislike of, 1: 318–319, 336;
 2: 474–475
 health concerns and marketing of,
 1: 331
 international advertising for,
 1: 252
 success in Germany, 1: 93
 women as target of advertising
 for, 1: 318–319, 319, 335–336
 youth marketing on radio and
 television, 2: 690
- Lump tobacco, 1: 262
- Lundgren, Claes, 2: 488
- Lung cancer, **1: 320–325**
 calculation of risk of, 1: 201
 case control studies of,
 1: 205–206
 causes of, uncertainty about,
 1: 321–322
 in celebrity smokers, 2: 672
 denial of smoking link by tobacco
 industry, 1: 206–207, 217,
 323, 324
 epidemiologic studies of,
 1: 200–201, 207, 323–324,
 344; 2: 622–623
 lung diseases vs., 1: 322, 322
 in Marlboro Man model, 2: 672
 mortality rates related to,
 1: 205–206, 206, 320
 Nazi identification of link to
 smoking, 1: 322, 383
 patient's responsibility for their
 disease, 1: 309, 325
 politicization of issues related to,
 1: 324–325
 public knowledge about smoking
 and, 1: 174, 174
 recognition of smoking as cause
 of, 1: 53, 174, 199–200, 203t,
 323–325
 relative risk of, 1: 200
- Royal College of Physicians report
 on, 2: 623
 secondhand smoke as cause of,
 1: 210; 2: 514
 U.S. Surgeon General
 reports/statements on, 1: 53,
 203t, 323; 2: 506
 worldwide smoking patterns and,
 1: 177–178
See also Cancer
- Lung diseases
 chronic obstructive pulmonary
 disease, 1: 202
 emphysema, 1: 203
 lung cancer vs., 1: 322, 322
- Lynch, David, 1: 235
- M**
- Madak*, as blend of opium, 2: 396
- Magazines, tobacco advertising in,
 1: 13
- Mainstream smoke, definition of,
 2: 512
- Malawi
 tobacco exports of, 2: 647
 tobacco growing and processing
 by, 1: 28–29
- Malaysia, 2: 583
- Males. *See* Men
- Manumission of slaves, definition
 of, 2: 529
- Marginal populations. *See* Class;
 Ethnic groups; Women,
 advertising targeted to; Youth
 marketing
- Marginalization
 definition of, 1: 272
 ostracism of tobacco users as,
 2: 403–405, 404
 of smoking, 2: 565
See also Smoking restrictions
- Marijuana (cannabis), 1: 24,
 37, 41
- Market share
 definition of, 1: 44
 international investments by
 tobacco companies, 1: 253
 of Virginia Slims, 2: 664–665
- Marketing, **1: 327–336**
 addressing health concerns,
 1: 331
 Camel cigarettes, 1: 106,
 106–107; 2: 690
 dealer promotions, 1: 328
 ethnic groups as target of, 1: 228,
 228–229
 fine arts promotion for,
 1: 331–332, 333
 global marketing and sales of
 cigarettes, 1: 146–147,
 251–256

- graduated product marketing by U.S. Tobacco, 1: 115–116
- outdoor displays for, 1: 328
- package inserts/coupons for, 1: 327–328
- in retail outlets, 2: 499–500, 501
- sports promotion, 1: 332–334
- of Virginia Slims, 2: 663–665, 664
- during World War I and II, 1: 329–331
- See also* Advertising
- See also* Retailing
- See also* Sponsorship
- See also* Youth marketing
- Marketing quota, definition of, 2: 387
- Marlboro cigarettes, **1: 337–339**
- advertising of, 1: 337–339, 338; 2: 407
- ammonia and acetaldehyde in, 1: 10, 114
- auto racing sponsorship by, 1: 334
- branding and image of, 2: 595
- change in image of, 1: 337, 338; 2: 564
- cowboy figure in advertising of, 1: 338, 338; 2: 407, 671, 691
- international sales of, 1: 339
- lung cancer in Marlboro Man model, 2: 672
- “Marlboro Spring Vacation Program,” 2: 692
- as top-selling brand, 2: 408, 409
- Marlboro Country Music Festival, 1: 332
- Marquette, Jacques, 1: 103, 361
- The Marriage of Maria Braun/Die Ehe der Maria Braun* (film), 1: 234–235
- Martin, Dean, 1: 332
- Maryland, 1: 120–121
- Civil War and, 1: 124
- contraband trade in, 2: 544–545
- population of, 1: 122
- settling of, 1: 120–121
- See also* Chesapeake region
- Masculine identity
- as advertising theme, 1: 15–16
- Bogart, Humphrey, as ideal of, 1: 236
- cigar and pipe smoking as symbol of, 2: 683
- cigarettes as symbol of, 1: 148
- European middle-class smokers and, 1: 253
- in film, 1: 235, 235
- in Marlboro cigarettes
- advertising, 1: 338, 338; 2: 407, 595
- rebellious behavior of smokers and, 1: 77
- tobacco linked to ownership of women’s bodies, 2: 680–681
- war and masculine image of smoking, 1: 148, 329; 2: 667
- Mass production of cigarettes. *See* Industrialization and technology
- Master Settlement Agreement (MSA)
- advertising restrictions in, 1: 22, 311; 2: 501
- cash flow to states from, 2: 437
- individual state settlements and, 1: 311
- as landmark development in antismoking movement, 1: 57–58
- lobbying by tobacco industry for, 1: 315
- Philip Morris and, 2: 409
- provisions of, 1: 57, 311; 2: 436
- release of industry documents as requirement of, 1: 218; 2: 437
- state antismoking programs and, 1: 58; 2: 436–437
- Match(es), Chinese use of, 1: 134
- Match safes, 1: 67, 164
- Mathis–Swanson, Beverly, 2: 465
- Matsigenka shamans of Peru, 2: 517–518
- Mayas, **1: 339–342**
- habit of tobacco smoking, 1: 340–341
- importance of tobacco to, 1: 341–342
- pagan saint Maximon of, 2: 571
- sik’ar* as origin of “cigar,” 1: 150, 167
- tobacco portrayal on artifacts of, 1: 340, 341–342, 342
- McCall, June, as “Miss Perfecto,” 2: 682
- McFarland, Wayne, 2: 482–483
- McLaren, Wayne (Marlboro Man model), 2: 672
- Mechanization
- of tobacco cultivation, 2: 660
- See also* Industrialization and technology
- Medicaid
- definition of, 1: 287
- Kentucky Medicaid expenditures, 1: 287
- litigation for reimbursement of smoke-related expenses, 1: 311
- Medical evidence (cause and effect), **1: 343–347**
- criteria for causal relationships, 1: 345–346
- early twentieth-century view on, 1: 343–344
- experimental causation model and, 1: 321
- lung cancer causation and, 1: 321
- mid-twentieth-century epidemiology and, 1: 344–346
- sampling bias and, 1: 345
- secondhand smoking debate, 1: 346–347
- Medicinal use of tobacco. *See* Therapeutic use of tobacco
- Medicine societies, Native American, 2: 381–382
- Meerschaum pipes, 2: 418–419, 420
- Men
- advertising targeted to, 1: 14
- lung cancer death rates for, 1: 320
- male and female differences in uptake of smoking, 1: 175, 175–176
- male-female smoking rates, early twenty-first century, 1: 177t, 178–181, 178t, 180t
- portrayal in English Renaissance literature, 1: 225
- smoking clubs for, 2: 533, 534, 535
- tobacco consumption in developing countries, 1: 195
- tobacco shops as social clubs for, 2: 497
- See also* Masculine identity
- See also* Sailors
- See also* Soldiers
- Mental disorders, smoking associated with, 2: 470
- Mental function
- smoking for enhancement of, 2: 562, 669
- See also* Intellectuals
- Menthol
- as additive, 1: 7
- physiological and respiratory effects of, 1: 349
- tobacco chemistry affected by, 1: 113, 114
- Menthol cigarettes, **1: 348–349**
- African American use of, 1: 228, 349
- early brands of, 1: 348
- Philippine consumption of, 2: 584
- taste of, and appetite suppression, 1: 63
- Meprobamate, as quitting medication, 2: 484
- Mercantilism. *See* British Empire; Dutch Empire; French Empire; Retailing; Spanish Empire; Trade
- Mergers and acquisition, of tobacco companies, 1: 43, 44, 95, 358
- Mérimée, Prosper, 2: 670
- Mexico, **1: 350–354**, 351
- colonial period of, 1: 350–352
- early cigarettes in, 2: 451

- Mexico **CONTINUED**
 pre-Columbian period of, 1: 350
 Spanish control of tobacco trade
 in, 1: 35–352
 tobacco factories in, 1: 352
 tobacco industry development in,
 1: 352–354
See also Spanish Empire
- Middle East, **1: 355–360**
 cigarette consumption in,
 1: 358–359
 cultivation and processing of
 tobacco in, 1: 356–358
 modern production and
 consumption in, 1: 359–360
 prohibition of tobacco use in,
 1: 275–276; 2: 355, 459
 socio-cultural significance of
 smoking in, 1: 355–356, 357
 tobacco trade in, 1: 356–358
 water pipes in, 1: 355; 2: 420,
 421
- Migrant labor, 1: 295
- Mill, John Stuart, 2: 456–457
- Milo Violets (cigarettes), 2: 683,
 685
- Minnesota
 clean air legislation in, 2: 431, 537
 litigation against tobacco
 industry by, 2: 436
 tobacco control program of, 2: 434
- Minnesota Clean Indoor Air Act,
 2: 431
- Minors Red Tips (cigarettes), 2: 685
- Missionaries, **1: 360–363**, 361, 363
 changing views of tobacco by
 church, 1: 360–361
 conflicting uses of tobacco by,
 1: 361–362
 promotion of tobacco by,
 1: 362–363
See also Christianity
- Mississippi, litigation against
 tobacco industry, 1: 56–57;
 2: 436
- Mitchum, Robert, 2: 671
- Moll Catpurse, 1: 225
- Monardes, Nicolás, 1: 86–87;
 2: 558, 610–611
- Monopoly
 definition of, 1: 80
See also Spanish tobacco
 monopoly
See also State tobacco monopolies
- Montez, Lola, 2: 680
- Morgan, James J., 2: 477
- Mormon Church, 1: 141
- Mortality
 cardiovascular disease, 2: 513
 deaths attributable to tobacco,
 1: 204–205, 205
- developing countries, 1: 193, 205,
 211, 212
- Kentucky tobacco users, 1: 287
- lung cancer rates, 1: 205–206,
 206, 320
- Nazi Germany, 2: 384–385
 reduced life span of smokers,
 1: 203–204, 204
- secondhand smoke as cause of,
 2: 513
- smoking as defiance of,
 2: 564–566
See also Disease
- Movies. *See* Film
- Mozambique, tobacco production
 in, 2: 443
- MSA. *See* Master Settlement
 Agreement (MSA)
- Mucha, Alphonse, 2: 667–668, 668
- Mufti, definition of, 1: 355
- Murad IV, Sultan, 1: 275, 355;
 2: 459
- Murai Bros. and Co., Japan, 1: 280
- Murray, Bill, 1: 237
- Murrow, Edward R., 1: 332; 2: 672
- Music, classical, **1: 364–368**
 early-seventeenth century
 England, 1: 364–365
 nineteenth- and twentieth-
 century compositions,
 1: 365–366
 seventeenth- and eighteenth-
 century Europe, 1: 365
 smoking concerts, 1: 366,
 366–368; 2: 534
 in tobacco advertising, 1: 368
- Music, popular, **1: 369–373**
 chewing tobacco and cigar
 references in, 1: 372–373
 chronological list of songs,
 1: 371f
 Native American influence in,
 1: 372
 slang and metaphor in, 1: 372
 smoking themes reflected in,
 1: 369–372
- Muslims. *See* Islam
- My Lady Nicotine: A Study in Smoke*
 (Barrie), 1: 304; 2: 422, 534
- Myanmar (Burma), 2: 580, 581,
 582
- N**
- Narghile (water pipe), 1: 355;
 2: 420
- Nasal spray, nicotine, 2: 489
- NASCAR racing, tobacco industry
 sponsorship of, 1: 333
- Nasir al-Din Shah, 1: 272, 273,
 273
- National Academy of Science report
 on environmental tobacco
 smoke, 2: 514
- National Cancer Institute (NCI),
 2: 495, 507
- National politics. *See* Lobbying;
 Politics; Regulation of tobacco
 products in United States
- Nationalism, definition of, 1: 147
- Native Americans, **2: 375–382**
 ancient farming by, 2: 377–380
 calumet use by, 1: 69–70,
 103–105, 169; 2: 553, 554
 cosmology of, 2: 554–555, 555
 creation stories of, 2: 375
- Crow Tobacco Planters, initiation
 and role of, 2: 554
- early tobacco use by, 2: 376–377,
 378
- hallucinogen and tobacco use by,
 1: 259–260, 341; 2: 518, 520,
 555
- Inipi* sweat lodge ceremony of,
 2: 382
- Internet sales of tobacco from
 reservations of, 2: 502
- Iroquois, smoking by, 1: 170;
 2: 553
- knowledge of tobacco cultivation,
 2: 424
- medicine societies of, 2: 381–382
- methods of tobacco ingestion by,
 2: 379, 379–380
- origins of tobacco and,
 2: 398–399, 518–519, 552
- postcontact tobacco use of, 2: 556
- pre-Columbian tobacco use of,
 1: 350; 2: 552–556
- recreational tobacco use of,
 2: 555–556
- references to, in popular music,
 1: 372
- religious and spiritual significance
 of tobacco to, 2: 376, 380–382,
 381, 553–554
- sailors' tobacco trade with, 2: 511
- smoking prevalence among,
 1: 227–228
- tobacco as sign of alliances
 between humans, 1: 105;
 2: 554
- women in cigarette advertising,
 2: 669
- See also* Shamanism
- Navigation Acts
 Chesapeake region tobacco trade
 and, 1: 121
- Dutch tobacco trade and, 1: 221
- purpose of, 1: 96
- Navy plug tobacco, 1: 127
- Nayarit, Mexico, 1: 353, 354

- Nazi Germany, **2: 382–385**
 bans on smoking, 1: 322; 2: 383
 identification of link between smoking and cancer, 1: 322; 2: 383
 pre-war tobacco imports, 2: 645
 smoking by soldiers in, 2: 570
 tobacco as genetic (race) poison, 1: 48, 322; 2: 383
 tobacco consumption in, 2: 384, 384
 youth smoking and sports participation, 2: 597
- NCI (National Cancer Institute), 2: 495, 507
- Near East, pipes used in, 2: 420, 421
- Nervine, definition of, 2: 562
- Nervous system, nicotine in study of, 2: 388
- New Amsterdam (New York), 2: 544–545
- New Deal, **2: 385–387**
See also Agricultural Adjustment Act of 1933
- New Guinea, 2: 393, 394
- New Jersey, tobacco tax rate of, 2: 434
- New smoking material (NSM), as tobacco substitute, 2: 507
- Newspapers, tobacco advertising in, 1: 13
- Ni Zhumo, 2: 612
- Nicot, Jean
 introduction of tobacco in Europe, 2: 388, 388
 nicotine named after, 1: 59, 87–88
- Nicotian therapy
 definition of, 2: 612
 in Europe, 2: 611
- Nicotiana*
 chromosome pairs in, 2: 399
 early European classifications of, 1: 85–87
 Linnaeus's classifications of, 1: 87–88
 number of species of, 2: 397
 origination of, 1: 85; 2: 397–402
- Nicotiana alata*, 2: 616, 617
- Nicotiana attenuata*
 early use by Native Americans, 2: 376
 evolutionary geography of, 2: 400
 sequence of development of, 2: 377, 378
- Nicotiana augustifolia*, 2: 616
- Nicotiana axillaries*, 2: 616
- Nicotiana clevelandii*, 2: 376
- Nicotiana forgetiana*, 2: 616–617
- Nicotiana fruticosa*, 2: 616
- Nicotiana glauca*, 2: 376, 377, 378
- Nicotiana glutinosa*, 2: 616, 617
- Nicotiana noctiflora*, 2: 617
- Nicotiana otophora*, 2: 400, 401
- Nicotiana paniculata*, 2: 399, 400, 616
- Nicotiana plumbaginifolia*, 2: 616
- Nicotiana pusilla*, 2: 616
- Nicotiana quadrivalvis*
 cultivation by Native Americans, 2: 398
 early use by Native Americans, 2: 376
 evolutionary geography of, 2: 400
 multivalvis variety of, 2: 379, 381
 quadrivalvis variety of, 2: 381
 sequence of development of, 2: 377, 378
- Nicotiana rotunifolia*, 2: 616
- Nicotiana rugosa*, 2: 616
- Nicotiana rustica*
 classification of, 1: 85–88
 early use by Native Americans, 2: 376
 evolutionary geography of, 2: 400, 401
 inyoka tobacco of Zimbabwe as variety of, 2: 699
 origination of, 2: 399–401, 400
 sequence of development of, 2: 377, 378
 shamanistic use of, 2: 518–519, 555
 smoked in calumets, 1: 104
- Nicotiana silvestris*, 2: 400, 401, 616
- Nicotiana tabacum*
 classification of, 1: 85–88
 cultivation of, in Zimbabwe, 2: 700
 early use by Native Americans, 2: 376
 evolutionary geography of, 2: 400
 origination of, 2: 401–402
 as ornamental plant, 2: 617
 in Philippines, 2: 410
 sequence of development of, 2: 377, 378
- Nicotiana tomentosa*, 2: 616, 617
- Nicotiana tomentosiformis*, 2: 398, 400, 401–402
- Nicotiana trigonophylla*
 early use by Native Americans, 2: 376
 evolutionary geography of, 2: 400
 sequence of development of, 2: 377, 378
- Nicotiana tristis*, 2: 616
- Nicotiana undulata*, 2: 399, 400, 616
- Nicotiana x sanderae*, 2: 617
- Nicotine, **2: 387–391**
 addiction to, 1: 1–6; 2: 389–391, 467–468
 additive effects on, 1: 8–9
 appetite suppression due to, 1: 65
 disclosure of levels in cigarettes, 2: 506, 619
 drug and alcohol use combined with, 1: 35–41; 2: 468
 effect on body, 2: 389–390
 freebase (non-ionized), 1: 4, 113
 genetic modification for control of, 1: 247
 hallucinogenic effect of, 1: 259
 history of scientific study of, 1: 1–3; 2: 388
 in “light” and filtered cigarettes, 1: 298, 299
 product design and delivery of, 2: 390
 smoking behavior driven by, 2: 390–391
 toxicity of, 2: 521
See also Hallucinogens
See also Product design
See also Psychology and smoking behavior
- Nicotine Anonymous, 1: 143
- Nicotine cholinergic receptors, 2: 389
- Nicotine-delivery medications. *See* Quitting medications
- Nicotine gum, 2: 488–489
- Nicotine intoxication of shamans, 2: 519
See also Shamanism
- Nicotine nasal spray, 2: 489
- Nicotine patch, 2: 489, 489
- Nicotine withdrawal
 symptoms/syndrome, 1: 3, 391; 2: 468, 486
- Nicotinic receptors, 2: 388, 389
- Nitrosamines, tobacco-specific (TSNAs), 1: 113; 2: 632, 633
- Nonsmokers' rights
 clean indoor air legislation and, 2: 431–432, 432, 537
- Non-smokers' Bill of Rights, 1: 34, 54
 political action of tobacco industry and, 2: 431–432, 432
 smoking restrictions and, 2: 536–537
- Norr, Isroy (Roy) M., 1: 52, 337
- Norr Newsletter about Smoking and Health*, 1: 52
- Norway, snuff use in, 2: 550

NSM (new smoking material, as tobacco substitute), 2: 507
Nurses' Health Study, 1: 208

O

Oceania, **2: 393–395**, 394
demographics of consumption in, 2: 395
diffusion and trade of tobacco in, 2: 394–395
early history of tobacco use in, 2: 393–394
smoking and tobacco use of, 1: 229
See also Philippines
"Of Tobacco" (Davies), 1: 224, 225
Office of the Surgeon General
functions of, 2: 495
See also United States Surgeon General reports
Oligopoly, definition of, 1: 256
Omni cigarettes, 2: 493
"On Tobacco" (Cotton), 1: 225
101 Dalmatians (film), 1: 234
Opera
Carmen (Bizet), 1: 365; 2: 670, 681
smoking linked with sexuality in, 2: 681
tobacco consumption during, 1: 365, 366
Opium, **2: 396–397**
cigarettes as replacement for, 1: 132–133
definition of, 1: 37
madak blend of, 2: 396
morphine in, 2: 389
pipes for, 1: 132
pure opium smoking, 2: 396
as snuff additive, 2: 549
tobacco smoking with, 1: 37, 47; 2: 396
Oral cancer
in India, due to *gutka*, 2: 578
Surgeon General's findings on, 1: 203t
Oriental leaf tobacco, 2: 451, 454
Origin of tobacco, **2: 397–402**
in Australia, 2: 398
Nicotiana rustica and, 2: 399–401, 400, 518–519
Nicotiana tabacum and, 2: 401–402
in North and South America, 2: 398–399, 400, 552
shamanism and, 2: 518–519
See also Diffusion of tobacco
Orinoco colony, Venezuela
contraband trade in, 2: 542–543
Warao shamans of, 2: 518, 519–520

Ornamental tobacco plants, **2: 616–618**, 617, 618
Ostracism of tobacco users, **2: 403–405**, 404
Ottoman Empire
banning of tobacco use in, 1: 275, 355
cigarette consumption in, 1: 358–359
cultivation and processing of tobacco in, 1: 356–358
modern production and consumption in, 1: 359–360
socio-cultural significance of smoking in, 1: 355–356, 357
tobacco trade in, 1: 356–358
See also Middle East
Ouida (English novelist), 2: 533, 668, 681
Out of the Past (film), 2: 671
Outdoor advertising displays, 1: 328
Outdoor areas, smoking restrictions in, 2: 540
Ovarian cancer, 1: 203t
Oviedo, Gonzalo Fernández de, 1: 136, 302

P

Pacific Ocean islands. *See* Oceania
Package inserts and coupons, 1: 327–328
Packaging
in advertising, 1: 11–12
use by soldiers in World War I, 2: 568
PAH (polynuclear aromatic hydrocarbons), 2: 632, 633
Palatinate, definition of, 1: 120
Pall Mall cigarettes, 1: 331
Pan (betel quid), in India, 2: 577–578
Pancreatic cancer, 1: 203t
Panegyric, definition of, 1: 118
Papalettes, 1: 144; 2: 451, 644
Paper cigarettes wrappers
porosity of, 2: 455
ventilation holes in, 1: 300; 2: 455
Papua New Guinea, 2: 394, 395
Park, Roswell, 1: 324
Particulate phase of smoking, 1: 112; 2: 632
Passive smoking. *See* Secondhand smoke
Patch, for nicotine delivery, 2: 489, 489
Paternalistic, definition of, 1: 124
Patriotism, cigarette smoking linked to, 1: 148, 330; 2: 463, 569
Peace pipes. *See* Calumets
Pearl, Raymond, 1: 203–204, 204, 268
Pearson, Karl, 1: 343
Peptic ulcer disease, 1: 203t
Personal liberty, prohibition vs., 2: 456–457
Pesticide, tobacco as, 2: 614
Petrified Forest (film), 1: 236
pH
processing effects on, 1: 113
"smoke pH," 1: 7
Pharmacotherapy, definition of, 1: 269
Philip Morris, **2: 407–409**
advertising by, 2: 407; 2 408
appetite satient product developed by, 1: 63
cigarette girls and sales of, 1: 330
diversification of, 2: 408–409
fire-safe paper technology of, 1: 239
Master Settlement Agreement effects on, 2: 409
product placement in films, 2: 477
promotion of tobacco to retailers, 2: 497
renamed as Altria, 2: 409
sponsorship of arts events by, 1: 332
television program sponsorship by, 1: 332; 2: 408
See also Marlboro cigarettes
See also Virginia Slims
Philip V, King of Spain, 2: 588, 589
Philippines, **2: 410–413**
diffusion and consumption of tobacco in, 2: 411–412
flue-cured tobacco production in, 2: 584
introduction of tobacco in, 2: 410–411
menthol cigarette smoking in, 2: 584
production and trade of tobacco in, 2: 411, 412
revenue from and governance by Spain, 2: 412–413
smoking of lit end of cigar, by women, 2: 583, 684
Spanish tobacco monopoly in, 2: 591
tobacco production in, 2: 584
Physicians. *See* Doctors
Physiology, definition of, 1: 3
The Picture of Dorian Gray (Wilde), 2: 669
Pipes, **2: 414–423**
accessories for, 1: 156–159, 157, 158, 165
African, 1: 28, 68; 2: 421–422

- argillite pipes, 1: 104, 157; 2: 415
in art and literature, 2: 422–423
bore diameter of, 1: 70
briar pipes, 1: 157, 167, 214
cases for, 1: 158–159
chibouk as, 1: 214, 355
Chinese, 1: 131–132; 2: 420–421
Civil War pipes and tobacco, 1: 67
clay pipes, 1: 158, 195;
2: 416–417, 417
definition of, 2: 414
demographics of smokers, 2: 422
European, 1: 68, 70
of Far East, 2: 420–421
German wood *gesteckpfeife*, 2: 415
as high art, auctioning of, 1: 156,
157
historical importance of, 2: 414
as indirect evidence of tobacco
use, 1: 67
Japanese *kiseru* pipes, 1: 277–278,
278; 2: 420–421
Kuba tribe, Africa, 1: 28
materials used for, 2: 414–416
meerscham pipes, 2: 418–419,
420
Middle Eastern, 1: 355–356, 358;
2: 420, 421
Native American pipes, 2: 379,
379–380
Near Eastern, 2: 420, 421
Oceania, 2: 394
opium pipes, 1: 132
porcelain pipes, 2: 417–418, 418
pottery pipes, 2: 418
prehistorical, 1: 68–70
tampers (stoppers) for, 1: 157
tobacco jars for, 1: 157–158,
157–158
types of, 1: 167
water pipes (hookahs), 1: 131,
167, 195, 304, 355; 2: 420,
421, 575
of western world, 2: 416–419
wood pipes, 2: 415, 418, 419
See also Calumets
- Pipestone, 1: 104
See also Argillite
- Pitt, Brad, 2: 672
- Plantations, **2: 423–428**
in Caribbean islands and Brazil,
2: 427–428
in Chesapeake region, 2: 424, 427
culture and cultivation of tobacco
on, 2: 424–427
definition of, 1: 26
in India, 2: 575
size of slaveholdings of, 1: 293
slave labor on, 2: 424, 425, 427,
657
See also Architecture
- Planters' Protective Association
(PPA), 1: 80
- Platform pipes, 1: 69
- Plug tobacco
definition of, 1: 43
as form of chewing tobacco,
1: 126, 127
hydraulic presses for making,
1: 263
"Lucky Strike" as name for, 1: 318
"Plug Wars," 1: 127
wooden tobacco presses for
making, 1: 262
- Pocahontas, marriage to John
Rolfe, 1: 122
- Politics, **2: 428–440**
Chesapeake region, 1: 119
clean indoor air ordinances and,
2: 431–432, 432, 537
early battles on smoking and
health, 2: 429–430, 430
international politics, 2: 438–439,
439
lawsuits against tobacco industry
and, 2: 436–437
national politics, 2: 432–433
New Deal policies and,
2: 385–387
nonsmokers' rights and,
2: 431–432
preemption of local tobacco
control activity and,
2: 429–430, 431, 433
state politics, 2: 433–434
state tobacco control programs
and, 2: 429–430, 430, 434–436
See also Lobbying
- Pollen, archaeological evidence of,
2: 377
- Polynuclear aromatic hydrocarbons
(PAH), 2: 632, 633
- Popular music. *See* Music, popular
- Porcelain pipes, 2: 417–418, 418
- Portuguese Empire, **2: 440–446**
consumption of tobacco in,
2: 441–442
control of tobacco production,
2: 442–443
end of, by military coup d'état,
2: 445
extent of tobacco commerce in,
2: 445–446
Indian colonies of, 2: 441,
445–446
introduction of tobacco to India,
2: 575
royal tobacco monopoly and
finances of, 2: 444–445
smuggling in Portugal, 2: 546
spread of tobacco consumption
by sailors, 1: 170
- tobacco trade in Africa, 1: 23, 26;
2: 442–443
See also Brazil
- Pottery pipes, 2: 418
- PPA (Planters' Protective
Association), 1: 80
- Preemption of tobacco control
programs
along with Cigarette Labeling and
Advertising Act, 2: 429–430,
675
overturn of preemption in,
2: 433
by tobacco industry, 2: 429–430,
431
- Pregnancy, smoking effects on,
1: 209
- Premier, as safer cigarette, 2: 508
- Priesthoods, Native American,
2: 381
- Priests, tobacco use by, 1: 137–138
- Private property (headrights),
Chesapeake colonies, 1: 119
- Processing, **2: 447–450**; 2: 448
air-curing in, 1: 27; 2: 448,
448–449, 655
chemistry of tobacco affected by,
1: 113–114
definition of, 2: 447
fire-curing in, 2: 449, 655
flue-curing in, 1: 28; 2: 449–450,
659
grading of leaves in, 2: 655, 666
prizing of leaves in, 2: 426
by slaves, 1: 293; 2: 530
stripping in, 1: 71, 261; 2: 655
sun-curing of tobacco in, 1: 113;
2: 454
See also Air-cured tobacco
See also Flue-cured tobacco
See also Production of tobacco
- Product design, **2: 450–455**
addiction as goal of cigarette
design, 1: 4
additives in, 1: 7–8; 2: 454–455
air-cured vs. flue-cured tobacco
in, 2: 454
chemical analysis in,
1: 114–115
chemistry of tobacco affected by,
1: 113
cigarettes for women, 2: 452
colored cigarette tips for women,
2: 453
cork-tips for cigarettes, 2: 453
of early cigarettes, 2: 451–452
elements of, 2: 450
fire-safe cigarettes, 1: 238–239
"light" and filtered cigarettes,
1: 5, 299–300; 2: 455,
632–633

- Product design **CONTINUED**
 mechanized production of
 cigarettes and, 2: 452–454, 453
 of modern cigarettes, 2: 454–455
 nicotine delivery and, 2: 390
 paper characteristics in, 2: 455
 reconstituted tobacco sheets (RTS)
 in, 2: 454
 safer cigarettes, 2: 507–508
 types of tobacco in, 2: 454
 unregulated health claims for
 newer products, 2: 493
- Product placement in film and
 television
 advertising potential of, 1: 13
 goals of tobacco industry in,
 1: 232
 public relations value of,
 2: 477–478
 youth as target of, 2: 691–692
- Production of tobacco
 Africa, 1: 26–29
 Brazil, 1: 91; 2: 442–443
 Caribbean region, 1: 108
 Chesapeake region, 1: 99–100,
 121–122; 2: 529–531, 638–639
 Cuba, 1: 187, 189
 cultivation requirements for,
 2: 425–426, 638
 culture and methods of
 cultivation, 2: 424–427, 654
 developing countries, 1: 196–197
 Dutch Empire, 1: 220, 220–221;
 2: 635
 France, 1: 243–244
 India, 2: 576–577
 Japan, 1: 280–281
 Malawi, 1: 28–29; 2: 647
 Middle East, 1: 356–358
 Native Americans, 2: 398, 424
 Philippines, 2: 411, 412, 584
 on plantations, 2: 424–427, 442
 Portuguese colonies, 2: 442–443
 slavery in, 1: 99, 123–124,
 292–293; 2: 526, 526–527
 South and Central America,
 2: 570–574
 South Asia, 2: 576–577
 stemming in, 1: 296, 297
 stripping in, 1: 71, 261
 suckering in, 2: 426, 654–655
 Zambia, 1: 29
 Zimbabwe, 2: 699–701, 700
See also Labor
See also Processing
See also United States agriculture
- Prohibitions, **2: 456–466**
 in Australia, 2: 619–621
 black market for tobacco
 resulting from, 2: 492
 in Brazil, 2: 442–443
 by Catholic church, 1: 138, 168,
 361; 2: 441, 458
 consumption decline related to,
 2: 465
 health as focus of, 2: 464–465
 in Holy Roman Empire, 2: 459
 ineffectiveness of, 2: 456
 in Islamic countries, 1: 275–276,
 355
 in Japan, 1: 277, 280; 2: 459
 by Jewish rabbis and law, 1: 283
 in Middle East, 1: 275–276;
 2: 355, 459
 monopoly and taxation as
 alternative to, 2: 460–461
 in Nazi Germany, 1: 322; 2: 383
 from 1970 to present, 2: 463–465
 ostracism of tobacco use and,
 2: 403–405, 404
 personal liberty vs., 2: 456–457
 philosophical views of,
 2: 456–457, 458
 by Protestant churches,
 1: 139–141
 of retail sale of tobacco to youth,
 2: 500–501
 in seventeenth century,
 2: 458–461
 of smoking in public places,
 1: 280; 2: 463
 sumptuary regulations and,
 2: 456
 in twentieth-century United
 States, 2: 461–463
 in United Kingdom, 2: 624
 of youth access to tobacco,
 2: 461–462, 461t, 464,
 500–501
See also Advertising restrictions
See also Antismoking legislation
See also Antismoking movement
 before 1950
See also Antismoking movement
 from 1950
See also Regulation of tobacco
 products in United States
See also Smoking restrictions
See also Tobacco control
- Project ASSIST (American Stop
 Smoking Intervention Study),
 1: 57; 2: 435–436
- Protestant churches
 antitobacco position of,
 1: 139–141
 financial support from tobacco,
 1: 141–142
 tobacco as salary for ministers,
 1: 142
- Psilocybin*, 1: 259
- Psychiatric disorders, smoking
 associated with, 2: 470
- Psychoactive drugs
 definition of, 1: 24
 prehistoric use of tobacco as,
 1: 69; 2: 398
 as snuff additive, 2: 549
See also Drugs
See also Drugs, tobacco combined
 with
See also Hallucinogens
- Psychology and smoking behavior,
2: 467–473
 addiction to nicotine and, 1: 3–6,
 8–9; 2: 467–468
 bad habits in America, 1: 77–79,
 78
 biological and physiological
 factors in, 2: 467
 consumer culture and, 1: 79
 disreputable behavior associated
 with tobacco, 1: 77–79
 identity building and youth
 tobacco initiation, 2: 694, 696
 initiation of smoking and,
 2: 470–471, 472, 689–690,
 694, 696
 psychopathology associated with
 smoking, 2: 470
 quitting smoking and, 2: 468,
 484, 485–486
 reasons for smoking, 2: 468–469
 relaxation associated with
 smoking, 2: 469
 sensorimotor aspects of cigarette
 handling, 2: 469
 shift of attitude toward smoking,
 2: 471–472
 stereotypical behavior of tobacco
 users, 1: 77–78
 tobacco “chippers” and resistance
 to, 2: 469
 youth tobacco use and, 2: 464,
 696
See also Rebelliousness
See also Social and cultural use of
 tobacco
- Public Health Cigarette Smoking
 Act, 2: 594, 675–676
- Public places, restriction of
 smoking in. *See* Prohibitions;
 Secondhand smoke; Smoking
 restrictions
- Public relations, **2: 473–479**
 advertising vs., 2: 474
 definition of, 2: 474
 early efforts of tobacco industry
 at, 2: 474–475, 475
 image enhancement as purpose
 of, 2: 474
 key tools for, 2: 476–479
 new product publicity and,
 2: 476–477

- product placement for, 2: 477–478
- secondhand smoke controversy and, 1: 347; 2: 476, 514–516, 539
- sponsorship of issues and events as, 2: 478
- Tobacco Industry Research Committee (TIRC) and, 1: 206–207; 2: 429, 475–476
- tobacco industry's response to disease risk and, 1: 206–207, 298–299, 307–308, 323
- Tobacco Institute and, 2: 476
- youth “prevention” campaigns in, 2: 478
- See also* Advertising
See also Marketing
See also Sponsorship
- Public transportation, smoking restrictions on, 1: 34; 2: 537, 539
- Puerto Rico, tobacco trade of, 1: 110
- Puritans, prohibition of tobacco use by, 1: 140
- Puzzle (pottery) pipes, 2: 418
- Q**
- Quitting, **2: 481–486**
- adaptations of models for, 2: 484
- aversion therapy in, 2: 485–486
- cancer risk reduction by, 1: 5–6
- Christian teachings in, 1: 143
- current therapies, from 1990 onward, 2: 486
- demographic differences in, 1: 176, 176–177
- difficulty of, 2: 468
- Ejrup, Borje E.V., treatment for, 2: 483–484
- experimental studies of, 2: 485–486
- Fredrickson, Donald T., treatment for, 2: 484
- insurance coverage for treatment programs, 1: 269
- McFarland, Wayne, Five Day Plan of, 2: 482–483
- nicotian therapy, 2: 611, 612
- popular music references to, 1: 370
- programs in the 1960s and 1970s, 2: 484–486
- public health service assistance for, 2: 391
- silver nitrate as early “cure,” 1: 49
- starting and quitting patterns in U.S., 1: 175, 175–177, 176, 177
- twentieth-century models for, 2: 481–484
- unsuccessfulness of, 2: 468
- weight gain after, 1: 61, 65
- willpower and, 2: 481, 482
- withdrawal symptoms with, 2: 391, 468, 486
- Quitting medications, **2: 488–490**
- as alternative for tobacco, 1: 5; 2: 490
- clinical practice guidelines and, 1: 269
- early developments of
- replacement therapy in, 2: 488
- future of, 2: 490
- initial marketing of nicotine gum and, 2: 488–489
- lobeline as, 2: 482, 483
- lozenge for, 2: 490
- meprobamate as, 2: 484
- nasal spray for nicotine delivery, 2: 489
- nicotine patch as, 2: 489, 489
- oral inhaler for, 2: 490
- reduction of cancer risk with, 1: 5
- R**
- “Race (genetic) poison,” tobacco as, 1: 47–48, 322; 2: 383
- Radio advertising. *See* Broadcast advertising
- Radiocarbon dating, definition of, 1: 68
- Raleigh, Walter, 2: 403
- Rat Pack, smoking by, 1: 332
- Reader's Digest*, 1: 208, 337; 2: 429
- Reagan, Ronald, 1: 329
- Rebel Without a Cause* (film), 1: 235, 235
- Rebelliousness
- of *kabukimono* gangs, in Japan, 1: 277
- lesbian smoking as symbol of, 2: 683
- rebel image in films, 1: 235, 235
- smoking as act of defiance, 2: 565–566
- smoking by women as visual statement of, 2: 682
- youth smoking as symbol of, 1: 32; 2: 464, 566
- Receptors
- discovery of, 2: 388
- nicotine cholinergic, 2: 389
- nicotinic, 2: 388, 389
- Reconstituted tobacco sheets (RTS), 2: 454, 507
- Reducing Tobacco Use* (U.S. Surgeon General's report), 2: 677
- Reeve, Christopher, 1: 236
- Referendum, definition of, 2: 385
- The Regimental (pipe), 2: 418
- Regulation of tobacco products in United States, **2: 491–495**
- of additives, 1: 9–10
- exemption of tobacco from consumer product statutes, 2: 491
- FDA's attempt at regulation, 2: 493–494, 500
- federal agencies with role in, 2: 495
- future of, 2: 495
- large-scale state tobacco control programs, 2: 434–436
- lobbying against tobacco control legislation, 1: 315
- model for regulation, 2: 492
- outlawing of cigarettes in, 1: 32
- preemption of legislation by tobacco industry and, 2: 429–430, 431, 433
- reasons for regulating tobacco products, 2: 491–492
- of retail tobacco sales, 2: 500–501
- tobacco control effects on per capita consumption, 2: 430, 430
- unregulated health claims for cigarettes and, 2: 492, 493
- See also* Antismoking legislation
See also Politics
See also Prohibitions
See also Tobacco control
- Religion
- influence on visual arts, 2: 666
- Judaism and, 1: 281–283
- missionaries of, 1: 360–363
- tobacco described as divine, 1: 224
- tobacco in Native American religions, 2: 376, 380–382, 381, 553–554
- See also* Catholic church
See also Christianity
See also Islam
See also Shamanism
- Renoir, Pierre Auguste, 2: 669
- Reproductive disorders, links between smoking and, 1: 209
- Republican Attorneys General Association (RAGA), 2: 437
- Republicanism, definition of, 2: 530
- Restaurants, banning of smoking in, 2: 540
- Retailing, **2: 496–502**
- advertising and marketing in, 2: 499–500, 501
- current methods of, 2: 498
- history of, 2: 496–497
- importance of outlets for, 2: 498–500, 499
- Internet tobacco sales and, 2: 501–502

Retailing **CONTINUED**

- preventing youth access to tobacco, 2: 500–501
pricing of tobacco and, 2: 501
regulation of tobacco sales and, 2: 500–501
See also Marketing
- Revel (noncombusting cigarette), 2: 493
- Reverse-*chutta*, 2: 583, 684
- Reynolds Tobacco Company. *See* R.J. Reynolds Tobacco Company
- Rhodesia
tobacco exports from, 2: 646
unilateral declaration of independence by, 2: 646, 701
See also Zimbabwe
- Rhodesia Tobacco Association, 2: 700
- Ribisi, Giovanni, 1: 237
- Ribonucleic acid (RNA), definition of, 2: 629
- Richelieu, Armand Jean du Plessis, Cardinal de, 1: 240
- Riggs, Bobby, 2: 672
- Right to smoke. *See* Nonsmokers' rights; Smokers' rights
- Rivers, for transporting tobacco, 2: 426
- R.J. Reynolds Tobacco Company
as leading cigarette manufacturer, 1: 44
Premier brand, as safer cigarette, 2: 508
R.J. Reynolds Co. v. Engle, 1: 312
See also Camel Cigarettes
- RNA (ribonucleic acid), definition of, 2: 629
- The Roaring Girl* (Dekker), 1: 224, 225
- Rococo, definition of, 1: 168
- Rolfé, John, 1: 119, 120, **122**
- Roosevelt, Franklin, 2: 385, 386
- Rose, Jed, 2: 489
- Rose Tips (cigarettes), 2: 685
- Roventini, Johnny ("Little Johnny"), in Philip Morris advertising, 2: 407, 408
- Royal College of Physicians report, *Smoking and Health*, 2: 623–624
- RTS (reconstituted tobacco sheets), 2: 454, 507
- Ruby Queen cigarettes, 1: 254
- Rush, Benjamin, 1: 38, 140; 2: 461
- Russell, Michael, 2: 488, 489, 490
- Russia
Iranian tobacco monopoly and, 1: 272
prohibition of tobacco use in, 2: 459
- Russian Orthodox Church, 1: 138–139
- S**
- Saccharine, in chewing tobacco, 1: 127
- Sacramental food, tobacco as, 2: 518, 521–522
- "Safer" cigarettes, **2: 505–508**
disclosure of tar and nicotine levels in, 2: 506
filter and tar issues related to, 2: 505–506
fire-safe cigarettes as, 1: 238–239
genetic modification of tobacco and, 1: 247
Kent cigarettes as, 2: 505–506
methods of smoking for risk reduction, 2: 506
novel cigarette design for, 2: 507–508
scientific research on, 2: 506–507
unregulated health claims for newer products, 2: 493
See also "Light" and filtered cigarettes
- Sailors, **2: 509–511**
chewing tobacco usage of, 1: 125
dispersal of tobacco by, 2: 509–511
Navy plug made for, 1: 127
Portuguese sailors, and spread of tobacco, 1: 170
snuff usage of, 2: 509
- Salvation Army, 1: 48
- Sand, George (Armandine Aurore Lucille Dupin), 2: 668, 680, 682
- Santo Domingo, tobacco trade of, 1: 109–110
- Sartre, Jean Paul, 1: 270, 271
- Schneider, Nina, 2: 488
- Schygulla, Hannah, 1: 234
- Scientific studies. *See*
Epidemiological studies; Medical evidence (cause and effect); Tobacco industry science
- Scottish merchants, in colonial tobacco trade, 2: 639, 641
- Scouting for Boys* (Baden-Powell), 2: 597, 694
- Scrap tobacco, in chewing tobacco, 1: 127–128
- Secondhand smoke, **2: 512–516**
activism against, after 1960, 1: 54
airline passengers and flight attendants affected by, 1: 34, 312
British tobacco control policy and, 2: 623, 624
as carcinogen, 1: 209; 2: 512, 514, 538
clean indoor air legislation and, 2: 431–432, 432, 438, 465, 516, 537, 621
composition of, 2: 512
controversy over, created by tobacco industry, 2: 476
Environmental Protection Agency report on, 1: 346–347; 2: 514, 538
epidemiologic studies of, 2: 513–514
health effects of, 1: 209–210, 210t; 2: 512–513, 515, 537–538
Hirayama, Takeshi, study of nonsmoking wives, 2: 513–514, 515, 624, 627
international network to prevent legislation on, 2: 438
Japanese spousal study sponsored by tobacco industry, 2: 627
lung cancer due to, 1: 210; 2: 514
"mainstream smoke" as, 2: 512
names for, 2: 512
Non-smokers' Bill of Rights and, 1: 34, 54
public awareness of risks of, 2: 513–514
"sidestream smoke" as, 1: 50; 2: 512
smoking restrictions based on, 2: 537–540
tobacco industry's efforts to prevent restrictions on, 1: 347; 2: 476, 514–516, 539
trends in public knowledge about smoking and, 1: 174
U.S. Surgeon General's report on, 1: 34; 2: 514
- Seedbeds, in tobacco cultivation, 2: 425, 654
- SEIT (*Société d'Exploitation Industrielle des Tabacs*), 1: 244
- SEITA (*Société d'Exploitation Industrielle des Tabacs et Allumettes*), 1: 244, 248
- Seventh-Day Adventist Church, 1: 143
- Sexual symbolism of smoking attitude toward women smokers and, 2: 679–681
bad behavior associated with smoking and, 1: 77–78, 78
in *Carmen*, 2: 670, 681
cigars associated with, 1: 78; 2: 669, 680–681, 682
effeminacy of cigarettes and, 2: 452, 562–563
exotic women in advertising, 2: 669–670, 681
femme fatale role in films, 1: 233–235, 234; 2: 670, 680
glamorization of smoking in films, 1: 79; 2: 564, 670–671, 671

- harem women and, 1: 1: 358, 356, 357; 2: 669, 670, 680–681
- male control of women's body and, 2: 680–681
- McCall, June, as "Miss Perfecto," 2: 682
- Mucha, Alphonse, Job cigarette poster of, 2: 667–668, 668
- scantly clad women in advertising, 1: 11–12, 32, 78, 78, 79; 2: 681, 682, 711
- vamp role in films, 1: 233–236
- Virginia Slims marketing and, 1: 16, 336; 2: 663, 664
- women's liberation and, 1: 16, 148, 335; 2: 563, 667–669, 686
- See also* Masculine identity
- Shag tobacco, 1: 261, 263
- Shamanism, **2: 517–522**
- amount of tobacco consumption by, 2: 519–521, 555
- in Brazil, 2: 441
- characteristics of shamans, 2: 521
- Crow Tobacco Planters, initiation and role of, 2: 554
- death and resurrection concepts in, 2: 519–520, 555
- definition of, 1: 259
- diffusion of tobacco and, 2: 518–519
- hallucinogen and tobacco use in, 1: 259–260, 341; 2: 518, 520, 555
- healing role of shamans, 2: 519, 554
- Matsigenka shamans of Peru, 2: 517–518
- Mayan shamans, 1: 340
- methods of tobacco intake, 2: 522
- Nicotiana rustica* use by, 2: 518–519, 555
- therapeutic use of tobacco by, 2: 519, 554, 555
- tobacco as sacramental food of, 2: 518, 521–522
- tobacco shamanism, 2: 381, 518
- transformation of sight and voice in, 2: 520–521
- Warao shamans of Orinoco Delta, 2: 518, 519–520
- Sharecroppers and sharecropping, **2: 522–524**
- after abolition of slavery, 1: 294; 2: 522–523, 523
- after Great Depression, 2: 524
- in Brazil and Cuba, 1: 294
- definition of, 1: 295
- former slaves as, 2: 532, 657–658
- in South and Central America, 2: 572
- system of sharecropping, 2: 523–524
- Sheen, Martin, 2: 477
- Sherlock Holmes, 1: 270; 2: 534
- Sherman Antitrust Act of 1890, 1: 43
- Shi'ism, 1: 275
- Sidestream smoke
- definition of, 1: 50
- mainstream smoke vs., 2: 512
- SIDS (Sudden Infant Death Syndrome), 1: 209, 210t
- Sight, paranormal, of shamans, 2: 520–521
- Signifier, definition of, 1: 289
- Sinatra, Frank, 1: 332
- Situados de tabaco*, 1: 190
- Skoal Bandit race car, 1: 333, 334
- Slang, in popular music, 1: 372
- Slavery and slave trade, **2: 525–532**
- in Chesapeake tobacco production, 1: 99, 123–124, 292–293; 2: 526, 526–527
- Civil War and end of, 1: 124
- culture and community of slaves, 2: 528–529, 530–531
- emancipation of slaves, 2: 531–532
- English slave trade, 2: 527
- expansion and contraction of tobacco production and, 2: 529–531
- exportation to southern states, 2: 530–531
- gender of imported slaves, 2: 527–528
- Igbo and Biafran slaves, 2: 527
- interaction with indentured servants, 2: 527
- internal trading of slaves, 2: 529
- laws for codifying slavery, 2: 527
- manumission of slaves, 2: 530
- movement to Western territories, 2: 657
- natural increase in slave population, 1: 292–293; 2: 528
- on plantations, 2: 424, 425, 657
- population of slaves in Chesapeake, 2: 527
- punishment of slaves, 2: 528
- quasi-freedom of slaves, 2: 530
- runaway slaves, 2: 528
- sharecropping by former slaves, 2: 532, 657–658
- slaves as chattel, 1: 124
- task system in, 2: 657
- tobacco processing by, 1: 293; 2: 530
- tobacco revolution and, 2: 527–529
- women and children in, 2: 528
- Slimness. *See* Appetite suppression; Virginia Slims; Weight control
- Smallholders
- definition of, 1: 29
- tobacco production by, 1: 293, 295
- Zambia, Africa, 1: 29
- Smoke. *See* Chemistry of tobacco and tobacco smoke; Secondhand smoke
- Smoke-free public places. *See* Secondhand smoke
- "Smoke pH," 1: 7
- Smokeless tobacco
- banning of, in Australia, 2: 621
- carcinogens in, 2: 632
- forms of, in India, 2: 577–578
- reduction of toxins in, 2: 633
- Snus, produced in Sweden, 2: 633
- warning labels required for, 2: 676
- See also* Chewing tobacco
- See also* Snuff
- Smokers' rights
- ostracism of smokers and, 2: 404–405
- tobacco industry support of, 1: 347; 2: 539
- See also* Nonsmokers' rights
- Smoking and Health* (Royal College of Physicians), 2: 623–624
- Smoking and Health: A Report of the Surgeon General's Advisory Committee* (1964), 1: 53, 208; 2: 675
- Smoking cessation. *See* Quitting
- Smoking clubs and rooms, **2: 533–535**
- Smoking concerts, 1: 366, 366–368; 2: 534
- Smoking jackets, 1: 151, 162, 163
- Smoking restrictions, **2: 535–541**
- in air travel, 1: 34; 2: 537–539
- in bars, 2: 465, 540, 623
- international restrictions, 2: 538, 539, 540
- nonsmokers' rights and, 2: 431–432, 432, 536–537
- ostracism of tobacco use and, 2: 403–405, 404
- public acceptance of smoking and, 2: 536
- in public places, 2: 463, 540–541
- secondhand smoke and, 1: 347; 2: 476, 514–516, 537–540
- in South and Central America, 2: 574
- in twenty-first century, 2: 540–541

- Smoking restrictions **CONTINUED**
 in workplace, 1: 34; 2: 463, 465, 537, 540, 623
See also Antismoking legislation
See also Prohibitions
See also Regulation of tobacco products in United States
See also Tobacco control
- Smuggling and contraband, **2: 542–546**
 associated with state tobacco monopolies, 2: 601
 in Bermuda, 2: 543
 in Brazil, 2: 543
 in Caribbean region, 2: 542–543
 in Chesapeake region, 1: 97; 2: 543–544, 544
 contraband trade at new world plantations, 2: 542–544
 in Cuban tobacco trade with Spain, 1: 187
 in Dominican tobacco trade, 1: 110
 French tobacco trade, 2: 545–546
 in French tobacco trade, 1: 240–241
 Great Britain, 2: 545, 636
 Maryland, 2: 543–544
 Mexican tobacco trade, 1: 351
 Portugal, 2: 557
 South American colonies, 2: 571
 South East Asia, 2: 582
 Spain, 2: 557
 Spanish tobacco monopoly, 2: 588, 589, 591
 taxation as stimulus for, 2: 608
 Thailand, 2: 582
 Virginia, 2: 543–544
- Sneeshing (snuff) mull, 1: 162
- Snuff, **2: 547–551**
 art (method) of using, 1: 81–82
 carcinogens in, 2: 632
 carotte (carrot)-shaped tobacco for, 1: 261–262; 2: 549
 Chinese use of, 1: 131–132; 2: 613
 current brands of, 1: 128
 definition of, 1: 3
 Dutch production of, 1: 221
 etiquette for use of, 1: 168; 2: 548
 European aristocrats' use of, 1: 153, 168; 2: 548, 549, 559
 flavorings for, 2: 549–550
 in India, 2: 579
 individualization of use of, 2: 559–560
 medical use of, 1: 132
 moist dip form of, 1: 168
 nasal (dry) form of, 2: 547
 oral, 1: 128; 2: 548, 550
 preindustrial production of, 1: 261–262
 production in Seville, Spain, 1: 187
 shipboard use by sailors, 2: 509
 social class of users of, 2: 550, 560
 toxic and psychotropic substances in, 2: 550
 women's use of, 2: 549, 679
 youth marketing of, 1: 334
See also Smokeless tobacco
- Snuff accessories, 1: 160–163; 2: 549–550
 handkerchiefs, 1: 163
 snuff bottles, 1: 161–162; 2: 550
 snuff grater, 1: 161
 snuff mull, 1: 162
 snuffboxes, 1: 161, 161; 2: 549, 560, 667
- Social and cultural use of tobacco, **2: 551–566**
 association of tobacco use with vice, 1: 78–79
 bad habits in America, 1: 77–79
 calumets and alliances, 1: 103–105, 104; 2: 554
 in China, 1: 134
 defiance symbolized by smoking, 2: 564–566
 early European uses, 2: 558–559
 feminine connotation of cigarette smoking, 2: 562–564
 glamour associated with smoking, 2: 564, 670–671, 671
 limits on growth of tobacco trade related to, 2: 642
 long-term trends in, 2: 552
 for losing vs. gaining self-control, 2: 552
 mass consumption and branding of cigarettes, 2: 564
 in Middle East, 1: 355–356, 357
 modern understanding and uses, 2: 556–561
 popular music and, 1: 369–372
 pre-Columbian (Amerindian) understanding and uses, 2: 552–556
 return to smoking by Europeans, 2: 561
 by sailors, 2: 510, 511
 smoking as supplementary tool, 2: 551–562
 in smoking clubs and rooms, 2: 533–535, 534, 557
 smoking gallants and, 2: 559
 snuff use, 1: 153, 168; 2: 548, 549, 550, 559–561
 tobacco shops as social club, 2: 497
 transfer and acceptance of tobacco in Europe, 2: 557, 557–558
 youth tobacco use related to, 2: 696
See also Class
See also Native Americans
See also Psychology and smoking behavior
See also Women tobacco users
- Social class. *See* Class
- Social Darwinism, and antismoking movement before 1950, 1: 47–48
- Société d'Exploitation Industrielle des Tabacs* (SEIT), 1: 244
- Société d'Exploitation Industrielle des Tabacs et Allumettes* (SEITA), 1: 244, 248
- Soil Conservation and Domestic Allotment Act (SCDAA), 2: 386
- Soil conservation, definition of, 2: 386
- Solanaceae family of plants, 1: 86, 259
- Soldiers, **2: 568–570**
 cigarettes as support for soldiers, 2: 568–569
 cigarettes included as rations for, 2: 569
 endorsement of smoking by doctors, 1: 215, 215
 Nazi soldiers, tobacco consumption by, 2: 384, 384
 smoking of cigarettes during World War I, 1: 32, 49–50, 148, 172; 2: 568–569
 smoking of cigarettes during World War II, 1: 172; 2: 569
- Songs. *See* Music, classical; Music, popular
- South and Central America, **2: 570–574**
 archaeology of tobacco in, 1: 68
 black tobacco cultivation in, 2: 572
 blond tobacco production in, 2: 574
 colonial beginnings of, 2: 570–572
 consumption of tobacco in, 2: 572
 contraband trade in, 2: 571
 European markets for tobacco from, 2: 571
 modern tobacco use and restriction in, 2: 574
 origin of tobacco in, 2: 398–399
 rural tobacco production in, 2: 572–573
 shamanism in, 2: 517–522
 tobacco industry in, 2: 573

- See also* Native Americans
See also Spanish Empire
See also Caribbean
- South Asia, **2: 575–579**
 advertising of tobacco in, 1: 15
 colonial introduction of tobacco in, 2: 575
 consumption of tobacco in, 2: 577–579, 578
 modern cultivation and production of tobacco in, 2: 576–577
See also India
- South East Asia, **2: 579–584**
 advertising of tobacco in, 1: 15
 antitobacco legislation in, 2: 584
 bidi popularity in, 1: 195
 Indonesian *kretek*, **1: 287–289**
 Malaysia, 2: 583
 Myanmar, 2: 582
 South Korea, 2: 584
 Sumatra, 2: 580–582
 Thailand, 2: 580–582: 582
 Vietnam, 2: 580–582: 582
See also Philippines
- South Korea, 2: 584
 Southern Rhodesia. *See* Rhodesia; Zimbabwe
- Souza Cruz (tobacco company), 1: 91, 254
- Spanish Empire, **2: 585–592**
 acceptance and use of tobacco in, 2: 585–586
 Bourbon dynasty in, 2: 588, 589, 590
 Caribbean tobacco trade of, 1: 107–111; 2: 542–543, 586
 cigar popularity in, 1: 150–151; 2: 644
 cigarette smoking as symbol of decline of, 1: 48
 conversion of Amerindians to Christianity by, 1: 136
 Dutch tobacco imports from colonies of, 1: 221
 smuggling and contraband trade in, 2: 542–543, 546, 588, 589, 591
 tobacco factory in Seville, 1: 187; 2: 587, 588
 tobacco imports of, 2: 592
 Spanish tobacco monopoly administration and organization of, 2: 587–589
 Caribbean tobacco trade, 1: 109–110; 2: 586
 Castile as first monopoly, 2: 587, 599
 Cuban cigar production control under, 1: 109, 150–151, 187
- Cuban tobacco trade, 1: 187–189
 direct control by crown, 2: 588
 Inquisition and, 2: 587
 lack of complete control of, 2: 591–592
 lease holders (*arrendadores*) of, 2: 587
 mercantilism and, 2: 591–592
 Mexican tobacco trade, 1: 351–352
 Philippine tobacco trade, 2: 412–413, 591
 political crises and wars effects on, 2: 589
 Portuguese *conversos* in, 2: 587
 revenue from, 2: 588–589, 600, 601
 smuggling and contraband trading in, 2: 588, 589, 591
 South American tobacco trade, 2: 571
 in Spanish-American colonies, 2: 590–591
See also Spanish Empire
See also State tobacco monopolies
- Spenser, Edmund, 1: 223, 303
 Spinoza, Baruch, 2: 456
- Sponsorship, **2: 593–596**
 of arts events, 1: 331–332, 333
 Australian taxes for buy-out of, 2: 621
 of auto racing, 1: 333–334; 2: 594, 594, 691
 banning of, 1: 335; 2: 596
 brand vs. corporate sponsorships, 2: 596
 definition of, 2: 593
 DOC organization “housecalls” at, 1: 55
 entertainment of troops as, 1: 330
 key objectives of, 2: 595–596
 patronage vs., 2: 593–594
 for public relations, 2: 478–479
 shift from broadcast advertising to, 2: 594–595, 691–693
 of sports events, 1: 332–334; 2: 594, 594–595, 690–691
 television exposure of sponsored events, 2: 594, 594
 television program sponsorship, 1: 332; 2: 408, 690, 690*t*
See also Advertising
See also Marketing
See also Youth marketing
- Sports, **2: 597–599**
 cigarette cards of athletes and, 2: 597
 tobacco advertising associated with, 2: 597–599, 598, 671–672
- tobacco industry sponsorship of, 1: 332–334; 2: 594, 594–595, 690–691
 youth smoking and, 2: 597
- Spuds, as first menthol cigarette brand, 1: 348
- Squash, cultivation by Native Americans, 2: 379, 380
- Stallone, Sylvester, 1: 13; 2: 478, 692
- Starting to smoke. *See* Initiation of smoking
- State politics
 clean indoor air legislation and, 2: 431–432, 432, 537
 large-scale tobacco control programs and, 2: 434–436
 overturn of tobacco control preemption laws in, 2: 433
 prohibition of tobacco sales to minors and, 2: 461
 taxes on tobacco and, 2: 433–434
See also Politics
- State tobacco monopolies, **2: 599–602**
 abolition of, 2: 601–602
 administration and organization of, 2: 587–589
 as alternative to prohibition, 2: 460–461
 Caribbean tobacco trade, 1: 109–110; 2: 586
 Castile as first monopoly, 2: 587, 599
 contraband trade associated with, 2: 588, 589, 591, 601
 Cuban tobacco trade, 1: 109, 150–151, 187–189
 direct vs. contracted management of, 2: 588, 600
 early monopolies, 2: 599, 600
 fiscal monopolies, 2: 599, 600, 601
 French colonial tobacco trade, 1: 241–242
 Iranian tobacco trade, 1: 272
 Japanese tobacco trade, 1: 20, 280–281
 lack of complete control of, 2: 591–592
 marginal members of society injured by, 2: 510–511
 mercantilism and, 2: 591–592
 Mexican tobacco trade, 1: 351–352
 Middle Eastern tobacco trade, 1: 359
 in Myanmar (Burma), 2: 582
 by papal states, 1: 141–142
 Philippine tobacco trade, 2: 412–413, 591

- State tobacco monopolies **CONTINUED**
 Portuguese Empire, 2: 444–445
 revenue from, 2: 588–589, 600, 601
 South American tobacco trade, 2: 571
 in Spanish–American colonies, 2: 590–591
 in Thailand, 2: 582
 types of income from, 2: 601
 in Vietnam, 2: 582
See also Spanish tobacco monopoly
- Statistical significance, in epidemiological studies, 2: 515
- Steam power, in tobacco production, 1: 263
- Steen, Jan, paintings of, 2: 666, 666
- Steinfeld, Jesse, 1: 34, 54
- Stemming of tobacco leaf
 by black women, 1: 297
 by women, 1: 296
- Sternberg, Josef von, 1: 233, 236
- Stogie (Conestoga) cigars, 1: 151
- Stomach cancer, 1: 203*t*
- Stone, Sharon, 1: 235
- Strickman, Robert L., 1: 115
- Stripping
 definition of, 1: 71
 in tobacco processing, 1: 71, 261; 2: 655
- Stroke (cerebrovascular disease), 1: 202*t*
- Strong, Josiah, 1: 47–48
- Subsidiary, definition of, 1: 74
- Substance abuse. *See* Addiction to nicotine; Drugs; Drugs, tobacco combined with
- Sudden Infant Death Syndrome (SIDS), 1: 209, 210*t*
- Suerdieck, August, 1: 89, 90
- Sugar
 in alcohol, 1: 36
 in caffeinated beverages, 1: 36
 saccharine vs., in chewing tobacco, 1: 127
 as tobacco additive, 1: 7, 36
- Sugar cane production, in non-Hispanic Caribbean islands, 1: 108
- Sumptuary regulations, 2: 456
- Sun-cured tobacco, 1: 113; 2: 454
- Superman II* (film), 1: 236; 2: 477, 692
- Surgeon General reports.
See United States Surgeon General reports
- Survival. *See* Mortality
- Sweat lodge ceremony, 2: 382
- Sweden
 chewing tobacco usage, 1: 126, 128
 smokeless tobacco (Snus)
 produced in, 2: 633
 snuff use in, 2: 550, 560
- Sweet Caporal cigarettes, 1: 332
- Sxymanczyk, Michael E., 2: 477
- Symposia, sponsored by tobacco industry, 2: 627–628
- Synar Amendment, 2: 432, 500
- T**
- Tabaco en Rama S.A.* (Tersa), 1: 353
- Tabaco Mexicanos, S.A.* (Tabamex), 1: 353
- Tabamex (*Tabaco Mexicanos, S.A.*), 1: 353
- Talman, William, 2: 672
- Tampers (stoppers), for pipes, 1: 157
- Tar
 in bidi cigarettes, 2: 577[^]
 cancerous lesions in animal studies of, 1: 206; 2: 506, 631, 631
 conversion to carcinogen, 1: 41
 definition of, 1: 5
 disclosure of levels in cigarettes, 2: 506, 619
 Federal Trade Commission report on levels of, 2: 495
 in light cigarettes, 1: 5, 174, 299, 300
 as particulate phase of smoke, 1: 112; 2: 632
See also Carcinogens
See also Chemistry of tobacco and tobacco smoke
- Tariff, definition of, 1: 146
- Taxation of tobacco products, **2: 603–608**
 as alternative to prohibition, 2: 460–461
 brief history of, 2: 603–604
 British taxes on Chesapeake tobacco, 1: 97
 Christian denominations supported by, 1: 141–142
 consumption linked to rate of, 2: 606–607
 Dutch tobacco imports, 1: 222
 duty-free vendors and, 2: 502
 European taxation of colonial tobacco, 2: 641–642
 fairness of, 2: 608
 as form of regulation, 2: 606–607
 French Empire, 1: 243
 Internet sales and, 2: 502
 Japan, 1: 280, 281
 Middle East, 1: 356–358
- Portuguese Empire, 2: 444–445
 problems related to, 2: 608
 retail stores and collection of taxes, 2: 501
 as revenue policy in past century, 2: 604–606
 smuggling associated with, 2: 608
 for sponsorship buy-outs, 2: 621
 United States taxes, 2: 433–434, 604–605, 604*t*–605*t*, 607, 607
 as user fees for public health costs, 2: 607–608
- Technology. *See* Industrialization and technology
- Teenagers. *See* Youth marketing; Youth tobacco use
- Television
 ban on tobacco advertising on, 1: 19–20; 2: 463, 594, 672
 early tobacco advertising on, 1: 13–14
 exposure of advertising in sponsored events, 2: 594, 594
 product placement in film and television, 1: 13, 232; 2: 477–478, 691–692
 programs sponsored by tobacco industry, 1: 332; 2: 408, 690, 690*t*
 shift from broadcast advertising to sponsorship, 2: 594–595, 691–693
 smoking identified with “bad guys” on, 2: 672
 youth tobacco marketing on, 2: 690–691
- Temburni leaf, definition of, 1: 195
- Tenant farmers and farming after Civil War, 2: 524
- characteristics of, 2: 658
 definition of, 1: 71
 family labor in, 2: 658–659
 houses of, 1: 71
 labor and debts of, 1: 294
- Tennis, sponsored by Virginia Slims, 1: 336; 2: 663–664, 672
- Tennyson, Alfred Tennyson, 1st Baron, 1: 167
- Terry, Luther L., 1: 53; 2: 676
- Tersa (*Tabaco en Rama S.A.*), 1: 353
- Thailand, 2: 582
- Therapeutic use of tobacco, **2: 609–615**
 in Brazil, 2: 441–442
 in Chinese medicine, 1: 130–131; 2: 612–615
 early European concepts of, 1: 173; 2: 558, 610
 in English Renaissance literature, 1: 223–224

- European debates over, 2: 611–612
- humoral theory of medicine and, 1: 360; 2: 610–611
- by Islamic peoples, 1: 274
- Monardes' health claims for, 2: 558, 610–611
- by Native Americans and shamans, 2: 381, 519, 554, 555, 609
- nicotian therapy as, 2: 611–612
- in sixteenth century Europe, 1: 81
- of snuff, 1: 132
- unregulated health claims tobacco products and, 2: 492, 493
- See also* Appetite suppression
- See also* Shamanism
- See also* Weight control
- Throat cancer, 1: 203
- TIRC (Tobacco Industry Research Committee), 1: 206–207; 2: 429, 475–476
- Tithes
- definition of, 1: 187
- late sixteenth century, 1: 187, 362
- TMV (Tobacco Mosaic Virus), 2: **628–630**
- Tobbacciana, 1: 156
- See also* Connoisseurship
- "Tobacco" (Hemminger), 2: 672
- "Tobacco" (Hume), 1: 226
- Tobacco accessories. *See* Accessories
- Tobacco as ornamental plant, 2: **616–618**; 2: 617, 618
- Tobacco combined with alcohol and drugs. *See* Alcohol; Drugs, tobacco combined with
- Tobacco control
- American Stop Smoking Intervention Study (ASSIST) program for, 1: 57; 2: 435–436
- in Australia, 2: **619–621**; 2: 620
- in developing countries, 1: 197–198
- Framework Convention on Tobacco Control for, 1: 23; 2: 438–439, 439, 495, 677–678
- in Japan, 1: 277, 280–281
- in United Kingdom, 2: **622–624**
- See also* Master Settlement Agreement (MSA)
- See also* Prohibitions
- See also* Regulation of tobacco products in United States
- See also* Smoking restrictions
- Tobacco Industry Research Committee (TIRC)
- creation of, 2: 429
- public relations as purpose of, 1: 206–207; 2: 429, 475–476
- Tobacco industry science, 2: **625–628**
- funding of, 2: 625–626
- Japanese Spousal Smoking Study of, 2: 627
- lawyers' role in, 2: 625–628
- refutation of harmful effects of tobacco as goal of, 2: 625, 628
- secrecy of documents related to, 2: 626–627
- See also* Documents of tobacco industry
- See also* Medical evidence (cause and effect)
- Tobacco Institute, 2: 429, 475–476
- Tobacco jars, 1: 157–158, 157–158
- Tobacco Monopoly Law (Japan), 1: 280–281
- Tobacco Mosaic Virus (TMV), 2: **628–630**
- Tobacco plant
- tobacco as ornamental plant, 2: **616–618**, 617, 618
- See also* Botany (history)
- See also* *Nicotiana*
- Tobacco presses
- hydraulic, 1: 263
- for plug making, 1: 262
- Tobacco processing. *See* Processing
- Tobacco production. *See* Production of tobacco
- Tobacco Products Export Corporation, 1: 255
- Tobacco shops, social gatherings at, 2: 497
- Tobacco smoke. *See* Chemistry of tobacco and tobacco smoke; Secondhand smoke
- Tobacco-specific nitrosamines (TSNAs), 1: 113; 2: 632, 633
- Tobacco substitutes, 2: 507
- Tobacco tins, in World War I, 2: 568, 569
- Tobacco use cessation. *See* Quitting
- Tolerance of tobacco
- dose strength and, 2: 389
- nicotine addiction related to, 2: 391
- Topsy-Turvy World* (Steen), 2: 666, 666
- Towns, Charles, 1: 38
- Toxins, 2: **630–633**
- additives as, 1: 9–10
- alkaloids as, 2: 632
- in bidi cigarettes, 2: 577
- chemistry of, in smoke, 1: 112, 112; 2: 390, 632
- Chinese medicine and toxicity of tobacco, 2: 612, 613–614
- ciliotoxic compounds as, 1: 114
- historical assessment of, 2: 630–631, 631
- lethality of nicotine and shamanistic use of, 2: 521
- list of, produced by Dietrich Hoffmann, 1: 114
- measurement of, by smoking machines, 2: 631, 632, 633
- product design changes for reduction of, 2: 632–633
- as snuff additive, 2: 549
- See also* Carcinogens
- See also* Chemistry of tobacco and tobacco smoke
- Trade, 2: **634–648**
- Africa, 1: 25–26
- Brazil, 1: 89–92
- British Empire, 1: 96–101
- Caribbean islands, 1: 107–111
- changes after World War II, 2: 645–646
- Chesapeake region, 1: 121
- consignment system in, 2: 639
- diffusion of tobacco to Europe and, 2: 634–635
- dissemination of tobacco vs. coffee, 2: 635
- Dutch Empire, 1: 221–222
- Europe's expanding market for tobacco, 2: 641–642
- export of tobacco from New World, 2: 635, 636, 638, 639
- human costs of tobacco trade, 2: 642–643
- import destinations for, 2: 645–646, 648
- investment in New World tobacco production, 2: 637
- Mexican tobacco trade, 1: 351–352
- Middle Eastern, 1: 356–358
- Oceania, 2: 394–395
- overdependency on tobacco in Chesapeake, 2: 640
- Philippines tobacco trade, 2: 412–413
- Portuguese Empire, 2: 442–446
- price of tobacco in Chesapeake region, 1: 98*t*, 99–101; 2: 638, 639, 640, 641
- re-export of tobacco to Europe, 2: 642, 642*t*
- from Revolutionary War into nineteenth century, 2: 643–644
- shipping improvements in, 2: 639–640
- Spanish Empire, 1: 107–111; 2: 542–543, 585–592
- tobacco colonies and New World settlement, 2: 635–640, 636
- twenty-first century trade, 2: 647–648

INDEX

Trade **CONTINUED**

- worldwide trade in early twentieth century, 2: 644–645
 - Zimbabwe tobacco trade, 2: 699–701
 - See also* Chesapeake region
 - See also* Globalization
 - See also* Smuggling and contraband
 - See also* Spanish tobacco monopoly
 - See also* State tobacco monopolies
 - Trade cards. *See* Cigarette cards
 - Tranquilizers, as quitting medication, 2: 484
 - Transgenic tobacco, 1: 245
 - Transportation, smoking restrictions on, 2: 537
 - Trinidad colony, contraband trade in, 2: 542–543
 - TSNAs (tobacco-specific nitrosamines), 1: 113; 2: 632, 633
 - Tubular smoking pipes, 1: 68–69
 - Turkey. *See* Middle East; Ottoman Empire
 - Turkish tobacco
 - in American cigarette blend, 2: 644
 - definition of, 1: 105
 - Oriental leaf as, 2: 451
 - Turrett cigarettes, 1: 332
 - Twain, Mark, 1: 151, 270
 - Twist form of chewing tobacco, 1: 127, 261
- U**
- Ubiquitous, definition of, 1: 132
 - Under Two Flags: A Story of the Household and the Desert* (Ouida), 2: 533, 668, 681
 - United Kingdom
 - advertising of tobacco in, 1: 13, 14, 15
 - cigar production in, 1: 150–151
 - classical music in, 1: 364–365
 - English Renaissance literature of, 1: 223–226
 - expansion of tobacco market in, 2: 641–642
 - gardening of ornamental tobacco in, 2: 616–618, 617
 - literature about tobacco, 1: 223–226, 303–304
 - re-export of tobacco to European countries, 2: 642, 642t
 - resurgence of smoking in, 2: 561, 565
 - safer cigarette research in, 2: 507
 - smuggling of tobacco in, 2: 545, 636
 - support for soldiers during World War I, 2: 568–569
 - taxation of tobacco, 1: 97; 2: 641
 - tobacco control in, **2: 622–624**
 - as tobacco import destination, 2: 645, 648
 - youth smoking in, 2: 694–695, 695
 - See also* British Empire
 - United States agriculture, **2: 653–660**
 - Agricultural Adjustment Act of 1933 and, 1: 287; 2: 385, 524, 660
 - Agricultural Adjustment Act of 1938 and, 2: 387
 - Bright leaf tobacco production and, 2: 659
 - cotton farming vs. tobacco farming, 2: 656–657
 - cultivation of tobacco in, 2: 424–427, 654–657
 - geographic expansion of, 2: 653–654, 654, 660
 - mechanization of, 2: 660
 - New Deal policies and, 2: 385–387, 386, 660
 - plantations and, 2: 423–427, 425, 657, 658
 - post-slavery labor changes in, 2: 657–659
 - sharecropping and, 1: 294; 2: 522–524, 523, 532, 657–658
 - tenant farming and, 1: 294; 2: 524, 658–659
 - See also* Chesapeake region
 - See also* Slavery and slave trade
 - United States Federal Trade Commission (FTC), 1: 5; 2: 675
 - United States Food and Drug Administration (FDA)
 - attempt to regulate tobacco products, 2: 493–494, 500
 - features of food and drug regulatory system, 2: 492
 - Supreme Court decision against authority to regulation tobacco, 2: 494
 - tobacco industry litigation against, 2: 494
 - United States Lobbying Disclosure Act (1995), 1: 314
 - United States Surgeon General reports
 - on addictive role of nicotine, 2: 390–391
 - The Changing Cigarette*, 2: 507
 - criteria for causal relationships invoked in, 1: 345, 346
 - on diseases caused by smoking, 1: 201, 201t–203t
 - epidemiologic studies as basis of, 1: 323, 346
 - The Health Consequences of Involuntary Smoking*, 1: 34; 2: 514
 - Reducing Tobacco Use*, 2: 677
 - Smoking and Health: A Report of the Surgeon General's Advisory Committee* (1964), 1: 53, 208; 2: 675
 - on smoking as cause of cancer, 1: 53, 201, 201t–203t, 207, 208, 323; 2: 506
 - Universal Leaf Tobacco Company, 1: 255
 - Uptown cigarettes, 1: 228
- V**
- Vamps, in films, 1: 233–236
 - Vanillin, as tobacco additive, 1: 7
 - Vanitas* (still-life) paintings, 2: 666
 - Vector Tobacco (company), 1: 247; 2: 493
 - Vegas, in Cuba, 1: 189
 - Ventilation holes in cigarette paper, 1: 300; 2: 455
 - Vice, tobacco use associated with, 1: 78–79
 - Vietnam, 2: 582
 - Virginia, 1: 117–119
 - Civil War and, 1: 124
 - contraband trade in, 2: 544–545
 - early disasters in settlement of, 1: 118–119; 2: 637
 - foundations for successful colonization of, 1: 119–120
 - original colonization plans for, 1: 117–118
 - population of, 1: 122
 - See also* Chesapeake region
 - Virginia Slims, **2: 663–665**
 - advertising of, 1: 16, 63, 336; 2: 663, 664, 664
 - initiation of teenage smoking related to, 1: 173
 - market share of, 2: 664–665
 - success of, 2: 663, 685
 - tennis sponsorship by, 1: 336; 2: 663–664, 672
 - weight control associated with, 1: 63, 336
 - Virginia Slims Tennis Tour, 1: 336; 2: 663–664, 672
 - Virology, definition of, 2: 629
 - Visual arts, **2: 665–673**
 - Cigarette Labeling and Advertising Act effects on, 2: 672–673
 - exotic women in, 2: 669–670
 - health issues and, 2: 671–672
 - historical background of, 2: 665–667

- impressionism and, 2: 669
 new woman in, 2: 667–669, 668
 pipes in, 2: 422
 recent developments in,
 2: 672–673
 smoke as fluid element in,
 2: 665–666
 twentieth-century images of
 glamour in, 2: 670–671
 unglamorous portrayal of
 tobacco in, 2: 666, 666
vanitas (still-life) paintings in,
 2: 666
 wartime smoking and, 2: 667,
 670
See also Film
 Voice, trauma to, in shamanistic
 initiations, 2: 520–521
 Von Mises, Ludwig, 2: 458
- W**
- Wahhabi movement, Islamic,
 1: 276
- War
 cigarette smoking during Crimean
 War, 2: 670
 male virility associated with
 smoking in, 2: 667, 670
 smoking-related health of soldiers
 and, 2: 597, 694
See also World War I
See also World War II
- Warao shamans of Orinoco Delta
 initiation ritual of, 2: 519–520
 tobacco as spirit food of, 2: 518
- Warehouses, architecture of,
 1: 72–73
- Warning labels, **2: 675–678**
 Australia, 2: 620, 620
 Brazil, 1: 90
 Canada, 1: 211; 2: 677
 Cigarette Labeling and Advertising
 Act, 2: 429
 developing nations, 2: 676–677
 European Union, 2: 677
 Framework Convention on
 Tobacco Control provisions,
 2: 677–678
 France, 1: 60
 United States, 2: 675–676, 677,
 678
 wording of, 2: 675–676
- Water pipes (hookahs)
 in *Alice in Wonderland*, 1: 304
 in China, 1: 131
 definition of, 1: 131
 in developing countries, 1: 195
 invention of, 2: 575
 method of smoking, 1: 167
 Middle Eastern, 1: 355; 2: 420, 421
- Websites, of tobacco industry
 documents, 1: 218–219
- Weight control
 body weight set-point and, 1: 65
 smoking for, 1: 61–65, 84, 131,
 336
 tobacco advertising related to,
 1: 62–63, 64, 172, 336; 2: 686
See also Appetite suppression
- Weight gain, after smoking
 cessation, 1: 61, 65; 2: 484
- Weissman, George, 1: 332
- Westling, Håkan, 2: 488
- White Burley tobacco, 1: 246
- Wild at Heart* (film), 1: 235
- The Wild One* (film), 1: 231
- Wilde, Oscar, 2: 669
- Wills (tobacco company), 1: 252;
 2: 452
- The Wings of the Dove* (film), 2: 680
- Withdrawal symptoms/syndrome,
 1: 3; 2: 391, 468, 486
- Women
 as slaves, reproductive value of,
 2: 528
 tobacco personified as,
 2: 680–681
- Women, advertising targeted to
 appetite and weight control
 strategy in, 1: 62–63, 64, 172,
 336; 2: 686
 feminized versions of cigarettes
 and, 2: 453, 685
 gender-specific marketing
 strategies in, 1: 79; 2: 685–686
 increase of smoking associated
 with, 1: 17, 172, 173
 by Lucky Strike, 1: 318–319, 319,
 335–336
 marketing strategies in,
 1: 335–336
 by Virginia Slims, 1: 16, 63, 173,
 336; 2: 663–665, 664
 in women's magazines, 1: 13
 before World Wars I and II,
 1: 14–15, 17, 79; 2: 683
See also Women, in
 advertisements
- Women, in advertisements
 acceptability of women in, 1: 79
 on cigarette cards, 1: 11–12, 14,
 32, 79; 2: 681
 Earhart, Amelia, in, 1: 319
 exoticism of, 2: 669–670, 681
 McCall, June, as “Miss Perfecto,”
 2: 682
 Mucha, Alphonse, Job cigarette
 poster of, 2: 667–668, 668
 scantily clad women in, 1: 11–12,
 32, 78, 78, 79; 2: 681, 682,
 711
- Women tobacco users, **2: 679–686**
 appetite suppression by smoking,
 1: 61–63, 62, 64, 65, 84, 172
 cigarettes as feminine method of
 smoking, 2: 452, 562–564
 cigarettes designed for women,
 2: 452, 453, 685
 colored cigarettes tips for, 2: 453,
 685
 criticism of, by men, 2: 682
 in developing countries, 1: 195
 in early twentieth century, 1: 32
 femme fatale role of, 1: 233–235,
 234; 2: 670, 680
 gender-based attitudes toward,
 2: 679–681
 global scale of cigarette smoking
 and, 2: 684–685
 in harems, 1: 356, 357, 358;
 2: 669
 health risks of smoking and,
 2: 684–685
 in India, 2: 579
 initiation of smoking by, 1: 17,
 173, 175, 175–176
 lung cancer death rates of,
 1: 320
 male control of women's body
 and, 2: 680–681
 male-female smoking rates,
 1: 177*t*, 178–181, 178*t*, 180*t*;
 2: 684
 in Middle East, 1: 355, 357, 358,
 359
 Nazi Germany's antismoking
 attitude and, 2: 383
negritas, smoked by Filipinas,
 2: 583
 new (independent) women as,
 1: 32; 2: 667–669, 668, 680,
 680
 in Oceania, 2: 394, 395
 portrayal in English Renaissance
 literature, 1: 225
 in preindustrial Europe and North
 America, 2: 679
 respectability of smoking and,
 1: 77, 79, 148–149;
 2: 680–681, 682
 secondhand smoke effects
 on, 2: 513–514, 515,
 624, 627
 sexual attractiveness of, 2: 564
 sexual connotations of,
 2: 680–681, 682
 vamp role, in films, 1: 233–236
See also Sexual symbolism of
 smoking
See also Women, advertising
 targeted to
See also Women's liberation

- Women tobacco workers,
1: 295–297
black women union leaders as,
1: 297
Carmen (opera character) as,
1: 365; 2: 670, 681
cheroot manufacturing by, 2: 581
cigar manufacturing by, 1: 266
cigarreras, in Seville, 1: 295
in Cuban factories, 1: 296
in early industrial production,
1: 263
kretek manufacturing by, 1: 288
low pay of, 1: 263, 266
- Women's Christian Temperance
Union (WCTU), 1: 48, 141
- Women's liberation
as advertising theme, 1: 16, 335;
2: 686
cigarette smoking as symbol of,
1: 148; 2: 563, 667–669
Virginia Slims as image of, 1: 16,
336; 2: 663, 664
of Western women, before 1950,
2: 682–683
- Wood, Edwin, 1: 112
- Wood pipes, 2: 415, 418, 419
briar pipes as, 1: 157, 167; 2: 418
See also Briar pipes
- Workplace, banning of smoking in
from 1970 to present, 2: 463
in airplanes and public
transportation, 1: 34; 2: 537
in bars, 2: 465, 540, 623
California's Smoke-Free
Workplace Act, 2: 465
- World War I
gender patterns of tobacco use
affected by, 2: 682
patriotism linked to smoking
during, 1: 148, 330; 2: 463, 569
popularity of smoking during,
1: 329
"Smokes for Soldiers" campaigns,
1: 49–50
smoking by soldiers during,
1: 32, 49–50, 79, 148, 172,
329; 2: 568–569, 569
social connotations of smoking
during, 1: 79
tobacco advertising during,
2: 670
tobacco exports in pre-war
period, 2: 645
- World War II
Japanese smoking consumption
after, 1: 279, 279
provision of cigarettes to soldiers
during, 1: 330
smoking by soldiers during,
1: 172
tobacco advertising during,
2: 670
tobacco trade after, 2: 645–646
- X**
- X-Files* (television program), 2: 672
- Y**
- Yin and yang, in Chinese medicine,
2: 612
- Young Men's Christian Association
(YMCA), 1: 48; 2: 485
- Youth access laws
"Action against Access" campaign,
by tobacco industry, 2: 477,
478
retail sales of tobacco controlled
by, 2: 500–501
tobacco industry actions against,
2: 431–432, 478
- Youth marketing, **2: 689–693**
advertising forms and strategies
in, 1: 15, 334–335
advertising restrictions for
protecting youth, 1: 22
on airways (radio and television),
2: 690–691
brand loyalty linked to age,
2: 689
importance to tobacco industry
revenue, 2: 689–690
Joe Camel advertising campaign
in, 1: 22, 107, 173, 335;
2: 692–693
popular cigarettes brands and,
2: 692*t*, 693
product placement and,
2: 691–692
retail outlets advertising in,
2: 499–500
sports sponsorship and,
2: 690–691
by young women, 1: 173
See also Children
- Youth tobacco use, **2: 694–696**
- alcohol and drug use associated
with, 1: 38, 39–40
in early twentieth century,
1: 31–33; 2: 694–695
in early twenty-first century,
2: 694, 695–696
in Great Britain, early twentieth
century, 2: 694–695, 695
initiation of smoking and,
2: 470–471, 471, 689, 695–696
in later twentieth century, 1: 33
in Middle East, 1: 359
by Native Americans, 1: 227
by naughty boys before World
War I, 1: 78
prohibition of tobacco sales to
minors, 2: 461
as rebellious gesture, 1: 32, 235,
235; 2: 464, 566
smoothness and mildness of
cigarettes as factors in, 1: 116
sports participation and, 2: 597
by young women, 1: 32, 173;
2: 684
See also Children
See also Youth access laws
See also Youth marketing
- Z**
- Zambia, Africa, tobacco growing
and processing, 1: 29
- Zhang Jiebin, 1: 130; 2: 612
- Zhang Lu, 2: 613–614
- Zimbabwe, **2: 699–701**
air-cured tobacco in, 2: 699
colonial tobacco production in,
2: 699–701
flu-cured tobacco production in,
2: 700
inyoka tobacco of, 2: 699
land redistribution and future
tobacco trade in, 2: 701
post-colonial tobacco production
in, 2: 700, 701
preferential purchase agreements
with British tobacco
manufacturers, 2: 700,
700*t*–701*t*
tobacco buyers in, 2: 647
tobacco exports from, 2: 646, 646
tobacco workers in, 1: 294–295
See also Rhodesia
- Zimmermann, Detlef, 1: 93