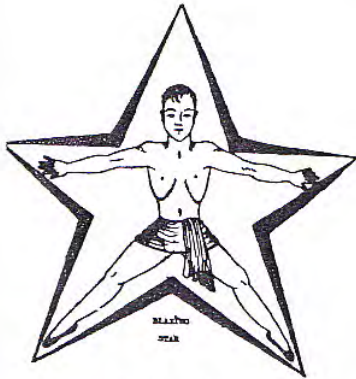


The Great Law



Professor Hilton Hotema

Creative Science



The Great Symbol of Solomon

The Great Law



Death is the release of the soul from material imprisonment.

Birth is the imprisonment of the soul in the physical body.

The Great Law
By Prof. Hilton Hotema

Revised Edition

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The statements made herein are general concepts of the various authors. We do not claim this book furnishes accurate information as to an effective treatment or cure of the diseases discussed — according to currently accepted medical opinion. The reader must accept the responsibility of choosing his own doctor in time of sickness.

The Publishers.

WHAT ONE BUYER OF THIS COURSE SAID (30 Years Ago!)

"Your teachings are both evolutionary and revolutionary. What a godsend these lessons are for those who have them.

"My fort has been lecturing. I was a clergyman at 20, and later was tutor and demonstrator of Anatomy at the College of Surgeons, Edinburg, Scotland."—**Marmaduke Rose, M.D., of Melbourne, Australia.**

Consulting Physician, Surgeon & Gynecologist. Formerly Resident Physician and Surgeon to the Royal Surrey County Hospital, England; Demonstrator of Anatomy and Lecturer on Anatomy at the Royal College of Surgeons, Edinburg; University Resident Surgeon, Edinburg Royal Infirmary, and Assistant to the Surgeon to Queen Victoria.

(He stated in his letter that he was then 84 years old, and had been a student and practitioner of medicine for 60 years.)

Mokelumne Hill (locally pronounced M'Kollumee) is an Indian word meaning "Big Water" 55 mi. S. E. of Sacramento (State Capitol), Highways: 16, 49 & 8 . . . (Calaveras County, California).

NOTICE TO ALL CONCERNED

This work is a late edition of a course of study written by Prof. Hilton Hotema thirty-five years ago, which has been out of print for years. It created unusual interest when it first appeared, and this new publication is the result of the great demand for it.

This work does not direct the reader to do anything in particular, nor condemn for what he does. Its purpose is to make the reader think and reason. No claim is made as to what any of the methods mentioned may do for any one in any given case; and the author and the publisher assume no responsibility for the opinions expressed. It is the office of higher intelligence to warn humanity that unwise words and unnatural works will harm them, and to admonish them that there is no escape from the law that they will reap as they sow.

The author of this work is open to no engagements, entertains no visitors, and grants no interviews. He tells no fortunes, does not teach divination, makes no predictions, composes no philters and lends himself to no sorcery nor evocation. He is only an humble Being of Creation, a Child of the Glorious Sun, a Seeker of Light, a faithful Disciple of the Ancient Masters. He is vital in mind and vigorous in body in his 86th year, a trifle over four years under 90, an age that few ever reach, and most of them who do, are dead on their feet, blank in their mind, and worthless to the world.

The publisher of this work accepts no patients, has no individual cases, no medical practice, and does not teach or prescribe for patients. He has no authority to

comment on the postulates or opinions presented in this work. His engagement is to publish and sell it, and there his obligation ends. Publications are sold to be accepted or rejected, and the purpose of Hotema's writings is to dissipate the darkness and incite the mind to make people think.

The October-1937 issue of Humanity said: "More people are looking for something to move their bowels than they are for something to move their brains. It is reported that more than 250 tons of 'laxative medicine' is sold weekly in this country."

Prof. Hilton Hotema

Honolulu, 1962

A-a

INTRODUCTION

Prior to its destruction by satanic despots in the 4th, 5th and 6th Centuries A.D., a remarkable system of Cosmography had been taught for ages in the Temples of the Ancient Masters. For that purpose were the temples erected, and the leader of these temples known to us, was the Great Pyramid of Gizeh, built so far back in the night of time that no record of its construction has ever been discovered.

This system of education was founded on fundamental principles, and scientifically expounded the constitution of the Macrocosm and the Microcosm, skillfully symbolized in the image of the Sphinx, found in all ancient nations. It revealed the secret that, at the birth of man, the Astral Garment of the Eternal Ego is a photographic representation of the planetary vibrations affecting the earth and all of its inhabitants.

The ancient Science of Celestial Correspondence, usually called Astrology, revealed the meaning and time-arrangement of electrons, atoms, molecules, and cells, their creation, function and related positions to one another, whether in star, nebulae, sun, earth or atom.

We must always see things whole or never find the fact that the Great Law of the Universe is One, constantly repeated by the ancient Seers, Masters and Adepts.

Man, the Microcosm, must celestially correspond in color, number, and vibration to the same in the Solar System at the moment he is born. And the mathematics of the Macrocosm inscribe in the structure of the Microcosm an imprint thereof, indicating the plane of Consciousness in which the Ego will function during its days in the living organism.

The Great Law of Celestial Correspondence, so well known and so highly regarded by the Masters, would be taught in the schools of the nation if the real purpose of education were to enlighten the mind and elevate the man. The hidden facts, when examined, disclose that this is not the case.

Johan G. Fichte (1762-1814) explained that "education should aim at destroying free will, so that after pupils have left school, they would be incapable, throughout the rest of their days, of thinking or acting otherwise than as their school masters would have wished. . . . Diet, injections and inunctions will combine, from a very early age, to produce the kind of character and belief that the authorities consider desirable".

Commenting on this statement, Dr. R. S. Clymer said: "The public at large that have read much of the literature on the subject, are growing panic stricken with fear that these agents of Satan will invent ways and means to employ drugs and serums for the purpose of their plan. People are more and more losing faith in the medical profession" (Age of Treason, p. 9).

In his startling book on this same subject, titled "Hide", Dr. Herbert Blackschleger wrote:

"The civilizations of today consider themselves 'educated and enlightened'. Actually, they are, to a great extent, brainwashed and hypnotized. The world has been plundered for milleniums. In today's period of so-called 'freedom' more people are living under physicalized, tranquilized, and lobotomized slavery than ever before in history."

The very work Education is a tricky misnomer. The schools are not designed to educate but to domesticate. Their purpose is to train children like horses and dogs. Children are brainwashed and mind-conditioned to do the things and to think the thoughts which those in

authority want them to do and to think. They are trained to accept without prejudice and to obey without question the dictates of authority. This training is so deeply instilled that only a few are ever able to recover from the effects of it, and they are smeared as enemies of civilization.

In this controlled civilization of fraud and trickery, we can't teach man the plain facts of Creation, the nature of Life and the constitution of the body, and also make him believe that it's scientific to poison patients because they are sick, or that the body can be made disease proof by injecting poisonous filth into it. These facts are known to medical art, and the hidded purpose of thus poisoning the body is exposed by Dr. Clymer.

The satanic scheme recently went a little too far, and resulted in damaging the bodies of some women so seriously, that they gave birth to a flock of deformed babies that shocked the public. The drug-poison used in this particular instance was a tranquilizer called Thalidomide.

With the despotic destruction of the marvelous Cosmographical Science of the Ancient Masters, all of the vast Roman Empire and the nations it controlled, plunged into a pit of intellectual darkness that has no parallel in the history of the world. That terrible condition lasted for more than a thousand years, right down to the 19th Century, when a little light began to glow in this gloomy world of darkness. Even that faint gleam is in danger of being obliterated by the nefarious schemers who control civilization and live and thrive on darkness and ignorance.

The ancient knowledge that has been permitted to drift down to us relative to Creation, is the simple fable contained in the Bible. This story was not written to enlighten the mind on that subject.

And we form the wrong impression when we mention

Creation. We think of something as beginning and coming forth from nothing. The Bible says "there is no new thing under the sun" (Eccl. 1:10). Everything that is has always existed. Nothing is created. Eternal existence is the fixed and changeless order of the Universe.

What we call Creation is the transmutation of invisible substance to visible matter. When invisible vapor becomes visible water, that is a transmutative process, not a creative one. This is the regular order of work of the Universe thru infinite time to infinite results. But for the sake of clarity, we shall continue to use the more common terms create, creative and creation.

The Circle

In the great school called the Ancient Mysteries, the Circle was used to teach the Neophyte the continuity of Space and the perpetuity of Time. The Circle has no beginning and no ending, indicating the Realm of the unmanifested Zodiakos.

The Circle encompasses all, yet it is the Silence of Equilibrium, the Realm of Inertia, the Cosmic Reservoir, the Astral World, the Realm of Invisible elements that become, by transmutation, the visible World, called Nature.

No manifestation of The Great Law yet appears, as no action has occurred. Law is not indicated until Equilibrium is disturbed. Then action begins; and the regular, constant mode of motion reveals the order of operation. The regularity of the motion that rises from the disturbance of Equilibrium indicated the principle called The Great Law.

The Dot

In the center of the Circle the Masters put the Dot,

the hieroglyphic of the Sun, the center of the Zodiakos. They recognized the Sun for what it is--the Father of Light, of Life, and of Power; the Gigantic Generator of the Universe.

In the Egyptian Mysteries, the great school of which actual knowledge has descended to us, the Dot or Sun was personified as Ra for the better instruction of the Neophyte. And in that great Egyptian scripture titled Book of the Dead, it was written:

"I am Ra (Sun) at his first appearance (in the morning). I am the Great Sun God, self-produced. . . . O Ra, in thine Egg, who risest up in thine orb, and shinest from thine Throne on high. . . . I come to do the will of my heart, out of the abode of Flame".

The Bible says our God is a Consuming Fire (Heb. 12:29, etc.).

This impressive scene, dramatically presented on the stage, with parts skillfully played by able actors, constituted some of the Mystic Drama employed in the Ancient Mysteries to teach the Neophyte the great lesson of the Creation of Man on the terrestrial plane.

Polarity

The Neophyte was taught that the primeval phase of the creative process produces the primary division of the Circle into lateral halves, termed positive and negative, active and passive, male and female.

The first presence of the Great Law now appears, as Equilibrium is disturbed and creative action begins.

The Great Law rises automatically from the state of Polarity that is produced by the primeval phase of creative action.

The vertical line No. 1 divided the Circle; and, like the Circle, No. 1 is a natural geometrical figure.

When external or internal force affects the Circle, it begins to revolve, thus generating an axis, the vertical line, the figure 1, which bisects the Circle, creating lateral halves, the primeval products of creative action.

No other figure could be the first of the numerical system; for 1 is the figure naturally generated by the first productive process of Creation.

The Great Law

We use the terms universal law, cosmic law, natural law, etc., but to the average brainwashed layman these terms mean little.

In 1883 a book by Henry Drummond, F.R.S.E., F.G.S., was published, its title being Natural Law In The Spiritual World. It made him famous. He began with this statement:

"Natural Law is a new word. It is the last and most magnificent discovery of science" (p. 3).

When the curtain of darkness fell on Ancient Science in the 4th Century, it was not to rise again until modern science discovered Natural Law.

During the interim of some fourteen hundred years, the people of the Christian World lived in a realm devoid of all law. Everything that happened was supernatural, occurring according to the will and whim of an immanent and omniscient God, who did as he pleased and observed no law and order.

As applied in science, Law is described in the dictionary as "a proposition which expresses the constant

and regular order of phenomena, or the constant mode of action of force".

Law does not exist per se. It rises from the order of action illustrating the sequence of effects, and is the result of a definite state of conditions observed.

Drummond said that science discovered Natural Law. What science discovered was the regular, changeless processes by which created phenomena called Nature is produced. It found that cosmic processes operate constantly and eternally in a definite manner, thus enabling us to predict with exactitude that a thousand years hence, grass will grow and water will run as at the present time.

Law predicates nothing of causes. Universal laws are simply the rules and order of the regular and definite processes and condition of things in Nature; or which are found in Nature by a sufficient number of competent observers.

The Law of Gravitation speaks to science only of processes. It has no light to offer as to its nature and itself. Newton did not discover Gravity. He presumed that he had discovered the operation of some unknown force which he called Gravity because he could think of no other appropriate name.

Equilibrium is Unity. As we move from Unity, the first manifestation of action appears in the realm of Duality--a fact which indicates that Polarity is the most fundamental expression of all laws.

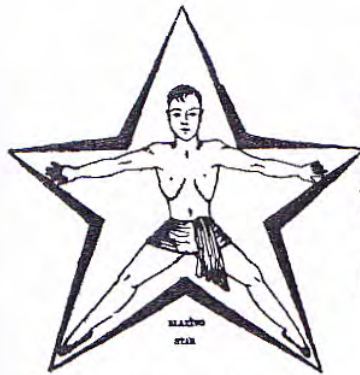
In the electro-magnetic world this law appears as positive and negative action; in the chemical world as acid and alkaline; in the atomic as electron and proton; in the biologic world as male and female; and in other departments of the Universe as heat and cold, expansion and contraction, action and inertia.

The Universe exists in equilibrium because of polarization. It manifests itself in a multiplicity of ways; a diversity having a common foundation of purpose, of process, and of progress.

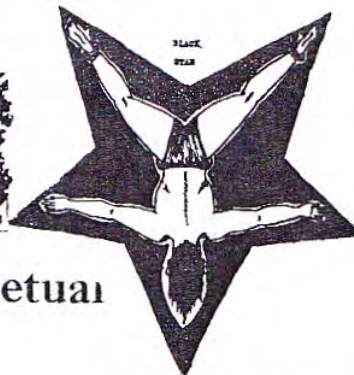
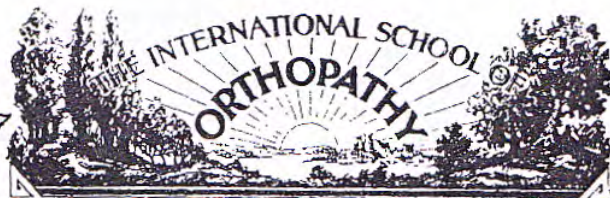
This diversity is a condition of degrees, not of differences. There is one force, one substance, one animating element, one consciousness, one intelligence, one mind, each expressing its infinite nature in a multiplicity of ways through a variety of forms.

This was the fundamental conception of Ancient Science. Its basic doctrine was, "As Above, So Below".

Everything contained in the Macrocosm is manifested in the Microcosm. Discover the constitution of the one, and you will know the constitution of the other.



Death is the release of the soul from his material imprisonment.



Birth is the imprisonment of the soul in the physical body.

Existence—or Law of Perpetual

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Lessons Nos. 1, 2, 3, and 4

Lesson No. 1, Chapter No. 1

REJECTING THE NEW

Fools deride; philosophers investigate—says the sage.

There is no old age. There is no natural death. Physical rejuvenation is a fact. Perpetual Youth is a possibility.

These four propositions are propounded with a full appreciation of their startling significance. They are presented as facts of Existence, clearly demonstrable by Universal Law.

These four propositions directly challenge the settled opinions of physical science, and the accepted belief of the world at large. They will provoke the hostility of the one, and the ridicule of the other. If the storm of criticism arouses at last an honest investigation, our labor shall not have been wasted.

The four propositions presented, disclose the queer character of the philosophy to follow. The authority to state these propositions in unqualified terms, is derived from knowledge of the existence and operation of the Law of Universal Formation.

The Law of Universal Formation is an eternal principle, and not a theory. It is the foundation of the new philosophy.

The propositions presented, arise from universal phenomena, their classification, and consideration, together with facts that demonstrate the existence and operation of the Laws involved, and the results that follow in the wake of their application to Living Organisms.

The Law of Perpetual Youth is a law as true in principle, and as positive in operation, as is the Law of Gravitation. It is as applicable to man as it is to trees and plants; but its mode application is not exactly the same in both instances.

Twigs of old, decaying trees may be engrafted onto young roots, and their life, in this way, be indefinitely prolonged. By this procedure, the twigs grow again into great trees, that live for centuries. The operation may be performed without end. Man thus supplies a condition that perpetuates the continued existence of the twigs. This is the Law of Perpetual Youth for trees, set into operation by the intelligent aid and assistance of man.

Man can do for himself what he can for the twigs of trees. The cells and tissues of his body respond automatically to the Law of Perpetual Youth. They are endowed with the power of their own rejuvenation. The power is set into operation by evocating its law. This is accomplished by meeting the requirements of the law. The requirements of the law are met when the conditions are

supplied that set the law into operation, just as in the case of twigs and trees.

In this study, as in any other, the student must face certain propositions, a solution of which depends upon a correct working formula. In this, as in any other study, a successful solution rests upon a knowledge of the laws involved, and their rigid application in an unvarying manner, from infinite time to infinite results.

Many grave difficulties confront a student, who dares to give to the world for the first time, any new knowledge that is contrary to the experience of man and the wisdom of the ages. The difficulties increase when the student is stripped of all proof, except the bald fact that results depend absolutely and always upon conditions, and that any result is possible and obtainable, if the requisite conditions can be supplied.

The requisite conditions of Perpetual Youth for man, as well as for trees, fall within the range of possibility. The state of Perpetual Youth will result from the conditions of Perpetual Youth. The conditions of Perpetual Youth are the conditions of Perfect Life. The conditions of perfect life are possible of fulfillment.

Perfect Life demands perfect correspondence as between the physical organism and its environment. Such correspondence as between the physical organism and its environment, comes within the limits of possibility. Within the limits of that possibility, Perpetual Youth is a fact, making death unnatural, and old age a meaningless term.

Fifty years ago, a group of scientists were holding a convention in New York. An aged Engineer was on the program. His turn came; the chairman introduced him, and he proceeded to read a scientific paper, in which he analyzed and explained with remarkable clearness, the principles of flying. He pointed out that to make a heavier-than-air machine which would fly with great speed, lay within the limits of possibility.

The Engineer had hardly reached the middle of his discussion, when he was interrupted by the chairman, who informed him that the convention had no time to waste on wild theories and speculations. He was politely requested to make room for the next speaker—and thus ended the reading of a paper, that had been prepared with profound skill, and stated a possibility.

Though rejected in that day as a wild theory, yet the principle was correct. Faith was required to test the principle. But the idea of flying was then so far ahead of the times, that no one would even think of believing it. In this generation, no one would think of denying it.

In these pages, the Principle of Perpetual Youth shall be analyzed and explained. But we know that our efforts

will meet, in this day, with no warmer reception than did those of the old Engineer with respect to flying.

We also know that we are preparing a work, which will lead at last to investigation. From this investigation will result an accumulation of knowledge, which will teach future generations the Law of Perpetual Youth, that man may avoid physical decay and decline, and gain the glory of Perpetual Youth.

Chapter No. 2

Perpetual Youth

Perpetual Youth is the dream of man. It is the highest hope of human flesh.

Throughout the centuries man has searched for the fabled Fountain of Perpetual Youth. Prophets and poets, in all ages, have told of a time when the pain of disease would be unknown, and the sting of death unfelt.

History, tradition, and experience indicate that the question of Perpetual Youth rises with the dawn of human life. Its quest has been the quest of the ages.

The ultimate goal of the world's activities is better health and longer life. The uncertainty of human existence more or less affects every person. The thought of death is the bitter cup that strikes the heart with terror. Childhood fears it. Old age dreads it. Even disease, poverty, and crime shrink from release by it.

The last enemy that shall be destroyed is death, says Paul. The thought of death arouses all men to restlessness. It deflects the mind from purposeful living by bringing before one the continual prospect of reaching the end. Anticipation of death takes pleasure out of living, and engenders sorrow where joy should reign.

The belief that death shall eventually be conquered, instead of being submitted to, grows stronger with the passing years.

In the ceaseless search for knowledge that will extend the limit of our youth and years, and prevent the Grim Reaper from robbing us of what seems a natural heritage that should never fail nor fade, sooth-sayers and sorcerers, wise men and fools, have been importuned for some mysterious concoction, some magic broth or brew, which would serve to rejuvenate the body and lengthen life.

Down through the ages of ignorance and superstition, man has searched for the secret that would delay the day when "the Grinders should cease and the windows be darkened."

With failure crowning every effort, the searchers are turning at last to man himself. The belief is growing, that as man has with himself all the potentialities of his own existence, he also has within himself the Fountain of Youth.

That the Fountain of Youth lies within the Kingdom of God, seems to be a Truth that can no longer be ignored. Dr. Friedenburg, of New York, an eminent authority, observes:

"With a perfectly balanced endocrine system, one would live forever. In fact, your fountain of youth lies within yourself."

The thought of Perpetual Youth penetrates all existence. It sleeps in the sluggard, dreams in the professor, awakens in the doctor, and acts in the thinker.

The craving for Perpetual Youth is as strong, and as natural, as the craving for food or drink. It grows more powerful as the body grows less efficient. It haunts alike the rich and the poor, the king and the slave, the young and the old.

As vitality wanes, as the step grows feeble, as the

hands tremble, as the eyes become dim, as the sunset of physical life draws near, the rich would give their all for a few more years of life. The mighty monarch would gladly give his jeweled crown for the physical vigor of his young and virile slaves.

It is an unfortunate man who does not long for Perpetual Youth. It is an abnormal man who does not desire it.

The belief in Perpetual Youth has increased with the higher evolution and progress of man. It is evident that the belief is based on a truth not yet discovered. The belief is not the mere superstition of the savage, for it grows stronger with the higher stages of intelligence and reason.

Chapter No. 3

Origin of Thought

There is nothing new under the Sun.

Everything that is to be, already is. It has at least a potential existence.

Man's knowledge is greatly limited. He lives and moves in a Five Sense world. Beyond the range of his Five senses lies the vast Unknowable.

There is no such thing as an original thought. No man has produced an original thought; for man cannot produce an original thought. In fact, man cannot produce thought at all.

Man does not originate his thoughts and ideas. The first thought expressed by him, came to him from without. It came not from himself. It was not of his own making. It was suggested to him by something that had either an actual or a potential existence. It was received by him as an impression upon his brain cells. The impressions were translated into what we call thought. They were transformed by the brain to correspond to that from which the impression was received.

Man is a creature of the five senses. These are the instruments that record Vibratory impressions.

From birth until death, vibratory waves are making impressions upon man's mentality. This is the method by which thought is produced. It can be produced in no other way.

Thought must correspond with the impressions received. Thought is merely an interpretation of the impressions. The impressions are made by vibratory waves. The waves are set in motion by a cause. The cause must correspond with the effect produced.

There could be no thought of a world of Perpetual Youth, if a vibratory force had not carried the impressions into the human brain. There could be no vibratory force of such kind, if such world did not exist.

The existence of the thought of Perpetual Youth, is proof of the existence of such a vibratory force. The existence of such a vibratory force, is proof of the existence of such a world.

Every impression in the brain, made by dream or otherwise, is put there by a vibratory force. The vibratory force must come from a condition or thing that is competent to impress upon the brain, the thought or idea that is translated and transformed from that impression. The condition or thing must have existence. The existence need not be actual. But the existence must at least be potential. It must be a possibility.

It may be suggested that the thought of Perpetual Youth comes first as an intuition. But the thought of Perpetual Youth could not have arisen, had its attainment not been a possibility.

It must be admitted that the universal thought of Perpetual Youth, arises from a source that is distinctly not physical. If the brain were forced to depend upon nothing more than the facts of observation, the thought had never developed.

People are hourly dying. Some are old and grey, some are in the prime of manhood, others are in the tender years of childhood. The death-rate among doctors, who are supposed to know how to live well in order to live healthy and long, is 17 per cent per thousand for the United States, while it is only 12 per cent per thousand for the population of the country as a whole.

No rational person can contemplate this condition, and regard it as natural, and then also conceive of the idea of Perpetual Youth. Much less would he think of attaining that state.

As man has conceived the idea of Perpetual Youth, and even struggles to achieve it, the condition of death must be regarded as unnatural, and the condition of Perpetual Youth must be regarded as a part of Eternal Truth. It must be regarded as a Potentiality—a Possibility that has not as yet evolved to a Reality, but is capable of such evolution.

Chapter No. 4

Deception and Profit

We are living in the days of Commercialism and Big Business. The Captains of modern enterprises never sleep. They keep their fingers on the Public Pulse, discover the trend of daily thought, and contrive to reap a harvest from every human need or desire.

As demand ever creates supply, Commercialism and Big Business have been prompt to supply the demand of the aged, for that which would impart to their decrepit frame, the vim and vigor of health.

The principle of economy enters into every human endeavor. The desire to gather wealth governs every human activity. The sick and the crippled, the old and the feeble, do not escape from the nets of the pirates. All things made and offered for the purpose of relieving sickness, and of rejuvenating the body, have been made and offered for the sole purpose of producing profits for the makers and offerers.

Scientists and chemists have searched for years, to discover ways and means of preserving youth and of rejuvenating the decrepit body. The foremost of these have advanced the theory, that youth is a question of keeping the ductless glands in order.

If the ductless glands be kept in good order, their excretions are of such character and power, that their effect on the body is to prolong youth and prevent the approach of old age—say the scientists and chemists.

This theory has led to wide speculation and experimentation. The work of Steinach, in his attempt to stimulate the activity of the gonads (sex glands); and of Voronoff, in the transplantation of the gonads of young monkeys to man, and the similar operation of Zondeck, have but served to demonstrate that man is much more than a machine, run by a set of glands.

Such absurd theories and preposterous practices are the products of economy. It is Commercialism and Big Business at work, extracting money from the public, under false and misleading claims.

But the credulous public is willing to be hoodwinked by every new scheme: It has clamored loudly for the invigorating and rejuvenating concoctions of commercialism. This demand has led to the wide manufacture of various

substances from the glands of animals, called biological products. These are finding an active market among the aged and weak. The sales are bringing riches to the sellers. The buyers are meeting with disappointment and discouragement.

Sixty centuries of labor and research have failed to find the secret of Perpetual Youth. But the desire for Perpetual Youth is proving highly profitable for Commercialism and Big Business. These institutions are not going to give up their prey without a desperate struggle. They will heap persecution and indignities upon those who teach that Perpetual Youth is the reward of diligent labor, and not the property of commercialism, to be sold and conveyed like goods and lands.

Chapter No. 5

Law of Self Preservation

No living creature, in a normal state, wants to die. The thought of death strikes terror to the very core of every animal, every child, every man. The aged fight as desperately for life as the youth; the beast loves life no less than the human.

The Law of Self-Preservation rules the conduct of the Living World, from the lowest to the highest, from the plant to the man.

Robert Walter, M. D., a man of remarkable reasoning powers and literary skill, of this law observes:

"Every particle of living structure in the universe, vegetable or animal, animal as well as human, and human as well as divine, no matter when, where, or how organized, or whether organized at all, lives and acts in obedience to this first law of life.

"Further illustrations of the truth of these statements are readily cited. The remarkable and apparently inconsistent conduct of the man who clings to life with utmost tenacity after every just reason for living has disappeared, and nothing left but sorrow and misery, notwithstanding the claim that death would open to him joys eternal, is excellent proof.

"Every physician knows that the firmest Christian shrinks from death, and often holds on to life with desperation long after reason has ceased to justify the instinct. It is this first law of vital expression that causes the flesh to be so weak and shrinking, and shows that intellectual belief has little to do with it. . . .

"The excitement, trembling, and, perhaps, exhaustion of the criminal, as he goes to his execution, exhibit and explain the same law.

"Do it quickly, and do it surely, if it must be done, is the cry of instinct. The pain is nothing, but the suspense is terrible.

"The conscious presence of the dreaded fact coming daily nearer, by the slow march of events, is the real punishment. In all these cases it is evident that the instinct does not belong to the intellectual life as much as to the organic or unconscious existence. . . .

"In a word, the instinct of self-preservation inheres—

1. In the minutest cell of the organized body;
2. In these cells as aggregated in communities;
3. As organized into distinct organs; and,
4. As organized into the organism as a whole."

A law that is universal in its scope and operation, as the Law of Self-Preservation is seen to be, cannot spring so consistently from an individual principle of intelligence.

The conduct of man, as he clings to life, after every just reason for living has disappeared, does not arise from individual intelligence.

The conduct of the aged, as they struggle for life, after there is nothing left for them but sorrow and misery, is not prompted by their own individual intelligence.

The desperate fight for life, of the fatally wounded animal, does not arise from the animal's individual intelligence.

We thus observe that in considering the Law of Self-Preservation, we pass beyond the realm of Individual Intelligence. We enter the vast world of Eternal Intelligence, where reason and judgment, philosophy and fear, have no influence, no force, no effect, and where living bodies respond automatically to the influence of Instinct and Intuition—these being qualities that arise as evidence of the existence and operation of Eternal Intelligence.

Important testimony in this respect comes from Prof. A. L. Ranney, A. M., M. D., University of New York, who says:

"We have come to learn that each group of cells—perhaps each cell—in this gray matter, represents a certain kind of intelligence; and that these cells are probably in communication with one another by means of white fibres. It is the sum-total of these intelligences that imparts to the (vertebral) cord its characteristics as an organ.

"As each one of these cellular groups and its inherent intelligence is more or less independent of all others, so the combined intelligence of the cord's gray matter is independent of the combined intelligence of other collections of gray matter; and it is a recognized fact that the spinal cord has a function of its own. This has been exemplified by the experiments on headless frogs and decapitated human beings.

"Cut off the head of a frog, permit it to recover from the shock of the operation, then pinch its skin, and it will hop away; or, throw it into the water, and it will swim. Place a drop of acetic acid upon the belly of such frog and it will endeavor to brush away the irritation with one foot. Now amputate the leg of this foot at the knee. The animal will make several futile attempts to reach the irritated spot with the stump, and, failing, will, after some hesitation, make use of the uninjured limb for this purpose.

"Robin witnessed some instructive phenomena in a criminal whose head had been removed an hour previously at the level of the fourth cervical vertebra. The skin around the nipple was scratched with the point of a scalpel. Immediately there ensued a series of rapid movements in the upper extremities (arms), which had been extended upon the table. The hand was brought across the chest to the pit of the stomach simultaneously with the semi-flexion of the forearm and inward rotation of the arm—a movement of defense, as it were.

"All this teaches us the more clearly to understand, that it is intelligence of the cord's gray matter that is called into play in a thousand actions that must take place without the aid of that conscious intelligence which we call 'mind'."—Applied Anatomy, p. 311.

In these varied facts is found a true explanation of the universal principle of Eternal Intelligence, which conserves animate organisms and guides the living world.

When animal or man fights for life, the action arises from the impelling power of eternal intelligence. When man searches for the fountain of perpetual youth, the action arises from the impelling power of eternal intelligence.

The fight for life, the struggle to live on, after reason has ceased to justify the instinct and action, arises from the impelling power of eternal intelligence.

The magic influence of eternal intelligence, working through the law of self-preservation, the flesh can neither explain, control, nor defy. The flesh must obey. It can do nothing more.

In this conduct, man is stripped of the higher human qualities, and reduced to the level of the animal kingdom. On this plane with the beasts, bees, and birds, he automatically and instinctively obeys the call of the Eternal Trinity that gave him birth and being.

Eternal Intelligence directs only towards eternal truth. It leads nothing astray, nor implants false impressions in any living thing. It has never betrayed nor deceived any

part of the living world. It directed the first bee how to make comb and honey, and the first hornet how to make paper. Its urgings and promptings are those of eternal truth. But these facts can neither be comprehended nor interpreted by men, who think they have the matrix of Truth, and are trimming what they find to fit the matrix they have made.

Lesson No. 2, Chapter No. 6

Horror of Death

All men from the first have died at last; but the search for the fountain of perpetual youth does not abate.

In this universal conduct, physical science can see nothing more than man reacting to the **Infirmities of age and the horror of death.** Such is the opinion of Garret A. Norton, M. D., who says:

"When the eccentric and adventurous Spaniard, Ponce de Leon, in 1513, pushed out from shore on poorly chartered seas, in search of the mythical fountain of eternal youth, about which liars told marvelous tales, he was reacting to a natural impulse, which is the dread of the infirmities of age and the horror of death."—Philosophy of Health, July, 1926, p. 153.

Physical science recognizes blind mechanical forces, but ignores the most patent of all facts of Existence, to-wit: the manifestation of a general intelligence in every operation.

Physical science attempts to account for the universe as the result of blind mechanical energies, and to account for human intelligence as the result of blind physical forces.

We do not attempt to account for what we term Eternal Intelligence; but we assert that man is more than a mass of Matter, that reacts "to a natural impulse, which is the dread of the infirmities of age and the horror of death."

The Infinite Intelligence responsible for all phenomena, did not labor long and lawfully, for no other purpose than to bring man into existence for a few short years, torture and torment him all his days with "the dread of the infirmities of age and the horror of death," then cast him into the pit of oblivion, and there end it all.

From the standpoint of reason, it would be a strange Intelligence, which works so wonderfully and so perfectly, and which never errs, that would organize Matter into the form of man, animate that form with the "Breath of Life," allow that form to roam the earth for a few short years, and fill those years with "the dread of the infirmities of age and the horror of death."

It is not the "horror of death" that urges man on in his search for ways and means to live a fuller life. It is the spirit of Perpetual Youth.

"The immortality of man," says Emerson, "is as legitimately preached from the intellections as from the moral volitions."

The perpetuality of youth is as legitimately preached from the intellections as from the moral volitions. The struggle for perpetual youth arises from the impelling power of Eternal Intelligence, and not from individual intelligence.

The thought of Perpetual Youth comes to man without effort. He may struggle against it, and try to drive it from him, but it will not down. The books he reads, the sermons he hears, the lessons he learns, bring him but one thought—Perpetual Youth and how to gain it.

If physical decay and death were natural, just as are living, sleeping, eating, drinking, exercising, man would harbor no more "dread of the infirmities of age and the

horror of death," than he does of living from day to day, or of growing sleepy, tired, thirsty, and hungry.

No normal man dreads natural conditions. He welcomes them; he enjoys them. He finds pleasure in growing drowsy and hungry and thirsty, for he finds joy in satisfying these natural demands.

What a sad state indeed, were man compelled to gaze upon the ripe, golden, luscious fruit, yet lack the natural state of hunger that gives him such delight in eating of it.

If to decay and die were natural, the natural end of physical man, then to decay and die would be as welcome as to live, or eat, or drink, or sleep. For the unobstructed operation of Universal Law brings "dread and horror" to none, but law violators. They alone are the criminals that must suffer. And man is, and has always been, a criminal.

It is not the natural state that engenders the unnatural sensation, under which head "dread and horror" must be placed.

It is the unnatural state that engenders the sensation of "dread and horror. It is the "dread and horror" of death, that teaches that man was made to live, and not to decay and die.

As man is made to live, he regards the thought of death with "dread and horror." For decay and death are the culmination of crimes, committed against the body, by which man is crushed to earth, to decay, die, and return to dust, unfit longer to live.

Chapter No. 7

No Natural Death

The thought of the grim monster Death, strikes horror to the heart of all men.

Surely, death is not the work of God. Reason declares that a loving father would not thus terrorize his helpless children. No normal parent would place and leave his little ones in this dreadful state.

Death must be regarded as unnatural. For natural states and natural conditions produce natural feelings and natural sensations. These are those of pleasure, happiness, joy.

But death brings none of these. It brings only sorrow, suffering, heartache, misery. It robs man of his life and joy. It brings sadness and despair to his friends, family, and home. None can logically hold that this condition is the natural state of man.

No man has ever died a natural death. Every man who has died, including every doctor, has died of disease. A man may live 100, or 500, or 900 years, and die of what is called "old age;" but he dies of disease.

Old age is a fancy, but not a fact. It is a belief, but not a truth. It is an assumption, and is assumed to be true. But assumptions do not become truth, because they are assumed and accepted as truth.

Old age is a term applied to the body that has been brought down to a low stage of degeneration. It is the condition of the body, not the number of its years, that is the determining factor.

If old age meant a certain number of years, the condition of the body of every man would be the same when the body reached that same number of years. All men would be old at 50, or 60, or 70, or 80, or at whatever number of years the mark was set. But some men are old at 50; others are young at 70, and live to be more than 100.

Old age is another name for degeneration. Degeneration does not result from use and years. It does not result from daily wear and tear. It does not result from

time and toil. It does not result from the rising and setting of the Sun.

The man who lives poorly, dies early. The man who lives well, lives long. The man who lives better, lives longer. The man who should live perfectly, would live perpetually.

The body of him who lives poorly, decays quickly. The body of him who lives well, decays slower. The body of him who lives better, decays still slower. The body of him who should live perfectly, could not decay at all.

Death does not result from age. Death results from disease. Disease results from decay. Disease IS decay. In the absence of decay there could be no disease. Without disease, there would be no death—barring accidents.

If the Law of Physiology were known and observed, the body could not decay. Without decay, there could be no disease; without disease, there could be no death.

There is no principle of decay in the living body. Consequently, there is no principle of death in the living body.

The body neither wears out, nor grows old. It is perfectly constructed and perfectly constituted. Daily and hourly it is constantly renewed, and is never more than one year old. It completely returns to dust within a year, and in the same period of time a new body is built, cell by cell.

Decay, disease, and death, are the direct result of errors in caring for the body. There is no other satisfactory explanation of death, disease, and decay. This explanation is not only sound and logical, but is based upon known facts of physiology, as acknowledged by physical science.

Eminent physiologists, authorities standing at the top of their profession, have declared that there are no principles of either decay or death to be found in the living organism. Hence, it is more difficult to explain why man dies, than to explain why he does not live forever.

Wm. A. Hammond, M. D., late surgeon-general of the United States Army, says:

"There is no physical reason known at the present day why man should die."

Dr. B. Stanford Claunch, eminent educator, author, and lecturer, observes:

"The living organism is potentially immortal. There is no physiological nor biological reason for death."

Dr. Monroe states:

"The human frame as a machine is perfect; it contains within itself no marks by which we can possibly predict its decay; it is apparently intended to go on forever."

Professor Weismann writes:

"Death is not a primitive attribute of living matter; it is of secondary origin. There are animals that never die; for instance, the infusoria and rhizopods, and, in general, all unicellular organisms."

Dr. W. R. C. Latson, discussing Harry Gaze's physical immortality theory, remarks:

"Gaze advances the somewhat startling claim that somatic death, that is, the death of the body as a whole, is due to causes which may be averted; and that by proper means one may so control the bodily functions as to retain the body indefinitely. I do not hesitate to say that, while his conception of life and the possibility of physical immortality is unique, there is nothing in the accepted facts of physiological science, by which his position can be refuted."

Linn A. E. Gale, an eminent writer, declares:

"Science agrees that death can be deferred and life extended far beyond the prevailing limit. Some scientists go far beyond that, and assert that disease and age will

eventually be eradicated to such extent, that death will be the exception instead of an unailing rule, as at present." —Health Messenger, June, 1928, p. 20.

Prof. A. E. Crew, Edinburgh University, addressing the Social Hygiene School at Cambridge, Mass., made the following significant statement.

"It is of the utmost importance, that we should once for all free ourselves of the notion, that death is a necessary attribute or an inevitable consequence of life. It has been abundantly demonstrated that (physical—Clements) life can and does continue without ceasing.

"Given appropriate and necessary conditions of environment, Eternal Youth is in fact a reality for a number of forms. It is possible to take a worm, and by repeated processes of fasting, keep it alive twenty times longer than it would have lived in the ordinary way. Similar treatment in the case of a man might bring about similar rejuvenation.

"There are no mysteries of life and death, only ignorance. As knowledge increases, as increase it must, so will also man's power over his physical environment and over the mechanism that is himself.

"Science as well as religion affirms that in the future mankind may, if it be so desired, not only remain permanently youthful, but also may live forever."

With no conflict of the leading authorities, the conclusions of physical science are:

1. The human body as a machine is perfect;
2. It is potentially immortal;
3. It contains within itself all the potentialities of its own existence;
4. It contains within itself no marks by which science can predict its decay;
5. It is apparently intended to go on forever;
6. Death is not a primitive attribute of living matter;
7. Death is of secondary origin, and, hence, is preventable.

Chapter No. 8

Facts vs. Speculation

Harry Gaze wrote his book, "How to Live Forever," in 1904. Aside from advancing the proposition that the living body is potentially immortal, that no physiological law necessitates somatic death, he has written little of actual value. He says:

"The cause of somatic death, or the death of the body as a whole, is simple, and may be completely avoided. Old age, which is somatic death partially consummated, can also be prevented. It is possible for every individual so to control the vital energies, that perpetual youth, accompanied by perfect health and strength, may be realized." —p. 23.

These bald statements convey no practical information to one who is searching for ways and means to avoid "somatic death." The world may be impressed by the doctrine itself, but the doctrine has no practical value, in the absence of specific instructions for putting it into effect. Locating and removing "the cause of somatic death" is the only solution of the problem.

Gaze does not seem to be familiar with the process by which mineral substance is raised to the status of living matter. He does not seem to know how and why the body carries on its function. He makes no direct reference to the fact of its animating force, nor as to what the nature of that force may be. He does not indicate whether the "vital energies," of which he speaks, are the product of air, water, and food, or whether they arise in some unaccountable and mysterious way from the general function of the body. Nor does he give a specific "cause of somatic death."

He makes these leading points:

1. The body literally and completely returns to dust in less than one year; and during this period, a new body is constructed, molecule by molecule.

2. Conscious cooperation with this change is the secret of immortal youth.

3. Old age and somatic death are brought about by conditions which can be effectually prevented."

His greatest omission lies in the fact that he has not explained "the cause of somatic death." Nowhere in the book does Gaze indicate that he knows why the body dies. The points he makes are good, so far as they go. But the principle lying back of immortal youth, if any there be, will never be discovered until it is known and explained why the animate existence of the body comes to an end. We cannot remove the fact of somatic death, unless and until we locate and remove the "cause of somatic death."

Gaze refers to "pure and exalted personalities," and the "attainment of conscious immortality." He observes:

"The science of perpetual life reveals the way by which the body may retain its purity and plasticity, and make it a fitting temple for the inner spirit.

"Life may be such that the body will grow stronger and healthier with the advance of years."

"Although perpetual life will not result from mere "goodness," as the term is generally used, yet every pure thought and noble action will add force and beauty.

"Pure and exalted personalities of the past did not make this attainment, because they did not conceive its desirability and possibility; and, therefore, did not concentrate their efforts upon it.

"The wisest and greatest people of the past were but children. There is new light ahead, and this new age brings special advancement.

"The attainment of conscious immortality requires a clear, scientific understanding of the subject, and unceasing practice of the principles.

"No faith in the Bible, in a personal God, or in any exterior personality, will save one from the grave.

"The attainment of perpetual renewal is a scientific process, like the attainment of skill in music, art, mechanics or invention; theories must be grasped with the same accuracy, and the principles practiced with the same earnestness.

"The conception of any supernatural processes must be removed from the mind. Simple, natural growth leads to superb health, and perfect equilibrium between the processes of waste and of repair in the physical system."

There is nothing contained in these general statements that has not been hashed and rehashed by authors both ancient and modern. This information has been passed on from generation to generation for hundreds of years. Our libraries are loaded with it; but the human life-span fails to lengthen, disease continues to increase, and physical death continues its onward march.

If "the attainment of perpetual renewal (of the body) is a scientific process," how shall we account for the fact that men of science generally reach the grave between the ages of 35 to 70 years, whereas some illiterate Indians, Turks, Arabs, Hindus and Chinese live from 100 to 350 years?

The attainment of perpetual renewal may be a scientific process, but there is no evidence to indicate that physical science has discovered the secret of the process. Nor is the secret disclosed by Gaze, or referred to by words or phrases that would lead one to infer that he knew anything about the process.

In Chapter IV, under "The Delusion of the Age," he remarks:

"The fact that the body is in a process of continual change has not been sufficiently recognized. Until the discovery of the principles of physical immortality, no effort was made to adjust the mind to this change.

"In order permanently to renew the body, the mind must be in harmony with the change, but this humanity

hitherto has failed to do. In positive contradiction to the law of renewal, man has steadfastly believed the body to be gradually growing older until no longer able to perform its function."—p. 29.

From here on, the book becomes largely a discourse on Mind and Suggestion. It compares the belief of man in the fact of old age, with the belief of the hypnotized subject in the suggestions of the hypnotist. He observes:

"Suppose, for example, that a hypnotist suggests to his subject that he is carrying a burden so light that he can walk freely, but that it gradually grows heavier, until he can no longer support it.

"Although the burden is purely an imaginary one, yet, under the influence of this suggestion, the subject is made to fall, exhausted.

"This illustrates the theory of bodily age. Failure fully to recognize the continual renewal of the body, leads to the belief that the body is growing older. The consciousness of ever-increasing age is firmly fixed in the mind.

"As the hypnotic subject falls beneath the delusion of the burden upon his back, so, crushed by the suggestion of the continual wearing and aging of the body, the life forces cease normally to exercise their power.

"The necessary equilibrium between the processes of waste and of repair in the physical system is wanting. New, perfect atoms are not substituted for the old ones, and the system is unable to dispose of the accumulated substance that interferes with the various vital processes. This constitutes the basis of 'old age', and is a certain forerunner of somatic death."—p. 33.

It is admitted that a close relationship exists between the mental and the physical condition of the body. But as normal minds are not found in abnormal bodies, so normal bodies, under normal conditions, do not express abnormal minds. As insanity is the mental expression of abnormality of the physical machinery, so rationality is the mental expression of the normality of the physical machinery.

To hold that mind alone is responsible for the fact that "new, perfect atoms are not substituted for the old ones," in the renewal processes of the body, is equivalent to asserting that it is folly for one to be solicitous as to his food, air, and water; for all will be well if the person gets and keeps his mind in the proper mood.

The chief fault to be found here is, Gaze harps back too strongly on the old belief in the absolute power of Mind over Matter. Apart from Matter, there is no Mind—a fact of observation that he fails to recognize.

In considering the physical organism, its mental state must be noticed, and due attention to the mental phase shall be given in the proper place.

But in a working-plan that has for its purpose the lessening of disease and the lengthening of life, there are certain facts of observation in connection with Matter that must not be ignored. They must be noticed, examined, and explained.

For instance, we must recognize the fact that inert Matter is raised up to the living plane; we must recognize the fact that the body lives, and moves, and has its being; we must recognize the fact of the body's animating force; we must recognize the fact that the body is a self-starting, self-building, self-renewing organism; we must admit the fact that the body receives force from a source that is distinctly not physical; we must recognize the fact that this force is governed by intelligence (law).

In the absence of a thorough consideration of these facts of observation, and of the facts of inference that duly and truly arise therefrom, any discussion of the proposition of Perpetual Youth is nothing more than mere speculation of the grossest kind.

Chapter No. 9 Theories of Life

Why physical organisms live, and move, and have their being, and why they decay and die, are questions that physical science has never been able to answer.

The scientific theory of Evolution begins with Living Matter. The theory makes no attempt to explain why matter is "living." It assumes that "life" is what it does; that "life" arises as the result of certain chemical actions and reactions. It then assumes that these assumptions are correct.

Theology refuses to accept this theory of Life. It holds that Life is a mysterious Something, which was originally bestowed upon man by God. It declares that God breathed into man's nostrils the "breath of life," and man became a "living soul."

This theory is enshrouded in the deepest mystery. Theology makes no attempt to explain where God is, from whence God came, or how God works. It has offered no definition of the "breath of life." It is unable to give a satisfactory explanation of the term, "living soul." It declares that man is the only creature of the animal kingdom that has a "soul;" but it advances no reason nor theory for this arbitrary opinion.

The world's greatest philosophers hold, that Life, in its true generic sense, is the name of the sustaining principles by which everything out of the Creator subsists, whether worlds, metals, minerals, plants, or mankind.

A full discussion of these theories would require a large volume for each. A brief analysis of the theories will enable the student to decide which theory is correct.

The theory of Life presented by Evolution, is the theory that has been accepted by physical science. This theory denies the existence of Life as a positive principle.

Science reduces all vital phenomena to a basis of physics, mechanics, and chemistry. It disregards the most obvious facts of observation. It ignores the appearance of Life in, and the disappearance of Life from, a material, physical environment.

Daily and hourly physical forms are collapsing back, from a state of activity to a state of inertia. This occurs as the result of an apparent abandonment of the forms by a mysterious, elusive Principle, which before enabled the forms to fly through the air, or bound over the ground, or swim through the water, or sing to the multitude.

Totally ignoring these patent and obvious facts, physical science assumes that Matter possesses these inexplicable attributes, then assumes that these assumptions are scientifically correct. Those who question the assumptions are said to be persons who have never attained the limits of their faculty of thought, according to Virchow.

Biology is one of the youngest branches of physical science. In works of Biology eminent authors glibly discuss what they call "living matter," or "living substance." They make no attempt to explain why Matter or Substance is "living." They assume that "living" is a property of Matter or Substance. Biologists make no attempt to explain why one substance is "living," while another substance, of identical qualities, is non-living. They make no attempt to explain why substance that is "living" today, is non-living tomorrow.

Prof. James Francis Abbott, Washington University, writes:

"If a biologist should ask the average layman whether he could tell the difference between something alive and something that is not, he would hardly be taken seriously.

Yet, if such a layman should be pressed to define just what he meant by being alive, he might be hard put."—General Biology.

In the same position, Prof. Abbott would be as helpless as the "average layman." If he were pressed to define what he means by "being alive," he would offer the scientific definitions of Life as given by Bichat, Haeckel, Virchow, or Osler. In doing so, he might not know that he was simply describing certain SIGNS of Life, and nothing more.

Physical science has offered no definition that explains what Life is. Its definitions are mere statements of certain SIGNS of Life. It describes certain phenomena arising from the animate organism. It makes no attempt to describe the CAUSE of the phenomena.

If we are to understand by the word "Life," simply the manifestations of its presence—the SIGNS of Life and nothing more—then physical science has done as well, perhaps, as the subject permits.

Physical science has explored "life" down to a single cell of living matter. There the exploration ends. That is the limit of scientific capacity. At this point physical science seems to hope that further search may cease.

Sir Oliver Lodge, University of Birmingham, England, one of the most learned authorities of the school of physical science, enters a strong protest against the manner in which the investigation of Life has been handled by his colleagues. He remarks:

"Instead of tackling the difficulty where it actually occurs; instead of associating life, will, and consciousness with the organism in which they are actually in experience found, these ideas are foisted into the atoms of matter; and then the properties that have been conferred on the atoms, are denied all essential reality to the fully developed organisms which these atoms help to compose."—*Life and Matter*, p. 42.

After having explored Life down to a single cell, physical science proceeds to animate the fully developed organism by means of the chemistry produced by the cell. According to Berman, a physical scientist of authority, the process works like this:

1. Our chemical factory consists of cells, manufacturing special substances that act upon the other cells of the body, and so start and determine the countless processes that we call life.
2. Life, body, and soul emerge from the activities of the magic ooze of their silent chemistry.

The absurdity of this proposition becomes clear by merely examining the theory. Which came first, the cells, or the special substances that they manufacture?

Berman admits that the cells came first. The cells are the factory, in which is manufactured "special substances." These "special substances" act upon the "other cells" of the body, and by that action "start and determine the countless processes THAT WE CALL LIFE."

Berman describes two kinds of cells, viz: (1) cells that compose the chemical factory, and (2) "other cells" that begin to function as they are acted on by "the magic ooze of the silent chemistry" of the cells composing the factory.

There are five special features here that should be noticed:

1. Before there can be the product of cells, there must be cells. From whence came the cells that compose Berman's chemical factory?
2. Before cells can produce, they must receive a Force that is competent to propel them to function. From whence came the Force that operated the cells composing Berman's chemical factory?
3. Before cells can produce anything, they must be supplied with the materials of production. From whence came the material of which were made the "special sub-

stances" that act upon the "other cells" of the body, and so start and determine the "countless processes that we call life?"

4. Before the "other cells" could receive the "magic ooze" of the silent chemistry of the cells of the factory, some system of transportation would be necessary to convey to the "other cells" the "special substances" made by the factory cells. From whence came the power that operated this system of transportation?

5. Before the system of transportation could have existence, it would have to be constructed and be brought into being. From whence came the Force that constructed the system of transportation?

Before Berman begins his discussion, he has (1) cells, (2) force, (3) material, and (4) a transportation system in operation. Nothing is lacking to constitute the complete living body; but he will not allow it to come to "life", until the chemical factory begins operation. Then he holds that, from the activities of the magic ooze of the silent chemistry of the factory, "Life, Body, and Soul emerge."

Prof. Haeckel is just as blind as Berman. He states:

"No physiologist thinks nowadays of looking upon any phenomena of life as the result of a marvelous vital force, or a special purposively active force, existing apart from ordinary matter, and only taking the physico-chemical forces into its service, so to speak."—*Riddle of the Universe*.

To this opinion, Prof. Ludwig Buchner, M. D., adds his in these words:

"Among the mystical notions, so destructive of all clearness of idea in natural philosophy, which were put forward at a time deficient in knowledge of nature, and which modern research has entirely overthrown, we may reckon more particularly the idea of so-called vital force."

Virchow joined in this language:

"This old doctrine of a vital force is not an erroneous teaching, but a mere superstition, the relationship of which to the doctrine of the devil and to the search for the philosopher's stone, cannot be denied."—*Anatomy and Physiology*, Vol. 9.

Pivany remarks:

"The theory of a special vital force leads necessarily to such absurdities, that at this day no naturalist thinks thereof, who has any serious claim to that title."

Prof. Matteucci observes:

"The living organism is a machine, like the steam-engine or the electro-magnetic machine; that is to say, a system in which chemical affinities, especially the union of the oxygen of the air with the materials of alimentary, produce heat, electricity, and muscular work."

Ah, yes. Many thanks, Prof. Matteucci. It is a beautiful comparison that you have drawn. But of all the machines of which you know, in addition to those you have mentioned, can you name one that is self-starting? or self-building? or self-repairing? or self-renewing? or self-regenerating? Every one of these qualities is possessed by the living organism, but not one of them is possessed by any machine that man has ever made, or can ever make.

Man-made machines produce no motion, save at the expense of energy received from some other source. A man produces no motion, save at the expense of energy received from some other source.

Perpetual motion is a delusion. Something from nothing is a scientific fallacy. Life from Matter is an impossibility. Motion from Inertia is mockery.

Man can make no machine that will create energy. He can make no machine that will return all the energy which it receives. Owing to friction between the parts of the machine, some energy is rendered unavailable for doing useful work.

The living organism, while apparently receiving no energy from its environment, is hourly expending energy. The invalid, under a fast, gains in strength. From whence comes the energy responsible for these facts of observation? Not from food, for none is eaten by the fasting invalid.

Physical science is utterly lost when it attempts to define the line of demarcation between Life and its action. It assumes that Life is what it does. What Electricity is, and what it does, are two distinctly different propositions. Life is no more what it does, than Electricity is what it does.

Physical science discusses the structure and function of the organs and cells of the body, and describes what they do. But it is hopelessly at sea when it is asked to explain what CAUSES the organs and cells to do it.

From a living cell in the slime of the sea, demanding nutrition and capable of reproduction, physical science makes a man. Out of this primitive cell, endowed with these physical functions, and a "hostile environment," it evolves a man, physically, intellectually, and morally.

But physical science fails to explain: (1) the original appearance of the living cell; (2) the cause that originates and animates it; (3) the original division of living organisms into male and female; (4) the phenomenon of intelligence exhibited in the operations of living organisms.

Instead of attempting to explain any of these vital facts, physical science most carefully, and unscientifically, relegates them to the realm of the "Unknowable," and hopes that there the search will cease.

Out of this self-imposed ignorance, arises an Institution that has no knowledge of Life, and the basic laws governing the mechanism through which Life manifests itself.

Lesson No. 3, Chapter No. 10

Breath of Life

God is a Spirit (John 4:24).

Spiro, the root of spirit, is Greek, and means "I breathe," Spiritus, the Latin form from which comes the English "spirit," has the same meaning.

The words Spirit and Breath originally mean exactly one and the same. The etymology of the word Spirit is sufficient to make this clear and conclusive.

A Master breathes on his disciples, and they receive the Holy Breath, or Spirit. God breathed into his nostrils the Breath of Life, and man became a "living soul."

There is no such distinction in the Hebrew, which in this instance applies identically the same terms to man and to beasts. Each was made "nephesh chayah," a "living soul." But our translators of the Bible have rendered the reference to the beast creation "living creatures" (Gen. 1:21, 24). Either word might legitimately be substituted for the other.

The translators of the King James version of the Bible took amazing and often unwarranted liberties, with their many poor and misleading translations of the Hebrew text. These erroneous translations have led to a vast amount of misapprehension and confusion.

Many authors have entrenched themselves in the phrase of "living soul," and found in it man's inalienable characteristic. Exactly opposite conclusions have been reached by some of those whose curiosity has led them to the original words.

Both beasts and man being called "living creatures," or "living souls," some have inferred from those words,

that beasts are as immortal as man; others, that man is as mortal as beasts.

Beasts must breathe, in order to live, the same as man. The entire animal kingdom, and the vegetable also, live by the constant inhalation of air.

Trees breathe the air through their leaves. In a sense, the leaves are the lungs of the tree. Insects breathe the air through the tiny openings in their bodies. Frogs breathe the air partly through the skin. Fishes breathe the air by taking oxygen out of the water as it passes over their gills.

Air is by far man's most important food. Scientists estimate that ninety-five per cent of the body's nourishment is obtained from the air, the remaining five per cent coming from water and food, but mostly from water.

As the existence of the body is dependent upon food, we may observe what an important part air plays in our lives, and how essential it is that we have plenty of it, not only, but that it be pure and free from contaminating elements, such as smoke, fumes, and gases.

Animation is inseparable from respiration. The manifestations of animation increase in ratio with the increase in the rate of respiration. In fowls that fly, making the activities energetic, respiration is vigorous. Where respiration is feeble, as in the reptilian family, activities are slow.

The restlessness of the child, and the activity of the boy, correspond with the vigor of their breathing; the calmness of the man are combined with a usually tranquil respiration, capable of being increased to the utmost as occasion calls for the higher energies. In the old man, deliberate in his movements, respiration is limited, and usually slow.

Breathing varies even with the condition of the body and its employments. We breathe differently in sickness and in health, differently asleep and awake; differently in the performance of every action of our animal organs. We breathe in one mode when we sit, in another when we walk, and in another when we run. Breathing, accordingly, is not only a physiological, but a representative phenomenon.

In the respiratory breast dwell, along with its health, magnanimity and heroic courage. Where the breathing is languid, we look but for timorousness and debility.

In our own species, the face itself, the silent echo of the heart, is not a more faithful index to our states, either of body or mentality, than is our breathing. As the emotions manifest themselves in the play of the muscles and the light of the eye, as they are shown in the tone of the voice, in the harshness, the tremor, the asperity or the sweetness of the uttered sound, and are interpreted thereby, so is it with the attendant breathing.

Let us but hear how a person is breathing, and though he be out of sight, we may infer, to a certain extent, how he is employed, and judge of his general tranquility or the reverse.

See what testimony to the breath appears in language! To be animated, to be spirited, or full of spirits, is to have breath aplenty. To be out of spirits, spiritless, or dispirited, is to be destitute of breath—literally in every case. For all agreeable, lively, or life-like emotions, tend to raise and quicken the breath, while depressing ones tend to lower and deaden it. Eagerness pants; despondency sighs; weariness yawns; fear makes us breathless, or aghast.

Respiration is the most important action occurring in the brain. This action is not the result of any effort of the reason, for it is performed alike by idiots and by ani-

mals as by persons of mature years and the highest intelligence. Neither are the movements of respiration directed by the will, for they go on during sleep as well as at other times. The greater part of the brain, composed of the cerebrum and the cerebellum, may be destroyed without arresting this highly vital function of the organism.

The part of the brain that presides over the function of respiration is called the medulla oblongata. It is located in the posterior and lower-most region of the skull, and while smaller than other portions of the brain, yet it is the most important of all.

When other parts of the brain are injured, various physical and mental functions are either impaired or abolished, but still the living existence of the organism continues. When the medulla is injured or destroyed, respiration instantly ceases, and physical life at the same moment comes to an end.

Because of the importance of the medulla to the living existence of the organism, Cosmic Intelligence has provided for its safety by burying it deeply under the remaining mass of brain, and thus secure it from external violence. Neither can this part of the brain be easily reached from below, for it rests upon the base of the skull, exactly above the summit of the vertebral column.

When the backbone is fractured high up, just at the level of its junction with the skull, the broken pieces are driven into the medulla, and lacerate its substance. We then say that the neck is broken, and such an accident is instantly fatal, if thereby the medulla is injured, for it stops at once the movements of respiration.

While there is breath, there is life. Hence death, popularly regarded, consists simply in loss of breath. And founded, as the common idea is, upon external appearances, it is not improper thus to speak of it.

It always has been, and always will be right, to speak of things in our common converse as they appear to the senses. We should always seek to think with the philosopher, to understand what is the real truth, but in our ordinary intercourse with one another in daily life, it is proper and expedient to speak of things as they seem—to say, for example, of the sun, that it 'rises.'

So in the case of the dying. Here, to appearances, the breath only is concerned. Of the breath, accordingly, do we alone take note, and further, in truth, we need not look.

Whatever terrible disorder may be evidenced in the frame, whatever paralysis may hold the organs of senses and locomotion in deadly torpor, if there be breathing, we know that all is not over yet.

The primary cause of death may date from years before; but in the final cause there is no enigma.

While there is breath, there is life. With the cessation of the breath comes death.

The independent life of the child begins with its first inhalation of air directly into its own lungs. If the newborn child fails to breathe as soon as it comes into the world, it fails to live.

These facts have been known from the earliest times among primitive people. They are facts of common observation. And they very logically led primitive man to believe, that God breathed into his nostrils the breath of life, and man became a living creature.

But air is not Life. Air is only material that enters into the construction of the living organism; while breathing is merely a function of the organism, having for its

purpose, the supplying of the body with nourishment, and the eliminating from the body of certain of its wasting and decaying particles.

A living body must inhale air to live; but forcing air into a dead body, will not bring it back to life.

Life is more than air; it is more than water; it is more than food.

Chapter No. 11

Universal Life

There is a natural (physical) body and a spiritual body. The first is of the earth, earthy; the second is the spiritual. As is the earthy, such are they also that are earthy; and as is the spiritual, such are they also that are spiritual. And as we have borne the image of the earthy, we shall also bear the image of the spiritual.

Not agreed, retorts physical science.

There is but one body—a physical body. From the activities of the magic ooze of the silent chemistry of its cells, there emerge Life, Body, and Soul.

A. E. Dolbear, Ph. D., Professor of Physics in Tufts College, is eminent in the world of physical science. He observes:

"The discovery of the conservation of energy, covering every field that has been investigated, led to the growing conviction that there are no special forces of any kind needed to explain any phenomena.

"What seemed probable forty years ago, to those who were conversant with the facts—that vital force as an entity has no existence, and that all physiological phenomena whatever can be accounted for without going beyond the bounds of physical and chemical science—has today become the general conclusion of all students of vital phenomena; and vital force as an entity has no advocates in the present generation of biologists.

"The term (vital force) has completely disappeared from the science, and is only to be found in historical works; and every phenomenon that was once supposed to be due to it, is now shown to be due to the physical properties of a particularly complex chemical substance known as protoplasm, which is the substance out of which all living things, animals and plants, are formed."—Matter, Ether and Motion, p. 279.

To support his own position, Dolbear quotes John Fiske, who during his lifetime went up and down the land lecturing on evolution. Fiske said:

"The hypothesis of a 'vital principle' is now as completely discarded as the hypothesis of phlogiston in chemistry. No biologist with a reputation to lose would for a moment think of defending it."

Dolbear also quotes Wundt as follows:

"Physiology thus appears as a branch of applied physics, its problems being a reduction of vital phenomena to general physical laws and thus ultimately to the fundamental laws of mechanics."

Sir Oliver Lodge, does not agree with all of the foregoing. He states:

"The conservation of energy is a sufficiently legitimate generalization: we do not really doubt its conservation and constancy when we admit that we are not yet sure of having fully and finally exhausted and whole category of energy.

"What we do grant is, that it may hereafter be possible to discover new forms; and when new forms are discovered, then either the definition may have to be modified, or else the detailed statement at present found sufficient, will have to be overhauled.

"But after all, this is not specially important: the serious mistake which people are apt to make concerning this law of energy is, to imagine that it denies the possibility of guidance, control, or directing energy, whereas really it has nothing to say on these topics; it relates to amount alone.

"Philosophers have been far too apt to jump to the conclusion that because energy is constant, therefore no guidance is possible, so that all psychological or other interference is precluded. Physicists, however, know better. . . .

"But are we to conclude, therefore, that nothing else exists? that the existence of one thing disproves the existence of others? The contention would be absurd.

"The category of life has not been touched in anything we have said so far; no relation has been established between life and energy, or between life and ether. The nature of life is unknown. Is life also a thing of which constancy can be asserted? When it disappears from a material environment, is it knocked out of existence, or is it merely transferred to some other surroundings, becoming as difficult to identify and recognize as are the gases of a burnt manuscript, or the vapor of a vanished cloud? Is it a temporary trivial collocation associated with certain complex groupings of the atoms of matter, and resolved into nothingness when that grouping is interfered with? Or is it something immaterial and itself fundamental, something which uses these collocations of matter in order to display itself amid material surroundings, but is otherwise essentially independent of them?

"Scientifically, we do not know; and for a man of science to pretend, or to assert in a popular treatise, that we do, is essentially and seriously to mislead.

"But I am content to say for the present, that from the point of view of strict science, it is not yet possible to give any positive answer to these questions; that they must await the progress of discovery.

"It becomes a question of some interest, therefore, how it is possible for Prof. Haeckel and for others of his school, to have arrived at the idea not only that a scientific answer can be given, but that already it has been given, and that they know distinctly what it is.

"Thus, then, in order to explain Life and Mind and Consciousness by means of Matter, all that is done is to assume that Matter possesses these unexplained attributes. . . .

"The possibility that 'life' may be a real and basal form of existence, and therefore persistent, is a possibility to be borne in mind. It may at least serve as a clue to investigation, and some day may bear fruit; at present it is no better than a working hypothesis. But it is one that, on a whole, commends itself to me; for I conceive that though we know of it only as a function of terrestrial matter, yet that it has another aspect too, and I say this because I see it arriving and leaving—animating matter for a time and then quitting it, just as I see dew appearing and disappearing on a plate.

"The life of a thing is its underlying permanent reality, that which gives it its meaning and confers upon it its attributes. The body is an instrument or mechanism for the manifestation or sensible presentation of what else would be imperceptible. . . .

"I maintain that life is not a form of energy; that it is not included in our present physical categories; that its explanation is still to be sought. And I have further stated—though there I do not dogmatize—that it appears to me to belong to a separate order of existence, which interacts with this material frame of things, and, while there, exerts guidance and control on the energy that already here exists; for, though they alter the quantity of energy no whit, and though they merely utilize available energy like any other machine, live things are able to direct inorganic terrestrial energy along new and special paths, so as to achieve results which without such living agency could not have occurred.

"The fact of an organism's possessing life enables it to build up material into many notable forms—oak, eagle, man—which material aggregates last until they are abandoned by the guiding principle, when they more or less speedily fall into decay, or become resolved into their elements, until utilized by a fresh incarnation; and hence I say that whatever life is or is not, it is certainly this: It is a guiding and controlling entity that reacts upon our world according to laws so partially known that we have to say they are practically unknown, and therefore appear in some respects mysterious.

"The view concerning life that I have endeavored to express is, that it is neither matter nor energy, nor even a function of matter or of energy, but is something belonging to a different category; that by some means, at

present unknown, it is able to interact with the material world for a time, but that it can also exist in some sense independently; although in that condition of existence it is by no means apprehensible by our senses.

"It is dependent on matter for its phenomenal appearance—for its manifestation to us here and now, and for all its terrestrial activities; but otherwise I conceive that it is independent, that its essential existence is continuous and permanent, though its interactions with matter are discontinuous and temporary. . . .

"That life is something outside the scheme of mechanics—outside the categories of matter and energy; though it can nevertheless control or direct material forces—timing them and determining their place of application—subject always to the laws of energy and all other mechanical laws; supplementing or accompanying these laws, therefore, but contradicting them no whit.

"My contention then is—and in this contention I am practically speaking for my brother physicists—that whereas life or mind can neither generate energy nor directly exert force, yet it can cause matter to exert force on matter, and so can exercise guidance and control; it can so prepare any scene of activity, by arranging the position of existing material, and timing the liberation of existing energy, as to produce results concordant with an idea or scheme or intention: It can, in short, 'aim' and 'fire.'

"When a stone is rolling over a cliff, it is all the same to 'energy' whether it fall on point A or point B of the beach. But at A it shall merely dent the sand, whereas at B it shall strike a detonator and explode a mine.

"It is intelligence that directs; it is physical energy which is directed and controlled and produces the result in time and space.

"Is it the material molecular aggregate that has of its own unaided latent power generated this individuality, acquired this character, felt these emotions, evolved these ideas? There are some who try to think that it is. There are others who recognize in this extraordinary development a contact between this material frame of things and a universe higher and other than anything known to our senses; a universe not dominated by physics and chemistry, but utilizing the interactions of matter for its own purposes; a universe where the human spirit is more at home than it is among these temporary collocations of atoms; a universe capable of infinite development, of noble contemplation, and of lofty joy, long after this planet—nay, the whole solar system—shall have fulfilled its present sphere of destiny, and retired cold and lifeless upon its endless way."—Life and Matter, excerpts from pp. 20-174.

No author of equal standing within the ranks of physical science, has ever shown so clearly and conclusively, as Prof. Lodge has shown in his remarkable work, the almost incredible extent to which pure assumption and bigotry make up the foundation upon which physical science, with few exceptions, approaches the consideration of the most profound of all scientific problems.

We quote freely from these eminent authorities, in order to present the conflict and disagreement within their own school on the great problem of life, that the student may observe and appreciate the unscientific aspect of some of its work.

To deny the essential existence of a Life Principle, is to disclose the fact that physical science knows little concerning the character and quality of the fundamental constitution of animate existence, of vital function, of mind or consciousness, regarding which it has written so learnedly and dogmatized so recklessly.

Lodge makes it plain that when Haeckel and other physical scientists presume to explain or account for these phenomena of Existence by means of Matter only, what they do, and all they do, is merely to assume that Matter possesses these "unexplained attributes." They then proceed to assume that their assumptions are scientifically correct, and hold that those who doubt them are stupid and superstitious.

Lesson No. 4, Chapter No. 12

Life Is Eternal

Life was not created. Life is eternal and perpetual. It is without beginning and without end. There is no place where Life is not present; and there was never a time when Life was not.

In whatever spot we see matter, whether at our feet, in the planet, or in the remotest star, we may be sure that Life is there.

Under the term Life, rightly regarded, far more is comprehended than the term is ordinarily used to denote.

Life, in its proper, generic sense, is the name of the eternal cosmic sustaining Principle, by which everything exists, whether worlds, metals, minerals, trees, animals, or mankind, together with all thought, feeling, and sensation.

Nothing is absolutely lifeless, though many things are relatively so; and it is simply a conventional restriction of the term, that makes Life signify no more than the vital energy of an organized material body, or the phenomena in which that energy is exhibited.

Though in man Life be at its maximum in manifestation, it is not to be thought of as concentrated in him, nor even in visible existence, outside of which there is as much Life as there is inside; though not the same expression of Life.

The Life that works in our organized frame is but an exalted manifestation of the Invisible Force that occasions the accretion of particles into this crystalline mass. The animating force of existence, through every form of being, is the same.

The characteristic which, manifested in a high degree, we call Life, is the characteristic manifested only in a lower degree by so-called inanimate objects.

Life cannot be defined in such a manner as to render it inapplicable to the physical phenomena of the inorganic realm, and at the same time embrace the lowest forms of organized beings.

The idea of Life is co-extensive with Existence. The individual or integrant parts of Existence are the members; Universal Existence is the total and complete organism. The relations of inorganic to organized bodies exist only by reason of this; hence, too, the universal connection, the combination, the never-ceasing action and reaction of all the activities of Existence, producing the vast and magnificent whole—an action and reaction that would be impossible, were not all pervaded by a single principle of Life.

Strictly speaking, every atom of the constituent matter of the globe is alive. Inanimate matter, dead matter, often vaguely mentioned, matter wanting for the breath of God to give it Life, does not exist.

Matter is not on a hearth existing anteriorly to Life, and independent of Life, and upon which the Flame of Life is sometime kindled. In its very simplest and crudest form, Matter is a sign that the Flame is already burning.

When it is popularly said that one thing is animate, and another is inanimate; that Life is present here, but absent there; the simple fact is, that a particular manifestation of Life is absent or present. Such phrases come from confounding Expression, which is variable, with Principle, which is uniform.

A particular Expression of Life is contemplated, and thus not only is the Principle itself misconceived, but everything that does not conform to the assumed impersonation of it is pronounced contrary to that which, in reality, has no contraries.

It is by a merely technical use of the word, that Life is said to be present only where there are physical growth, feeding, motion, sensation, reproduction, etc.

Life confines itself to no such restricted costume; and, as if it would rebuke the penuriousness of a doctrine that so limits and degrades it, Life often forbears from all the more striking phenomena of the series, in the very departments of Existence of which they are asserted to be characteristic; and expresses itself so slenderly, that physical science needs all its eyes and analogies to discern it.

The fact is, the notions of Life and of what lives, as of the whole or genuine truth in any matter, are things essentially of growth, and modification for the better.

The popular notion of Life is not a censurable one. It necessarily precedes; the error being to remain in it after it has been shown to be only a part of the truth, and the lesser portion.

It needs little observation of Existence to perceive that Life does not necessarily imply consciousness or feeling. If it did, the whole vegetable kingdom would be lifeless, together with many animal structures of humble kind, as the sponge and allied beings. So with the mere circumstances, separately taken, of volitional movements, feeding, and growth.

That feeding is not indispensable testimony and requirement to the presence of Life, is shown in insects, while in the chrysalis form, and in all kinds of hibernating animals.

So with the phenomenon of growing. That this is not needed in order to betoken Life, is illustrated in every egg before it is placed under the hen, and in every seed before it is put in the soil.

Contemplating "latent life" as the physiologists call it, or that which supports the egg and the seed prior to hatching and germination, we discover that behind the scenes there is, if possible, even more Life than in front.

Millions of beings enjoy complete and active Life; tens of millions lie potentially alive, crowding with intense vitality the very places which to appearances seem empty.

As Life does not necessarily imply volitional movement, feeding, sensation, etc., so neither is any one of the instruments through which Life is manifested universally present. No one instrument in particular can be deemed as essential to Life, or as absolutely characteristic and indicative of Life.

That Life does not necessarily imply organization or reproduction, is shown in what may without impropriety be called the Life of the World. Doubtless, there is an impassable chasm between the mineral and the vegetable, as between the vegetable and the animal, and between the animal and man. But in the inorganic part of Matter, as in the organic, all is acting, all is promoting change, all is itself undergoing transformation.

This Life of the globe, this physiology of the planet, is not the Life of the tree or the bird, but it is also Life. We cannot refuse to call as life those lively actions and reactions, that perpetual play of Force and Matter, of which we are every day the witnesses. The particular phenomena of animal and vegetable Life may not be present, but they are replaced by phenomena no less truly vital.

It is this full, generic significance of the word Life, which we recognize and refer to in these pages. The doctrine that it involves is no hypothesis of the fancy. It is dictated by the facts of Existence; it commends itself to reason and common sense; it is eminently practical; it is promotive of the highest aims of physical science and philosophy, metaphysical no less than physical.

Chapter No. 13

Life Is Real

Many noted authors have been quite emphatic in their opinion as to the existence of the Life Principle. Prof. Robley Dunglison, writes:

"Physiologists have noted in every living body an instinctive action—an action of the living principle, whether manifestly directing its operation to the health, preservation, or reproduction of the living frame or any part of it. This applies to the plant as well as to the animal. It is the *vis medicatrix naturae*, for and against which so much has been said, but which, if restricted to the above-mentioned acts, can no more be denied than the existence of Life itself, of which we know nothing except by its results."—*Materia Medica*.

Other philosophers and scientists have labored diligently to confuse the subject. They have claimed that Life is a mode of motion; that it is the action or energy of physical forces. At the same time they freely admit that it is unexplainable how the results are produced.

Prof. Le Conte claims that Vital Force arises from decomposition—from the action of foul gases released by decaying matter. He observes:

"In all cases, vital force is produced by decomposition."—*Conservation of Energy*, p. 175.

On p. 188 he further says:

"Whence do animals derive their vital force? I answer, from the decomposition of their food and the decomposition of their tissues."

Vital Force is not the product of food and tissue decomposition. If it were, then in the absence of food and tissue decomposition, there should be an absence of Vital Force. Whereas a dead animal body should exhibit more Vital Force than a living one, since tissue decomposition is greater in a dead body than in a living body.

If food were the source of vital power and vital energy, then food would be the source of Life, and the calorie theory would be correct in asserting, (1) that the energy of the body is derived from food combustion in the stomach and intestines; (2) that the decomposing (burning) food in a glutton's sick body is the cause of the heat of fever; and (3) that the carbon dioxide exhaled from the lungs, is the exhaust gas or the product of combustion of food substances in the body.

Another author observes:

"Life is the total organic functional activity of the body. Life is not an entity, a separate something that can be introduced into or taken out of the body at pleasure, but a condition, a state, or a function of the organism."—*Science of a New Life*.

This writer lacks capacity to observe the fact, that if Life did not exist as a separate and Primary Principle, the physical body could not come into existence. Because his reason is clouded by the fog of false theories, he does not realize that, as movement precedes phenomena and cause precedes effect, so the Forces of Production must exist before their processes and products can become manifest.

He does not know that phenomena, or modes of motion, result from the action of Primary Force upon Matter, with the Force and Matter as distinctly separated from each other, as is cause from effect, or as a machine is from the power that drives it.

He thinks, with the scientific world, (1) that Matter can move itself; (2) that Matter is able to produce and reproduce organized forms, and endow them with the power of movement, growth, and vital function; and (3) that

the chemical action, reaction, and decomposition of food substance, produce the energy that moves and grows living bodies. He cannot see that these propositions are analogous to the absurd theory of perpetual motion, or something from nothing.

In Lesson No. 3 of our Extension Course of Orthopathy we noticed briefly the theory of Transformation of Force, as taught by the scientific world. In that lesson we saw that Prof. Joseph Le Conte placed Energy or Motion in the same category with Force, and used the terms interchangeably as a basis for the development of important doctrines. We also saw that Herbert Spencer regarded Motion, Heat, Light, Chemical Affinity, Gravity, Sensation, Emotion, Mind, Intelligence, Thought, as "modes of the Unknowable," derived from the same source, and transformable one into the other and back again, without loss, as occasions or conditions require and demand.

In support of his contention, Spencer attempted to show that the Life Force of a chick comes from the transformation of Heat. He observed:

"The transformation of the unorganized contents of an egg into the organized chick is altogether a question of heat; withhold the heat and the process does not commence; supply the heat and it goes on while the temperature is maintained, but ceases when the egg is allowed to cool."

Science is sadly in error in assuming this position. The Vital Energy displayed by a living body is not transformed physical energy. The energy exhibited by a living body is not derived nor transformed from heat, air, water, food. These merely furnish the occasion or condition for calling forth the activity of Vital Force, which is always present and persistent, and responds as conditions are supplied for its operation.

The Vital Energy displayed by a living body arises as the effect of Life Force acting in and through the body. Vital Energy arises from the action of Life Force in doing vital work, performing vital function, as breathing, thinking, talking, singing, drinking, eating, digesting, analyzing and synthesizing foods and other substances in the body.

Air, Water and Food are the physical agents that call forth the activity of Vital Force, in the production of movement, growth, repair, heat. These activities are modes of motion that result from the action of Life Force upon Matter.

Vital Energy may be transformed into physical energy, and then be measured and merchandized. The labor of a horse in pulling a plow, or of a man in sawing wood or shoveling sand, are examples of Vital Force producing physical energy, or of Vital Energy transformed into physical energy. The physical energy thus produced may be estimated in horsepower hours or foot pounds per hour, and paid for at so many cents a unit.

In the absence of Vital Force, there is an absence of Vital Energy. In the absence of Vital Energy, there can be no physical energy in the instances cited. A dead horse cannot pull a plow; a dead man cannot shovel sand; the bowels of a corpse cannot be made to move by chemical energy that may arise from purgatives and laxatives.

Heat is an example of physical energy. It cannot transform the unorganized contents of an egg into the organized chick, if the egg is minus the Life Principle. Heat and eggs do not produce chicks; but a vital egg may develop into a chick, the potential or passive Life Element becoming active, if the requisite conditions for its unfold-

ment are supplied, of which a certain degree of heat (physical energy) is one.

Work is the effect of Force acting upon Matter. Work is the evolution of Force into phenomena. The energy of a living body is the evolution of Vital Force in and thru the body, in the performance of vital function.

Vital energy is the product of the Life Principle, or the effect of Vital Force in the doing of work, performing the functions of animate existence, the functions of living matter.

Physical energy is the product of any of the Principles of Existence, as Gravity, Polarity, Chemical Affinity, and of Vital Force, as we have seen.

Power is a term, often promiscuously used, to indicate either Force, Motion, or Energy. Power is synonymous with Energy, and is an exact engineering term. But Energy is a loose and indefinite term, although it may be used interchangeably with Power in the sense of an effect.

Force and Power sustain to each other the relation of Cause and Effect. They are not interchangeable terms. Power is the product of Force. It is the rate of doing work, producing motion, performing physiological function.

The idea of Power includes the time element of a mode of motion, or so many units of work per so many units of time. Power may be measured and merchandized in definite units, as kilowatt-hours, horsepower-hours, calorie-hours, etc.

Each Principle of Existence produces the phenomena of its own domain, each after its kind. Gravity, Polarity, Affinity give rise to what is called inanimate existence, which includes the mineral kingdom, with its mechanical and chemical energies.

The Life Principle rises superior to the other Principles of Existence. It reaches down to the mineral or inorganic realm, transforms the elements of this realm, along with their inseparable properties, into living bodies, consisting first of the vegetable world, and then rising to the animal world, where the highest manifestations of the Life Principle are expressed, as sensation, emotion, thought.

It cannot be shown that Gravity produces Chemical Affinity, or conversely. Neither can it be shown that these give rise to Vitality. While it is conceded that Vital Force does not produce Gravity or Chemical Affinity, yet it is a fact of observation that Vital Force employs these in organizing plant and animal forms, and imparting to them such properties and conduct as belong to all organic existence.

The living body is a machine. Its motive power is Life Force. The Force animates, constructs, and maintains the machine in repair. In every instance, it is the motive power that does the work, with the results depending upon the conditions supplied.

We know that the motive power of a machine is not inherent in the machine. We know that the motive power comes from some source apart from the machine.

We declare that the motive power of the human body is not inherent in the body. We hold that the motive power comes primarily from some source apart from the body.

Science claims that the motive power of the living body is inherent in the body; that it comes primarily from within the body. But science has not succeeded in proving its claim. It has failed to show that the motive power of

man is inherent in his body. It admits that the question is still unsettled, that the matter is still a mystery.

The brain appears to be the supreme center of coordination of the actions of the Life Force, which Force is received not only by the brain-cells, but by every innervated cell of the body. As soon as the connections for reception, transmission, and distribution of the motive power (Life Force) are removed, broken, or seriously injured, the living body becomes non-living, inactive, motionless, dead.

The proposition may be well illustrated by comparing a living body with a live electric wire. The wire is energized so long as it constitutes a part of the circuit, but it is "dead" as soon as the circuit is made discontinuous.

Man is energized (alive) so long as his elementary composition and elementary relationship remain capable of being animated or energized; but his body is "dead" as soon as it loses this position and condition. The body is animated or energized always in proportion, in quantity and quality, to its material capacity for being animated or energized.

A lamp filament in time deteriorates and finally burns out, due to the wearing and tearing influence of the electric current working in and thru it.

So Vital Force, as it acts in and thru the body, may be said to have a vitolytic effect upon the cells and tissues, analogous to the electrolytic effect upon the lamp filament.

The Force that wears out the lamp filament will not make a new filament, nor maintain the old one in repair. Life Force is constantly repairing and regenerating the cells and tissues of man in the time of activity and rest, but more especially in time of rest. This point the student should remember; for in later lessons we shall refer to it again, and reveal its great importance.

While some authors hold that Vitality is simply chemical affinity in some form, others assert the existence of a Life Principle. The great Baron Liebig, who is hardly surpassed in literature for attention to the subject, says:

"Everything in the organism goes on under the influence of Vital Force, an immaterial agent, which the chemist cannot employ at will. . . . It is a peculiar force, because it exhibits manifestations that are formed by no other force."

Dolbear has said that every phenomenon that was once supposed to be due to Vital Force, is now shown to be due to the physical properties of a particularly complex chemical substance known as protoplasm, the substance out of which all living things are made.

The boldest and ablest scientists and evolutionists have theoretically, and illogically, brought man and all the lower animals up, by a process of evolution, from a microscopic germ; yea, from protoplasm, which Prof. Huxley called "the physical basis of life." But, as a matter of fact, they have been unable to suggest any way that even protoplasm could get Life from inert matter.

In this discussion of Life, we must notice the remarks of another able author, Professor Lionel S. Beale, M. B. F. R. S., King's College, London, as contained in his important work, "Bioplasm," which is the name he applies to "Protoplasm." He is an authority on the use of the microscope, and, as some evidence of the power of the object-glass through which he has studied "Bioplasm," he states:

If it were possible to see a hair in its entire width, it would appear to be nearly one foot in diameter, and an object an inch in height, would appear to be 250 feet high."

With a microscope of such power, he has viewed the initial processes of Life, and has left on record the results of his observations, from which we quote:

"The colorless, structureless matter, characteristic of and peculiar to all life on earth, . . . is capable of moving in every part and in every direction. The movements are not such as are communicated . . . from matter . . . in its neighborhood, but the impulse proceeds from the matter itself.

"This wonderful matter, to which I shall have frequently to refer in every part of this volume, moves and grows. Everything else in Nature may be moved and caused to increase by aggregation, . . . but this alone moves towards lifeless matter, incorporates it into itself, and communicates to it, in some way we do not understand, its own transcendently wonderful properties. . . . This matter which is found only in living beings . . . may be correctly called living or forming matter, for by its agency every kind of living matter is made, and without it, as far as is known, no living thing ever has been made, or can be made at this time, or ever will be made."

Beale's observations have demonstrated that:

1. Life first appears in a single nucleated cell of protoplasm.
2. Movements of the cell are not such as are communicated from matter.
3. The impulse proceeds from within the matter itself.
4. The matter (protoplasm) moves and grows.
5. The matter is found only in living beings.
6. The matter may be called living or forming matter.
7. By its agency every kind of living matter is made.

Bioplasm, or protoplasm, moves "in every part, and in every direction,"—and the impulse of movement proceeds from within the matter itself.

This is the due and true distinction between what we call living things and things that are not living. Anything may be moved, but only living things move themselves, and by impulses that proceed from within themselves. This is the test by which to determine whether a thing is alive or dead.

The essential facts of Life are movement and growth. Protoplasm is the medium through which Life first manifests its presence; but protoplasm is not Life. It may be inactive as well as active, for both kinds of protoplasm exist side by side. When inactive, or dead as some call it, such protoplasm answers to very different tests from the tests exhibited by active or living protoplasm.

The living cell of protoplasm, which moves and grows, is made up of Vital Force and Matter, with the Matter derived ultimately from the mineral kingdom. But it is both inconsistent and impossible to agree that Vital Force comes from the same source, because—

1. Life only from Life.
2. Matter only from Matter.
3. The greater cannot come from the lesser.
4. High quality cannot come from low quality.
5. Motion cannot come from inertia.
6. The energies of Matter never desert Matter.
7. Life is not an essential, inherent part of Matter.

The Life Principle grows plants, animals, and men, using as the materials of construction, air, water, and minerals of the earth. It employs in its work, chemical and mechanical forces. When Life no longer animates the body to vital function, the same chemical force disintegrates that which it previously aided in constructing.

Vital Force, being the highest order of the known forces, employs in its service all agencies beneath it; but it neither falls to the level of its servants, nor lifts them up to its own level. Chemical forces always remain chemi-

cal, and mechanical forces always remain mechanical, whether observed in operation in living organisms, or outside of them.

The work which the Man of Matter performs, is physical work. The work which the Man of Spirit performs, is vital work. While respiration, digestion, absorption, assimilation, elimination, and all the other functions of the living body are physical processes, yet they arise as the result of Vital Force performing vital work.

In the living organism, the spiritual and the physical meet, act, and interact in a round of function that is the mystery of Animate Existence. To do the work, there must be both Vital Force and Physical Energy—the former to control and direct, and the latter to do and serve.

The Eternal Trinity of Intelligence, Force, and Matter is a fact. It is not a fiction of human imagination.

While physical or chemical energy is a necessary agent of the functions of living forms, it is never transformed into Vital Force. Being inherent in the constitution of Matter, it always remains the same. Being inferior to Vital Force, it cannot be elevated and transformed into Vital Force.

In speaking of the Life Principle, Prof. Beale says:

"Life is a power that we cannot isolate nor physically examine, but the effects of the action of which we may study."

Lodge points out that Life belongs to a separate order of existence, which interacts with the material world for a time, building material aggregates, which last until they are abandoned by the guiding principle, when they more or less speedily fall into decay. He further declares that its existence is continuous and permanent by which he undoubtedly means that Life does not end when it leaves the physical frame through which it previously functioned.

Since Gravity, Polarity, and Chemical Affinity are real, eternal and omnipresent principles, we have the same reason to believe that the Life Principle is a real, eternal, and omnipresent principle. Like other Primary Principles, Life makes itself manifest upon supplyment of proper conditions for its appearance and operations; and withdraws its manifestations upon a change of the conditions.

Since Gravity, Polarity, and Chemical Affinity neither arrive from anywhere to begin work at a certain moment, nor go anywhere when they cease to manifest their presence, so the Life Principle neither arrives from anywhere to begin work at a certain moment, nor goes anywhere when it ceases to manifest its presence in and through the body. It is here and there before and after; it is here and there always, but its manifestations appear and disappear, depending always upon the conditions supplied.

Under the same conditions the same result is obtained; under a change of conditions, it is evidence that there must be a corresponding change of result. This is true whether in mechanics, chemistry, or physiology. The causes of things are dependent upon occasions or conditions, as these bring into play the law of production.

Man does not possess or own the power within his frame, the power that animates him and makes him move and grow and act in every part.

Consistent with this doctrine, man cannot expend and exhaust his powers, any more than he can receive, acquire, and hold in his possession a certain amount of these powers. He may change, within certain limits, the elementary composition and elementary relations of his body, and the manifestations of Vital Force in and thru his body will change accordingly.

The mass of man's body is not separated entirely from its animating force thru somatic death at a certain moment. It continues to be animated in its changed and continuously changing organity, in its downward transit towards minerality, always in proportion to the elementary composition and elementary relations of the mass, or in proportion to the capacity of the mass to express vital phenomena, down to the absolute inorganity, or minerality.

A knowledge of just what is Vital Force (Life Principle), and the source thereof, would indeed be valuable knowledge. But HOW the Force works, is the important consideration here.

As the discovery of the law and the force of Electricity, enabled man to turn night into day and fly through the air; as the discovery of the law and the force of Gravitation, solved the hitherto mysterious problems of the celestial bodies and made possible a science of Astronomy; as the discovery of the laws and the forces of Chemistry, gave us chemical science; so a solution of the great problems of Physiology, and the establishment of an exact science of Physical Regeneration, leading ultimately to a condition of Perpetual Youth, is involved in a discovery, formulation, and elucidation of the great primary Law of Animate Existence.

Questions for Lessons Nos. 1, 2, 3, 4.

The student should answer the following questions, and send his answers to Dr. Clements for review and criticism. It is not necessary to copy the question. Simply number the answer to correspond with the number of the question.

The student is not obliged to answer these questions; but by answering them, he will get more good out of the work.

1. (a) Is Perpetual Youth a possibility? (b) How may it be attained? (c) What are the conditions of Perpetual Youth? (d) Is it possible to supply these conditions?

2. (a) If Perpetual Youth were impossible, could man conceive of the idea? (b) Why has man failed to find the conditions of Perpetual Youth?

3. (a) Does the urge to live arise from individual intelligence? (b) Does Eternal Intelligence lead any living thing astray? (c) Why does man fail to find Truth?

4. (a) What fact does the "horror of death" teach us? (b) Why do all living things dread death? (c) What is originally intended that man should die?

5. (a) Give the cause of death; (b) of disease; (c) of decay and degeneration. (d) Is it possible to remove the cause of all these conditions? (e) If so, how?

6. (a) Name the three leading points made by Gaze. (b) What facts must be considered in the question of lessening disease and lengthening life?

7. (a) Name the three theories of Life. (b) Which one seems the most plausible? (c) What is meant by "being alive"? (d) What is the difference between a living body and a dead body?

8. (a) What is meant by the "breath of Life"? (b) What part does air, or breathing, play in the maintenance of the living body? (c) Can man live long without breathing?

9. (a) Does science recognize the existence of two bodies? (b) If your answer is No, then how does science account for the function of the physical body?

10. (a) What difference, if any, is there between the Life Force in man, in animals, in plants, and in minerals?

11. (a) What is vital energy? (b) What is physical energy? (c) Does vital energy produce physical energy? (d) Can physical energy produce vital energy? (e) Can heat and an egg produce a chick?

12. (a) Can air, water, and food produce vital energy? (b) What part do air, water, and food play in the existence of man?

NATURAL HYGIENE

Lessons Nos. 5, 6, 7, 8.

Lesson No. 5, Chapter No. 14.

Eternal Trinity

In the beginning, God created the heaven and the earth (Gen. 1:1).

In this eternal formation, three grand elements are present, to-wit:

1. Intelligence (Law).
2. Force.
3. Matter.

Intelligence (Law), Force, and Matter constitute the Eternal Trinity—the Three in One, and the One in Three, held sacred in the various religions of the earth.

It matters not whether a world, a man, or a machine is being made, the Eternal Trinity is always and forever present, and involved in every process.

The idea of the Eternal Trinity, as first formed in the primitive brain, has been preserved in the various religions, and passed down to us, adorned with profound superstition.

The number THREE is sacred in all doctrines derived from oriental sources. The notion of a Triad of Supreme Powers is common to most ancient religions. Nearly all Pagan nations of antiquity, in their various theological systems, acknowledged a Trinity in the divine nature.

One of the most prominent features of the theology of India is the doctrine of a divine triad, governing all things. This triad is called Tri-murti—from the Sanscrit word TRI (three) and MURTI (form)—and consists of Brahma, Vishnu, and Siva. It is regarded as an inseparable unity, though three in form.

Regarding this, Monier Williams remarks:

"When the universal and infinite being Brahma—the only really existing entity, wholly without form, and unbound and unaffected by the three Gunas or by qualities of any kind—wished to create for his own entertainment the phenomena of the universe, he assumed the quality of activity and became a male person, as Brahma the creator. Next, in the progress of still further self-evolution, he willed to invest himself with the second quality of goodness, as Vishnu the preserver, and with the third quality of darkness, as Siva, the destroyer.

"This development of the doctrine of triple manifestation (tri-murti), which appears first in the Brahmanized version of the Indian Epics, had already been adumbrated in the Veda in the triple form of fire, and in the triad of gods, Agni, Surya, and Indra; and in other ways."—Indian Wisdom, p. 324.

This divine Tri-murti, say the Brahmans and the sacred books, is indivisible in essence, and indivisible in action; mystery profound, which is explained in the following manner:

1. Brahma represents the creative principle, the unreflected or unevolved protogeneus state of divinity—the Father.
2. Vishnu represents the protecting and preserving principle, the evolved or reflected state of divinity—the Son.
3. Siva is the principle that presides at destruction and re-construction—the Holy Spirit.

These three gods are the first and highest manifestations of the Eternal Essence, and are typified by the three letters composing the mystic syllable AUM. They constitute the well-known Triad of divine forms that characterizes Hinduism.

It is usual to describe these three gods as Creator, Preserver, and Destroyer. But their functions are con-

stantly interchangeable, and each may take the place of the other, according to the sentiment expressed by the greatest of Indian poets, Kalidasa, who says:

'In those three persons the One God was shown—
Each first in place, each last—not one alone;
Of Siva, Vishnu, Brahma, each may be
First, second, third, among the blessed three.'

The Buddhists, as well as the Brahmans, have had their Trinity from an early period.

The inhabitants of China and Japan, the majority of whom are Buddhists, worship God in the form of a Trinity. Their name for him is Fo. In speaking of the Trinity, they say: "The three pure, precious, honorable Fo."

This triad is represented in their temples by images similar to those found in the pagodas of India; and when they speak of God, they say: "Fo is one person, but has three forms."

The ancient Egyptians worshipped God in the form of a Trinity, which was represented in sculptures on the most ancient of their temples. The celebrated symbol of the wing, the globe, and the serpent, is supposed to have stood for the different attributes of God.

The priests of Memphis, in Egypt, explained this mystery to the novice, by intimating that the premier (first) Monad created the Dyad, who engendered the Triad, and that it is this Triad which shines through Existence.

The idea of calling the second person of the Trinity the Logos, or Word, is an Egyptian feature. Mr. Bonwick states:

"The Logos or Word was a great mystery (among the Egyptians), in whose sacred books the following passages may be seen: 'I know the mystery of the divine Word. . . . The Word of the Lord of All, which was the maker of it. . . . The Word—this is the first person after himself, uncreate, infinite, ruling over all things that were made by him.'—Egyptian Belief, etc.

The Trinity of the Persians consisted of Oromasdes, Mithras, and Ahriman. The Trinity of the Druids was called Taulac, Fan, Mollac. The ancient Scandinavians worshipped a Trinity consisting of Odin, Thor, and Frey.

The ancient Mexicans and Peruvians of the new world had their Trinity. Tezcatlipoca, the supreme God of the Mexicans had associated with him two other gods, Huitzilpochtli and Tlaloc; one occupied a place upon his right hand, the other on his left.

An explanation of the Trinity is found in the ancient Sun Myth. Amid the phenomena of Existence, the mightiest of all, of which we have knowledge, is the Sun.

Primitive man knew, as well as we know, that without the Sun, the earth would become as dead and barren as a cobble stone. To him the Sun was the Creator, the Preserver, and the Saviour of the world.

In the spring-time, the time of love, when the soft, warm rays of the Sun embrace her, from the fertilized womb of Mother Earth, come forth all living forms. It is the warming influence of the Sun, that makes the life sustaining fluids flow in the veins of her body. It is she who quivers on the plains, where the soft moist air waves gently on the grasses; it is she who climbs in the bush, who soars in the elm, who fills the solitude with the joyous twitter of the birds in the branches; it is she who in lake and sea, in mountain and woodland, couples the

gorgeous male with the ardent female, throbs in every bosom, loves in every life, laughs in every stream.

But all this terrestrial life, all this glow and warmth, all this light and joy, all this growth and glory, are but effluents from the Sun.

The feeling that the fruits and living forms of Mother Earth are called forth by the power of the Sun, would find expression in words that spoke of the Sun as the Father of all living things, the guardian angel of the world, who provided for the needs of man, beast, fish, and fowl.

The Sun was regarded as the Creator, and became the first object of worship.

It was also observed that this all-powerful and all-providing agent, the solar fire, was the most potent Destroyer; and hence would arise the first idea of a Creator and a Destroyer, united in the same person. It was further observed that the destruction caused by this powerful being, was destruction only in appearance; that destruction was only re-production in another form—regeneration; that if he appeared sometimes to destroy, he constantly repaired the injury which he seemed to occasion—and that, without his heat and light, everything would wither away into a cold, inert, decaying mass.

Thus, in the same being became concentrated the—

1. Creating power.
2. Preserving power.
3. Destroying power (re-production).

This is a brief sketch of the manner in which the Eternal Trinity, (1) Intelligence (Law), (2) Force, and (3) Matter, has been woven into the various religions, and worshipped by the various nations as a God.

The doctrine of the Trinity is the highest and most mysterious doctrine of the religious world. Numberless attempts have been made to explain the mystic One in Three and Three in One.

We have given for the first time in history, a logical explanation of the Eternal Trinity.

The Three Grand Elements of Intelligence (Law), Force, and Matter, are involved in every operation, not only, but as each is absolutely dependent upon the other two, so the other two cannot exist without the third.

If these Three Grand Elements be separated from each other, then each becomes an empty abstraction or idea, which is useful only as showing the triple manifestations of a vast, invisible Unity, which passes beyond all human knowledge and understanding.

The Number One is all-including, as perfect white contains all colors. But as we cannot conceive of the Absolute Unmanifested with our finite intellects, all expressions thereof must be in the form of the Triad, in which is revealed the Monad.

Chapter No. 15

Eternal Intelligence (Law)

Knowledge is the Master Key that unlocks the Mysteries of Life. It makes man the Master of his Destiny.

Knowledge of what? What can man know? How far can his knowledge extend? What and where is the limit?

Learn the Law. The treasures of the Earth become man's as he discovers the laws of their production. Colquhoun rises to the role of prophet as he observes:

"When we have once established a general law of Nature, we have reached the limit assigned our faculties, and must take our stand on the primitive will and fiat of the great Creator of the universe; for who would otherwise attempt to explain the cause of a general Law?"

"The true philosopher endeavors to connect the various phenomena of the universe in such manner, as to elicit one or more of these general laws; and it is in this

way—and in this way alone—that he can best contribute to the completion of the sciences. To attempt to go beyond this point is an error, into which no man of sound sense and philosophical tact will readily fall."—History of Magic.

More than to learn the law, no man can hope to conceive or achieve. More than this, is both unnecessary and superfluous. Less than this makes the scientist say, I believe, and leaves humanity bewildered in the shadows of superstition and doubt.

The fundamental principle of Eternal Formation, is the Law of Production. The Law operates through vibratory correspondence, to the organization of forms and the equalization of forces. One phase of it is expressed in the phenomenon of Polarity.

As Force and Matter are the basic principles that constitute Eternal Formation, so Positivity and Respectivity are the active principles that express the manner in which the work is done. The operations are directed and governed by Eternal Intelligence (Law).

The Law of Vibration arises from the operation of Force upon Matter, or of Spiritual Power radiating through Physical Substance.

The Law of Polarity arises from the activity of physical particles, as they are impelled to seek vibratory correspondence with other particles of like chemical affinity. Between the positive and receptive elements, there appears an inherent attraction, an irresistible and spontaneous impulse of union.

Matter appears under the control of a principle that impels every particle in existence, to seek vibratory relation with every other particle of opposite polarity. This principle must be recognized as an intelligent principle.

The conduct of the Atom, as it seeks vibratory correspondence with other Atoms, must be recognized as an intelligent act. The intelligence is not an individual principle inherent in the atom. It is a general principle that we rightly name Eternal Intelligence.

One of the most patent facts of Existence, is the omnipresent manifestation of a universal principle of Intelligence. It is exhibited in the operation of every process and every production, in the conduct of every plant and every animal, in the movement of every planet and every star.

Every phase of Existence exhibits the unchanging rule of a directing intelligence. Every fact of Existence proves the presence of a directing intelligence. Every function of Existence occurs in response to a directing intelligence.

A realization that Existence is ruled by Eternal Intelligence, is the first step in the acquisition of knowledge. A discovery of the manner in which Eternal Intelligence operates, is the final step in the acquisition of knowledge.

Force directed by Eternal Intelligence, or Eternal Intelligence sustained by Force, accounts for and explains all phenomena.

No matter how low we descend in the scale, we find the same unerring intelligence ruling all operations, and directing them to a positive purpose.

This fact is what makes so great, the discoveries of Archimedes, Newton, Lavoisier, and others. They are the world's greatest teachers. Upon their findings is based the hope of humanity.

Eternal Intelligence, as we use the term, is interchangeable with the term Universal Law. This law some call the Law of Nature.

The primal definition of Law gives it as "a rule of action prescribed by authority." This refers to man-made laws. The same definition, as to Universal Law, leads to

confusion; for the question immediately arises, What authority prescribed the Law of Nature?

If we hold that over and above the Eternal Trinity there is a Greater, we then and there bring into being an element, and the greatest of all, for which a use and need cannot be found. For the Eternal Trinity answers perfectly to each and every requirement of Existence.

It is well to speak of Eternal Intelligence as Universal Law, for such it is. But it is erroneous to speak of Universal Law as the Law of Nature.

No one can define "Nature" without omitting the major portion of Existence. If the Law of Nature means that rule which governs the visible things of the earth, then another law is required to rule that which is not of the earth.

Universal Law, which is the equivalent of Eternal Intelligence, is a term that refers to the manifestation of an immutable rule of conduct, that runs through all departments of Existence, from the infinitely small to the infinitely great, thus leaving nothing more as needful or necessary, to account for and explain all phenomena.

Eternal Intelligence is one element of the Eternal Trinity. It is the power, if it may be called that, which describes and directs the course of all operations and all productions. As the Poet says:

The very law that moulds a tear,
And bids it trickle from its source,
That law preserves the earth a sphere,
And guides the planets in their course.

—Anonymous.

Physical science does fairly well when it deals with physical causes and physical effects. When it enters the domain of pure intelligence, it becomes grossly speculative. "All the laws of physical evolution can never explain the first genesis of mind," asserts the Encyclopedia Britannica.

If Universal Existence were the product of blind mechanical, chemical and physical forces, the orderly arrangements of all its parts becomes the most stupendous miracle ever presented for human contemplation.

Any attempt to define Eternal Intelligence, other than the ruling, directing, governing Principle of Existence, would amount to an absurdity.

The finite mentality can neither grasp nor define ultimates. At no point of Existence has the finite thus far comprehended the Infinite, either as to Intelligence, Force, or Matter.

Science is forced to rest upon the principle itself. It can do no more than occupy itself with demonstration and classification of phenomena that serve to prove the principle.

The finite mentality thus far is forced to content itself with the fact, that all operations and productions, that Eternal Formation in a word, is and are orderly, and are directed by a general principle of intelligence.

A complete disregard of so self-evident a principle as the manifestation of a general intelligence in Eternal Formation, is one of the fatal errors of physical science.

Chapter No. 16

Manifestations of Intelligence

Every Formation of Matter, from the lowest to the highest, stands as eternal proof of the existence and operation of a general principle of intelligence.

Every activity of Matter, from the simplest to the greatest, stands as eternal proof of the evolution of intelligence, from a general principle of intelligence in the mineral to an individual principle of intelligence in man.

The Principle of Polarity raises the Primitive Elements to a Compound. The Principle of General Intelligence forms the Compound into an Organic Body.

With the formation of the Organic Body, there appears the dawn of Individual Intelligence. With the dawn of Individual Intelligence there comes the beginning of a distinctly new class and order of phenomena.

When the Eternal Trinity has evolved a sufficiently delicate physical organism, the phenomenon of sensation appears. While a general intelligence governs every operation of existence, the phenomenon of sensation is the first distinct evidence of an individual intelligence.

The apparently insensate acorn falls to the ground. When proper conditions are supplied, it sends forth a sprout that bifurcates, one fork going down in the soil, for nourishment, and the other extending upward, in defiance of the attraction of gravitation, to gather from the air, light, and sunshine, such nourishment as the plant needs, and appears to know that it cannot get from the soil.

The conduct of the plant, as it strives for existence, must be recognized as an intelligent act. The intelligence is not a general principle apart from the plant, but appears as an individual principle that arises from its conduct, as the plant seeks to consummate the principle of fulfillment, which is the fundamental principle of Eternal Formation.

The Eternal Intelligence that fashions worlds, and condenses cosmic matter into enormous masses, pervades every department of Existence, and manifests itself with varying intensity and an increasing concentration in the successive stages of Existence.

Appearing as a general force, working orderly in the mineral, individualized in the plant, polarized in the sensations and instincts of animals, it extends towards the conscious Monad in this slow elaboration; and the elemental Monad is visible in the most inferior animal.

The same elements exist in every kingdom, though gradually decreasing in quantities as we descend in the scale. But if the question be asked, Where in the scale does the Monad begin, the reply would be, Where does cold end and heat begin? Where does daylight end and darkness begin?

Some writer has declared, that Intelligence sleeps in the stone, dreams in the plant, awakens in the animal, and acts in man.

The higher be the development in the series of organisms, the more the Monad develops the principles latent in it. Polarized force becomes capable of sensation, capacity of sensation becomes instinct, and instinct becomes individual intelligence.

The capacity of sensation is proof of a higher organization of Matter than that found in either stone or tree. The capacity of sensation is the quality that determines the plane of existence, which a physical organism shall occupy.

In the production of organic forms, there appears the involuntary response of mineral, vegetable, and animal substance to the influence of the universal principle of Polarity.

Until the capacity of sensation is developed to a certain degree, the conduct of the animal appears as purely automatic and instinctive. It arises as conduct prompted, directed, and controlled by Eternal Intelligence.

The principle is manifested in the conduct of insects, worms, and bugs. These are able to anticipate the full requirements of Existence, and to supply them in a universal manner. They exhibit a degree of individual in-

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telligence that is sufficient to enable them to control their activities and direct their efforts, that their well-being may be promoted, and their existence preserved and perpetuated.

After individual sensation, perception, and volition appear, the conduct of the particular animal is no longer directed and controlled by a cold principle of general intelligence alone. It becomes subject also to the principle of Will and Desire.

While it is Eternal Intelligence that impels the conduct of the animal, it is the individual intelligence of the animal that establishes the Law of Individual Preference, and endows the animal with the capacity to act in accordance with the principle of Will and Desire.

This capacity is markedly illustrated in the conduct of the migratory birds.

In the northland, these birds gather in great groups at various points in the autumn, and chirp and chatter as though in important conference. Within a few days the feathered folk wing their way toward the warm skies of the sunny south, and there spend the dreary days of winter in comfort in the balmy atmosphere of the tropics and semi-tropics.

The question at once arises, How do the birds know which way to travel in order to avoid cold winter's icy blast? How do they know that at a definite time, frost and snow and ice will come, and that they must travel in a certain direction, to escape the fate of being starved and frozen to death?

Physical science offers no rational solution of the problem. It suggests that the birds are guided by instinct; but it fails to explain what "Instinct" is. Science assumes instinct to be a property of Matter.

Some suggests that the birds are governed in their conduct by experience. This fails to solve the problem. The result would be the same, if all the old birds were killed, and none left but the inexperienced young, that were hatched during the summer in the northern woods.

What power guides the ant and the bee, in their labor during the summer, to lay up provisions to carry them through the winter?

What power guides the new-born pig to seek its mother's breast for nourishment? What power guides the weak and wobbly calf, just come into the world, to seek the udder of the cow? What power tells it what it will find there?

Man has known how to make paper for about two thousand years. Hornets and wasps have always known how to make paper. They were never taught; they needed no experience. Whence came their knowledge. From Eternal Intelligence is the only rational answer.

No chemist can make honey. No chemist knows how to make honey. Bees have always known how to make honey. They were never taught; they needed no experience. Whence came their knowledge. From Eternal Intelligence is the only rational answer.

Birds have always built their nests as they do now, and each kind builds a certain kind of nest. They were never taught; they needed no experience. Whence came their knowledge. From Eternal Intelligence is the only rational answer.

Physical science does not hold itself competent to account for the manifestations of intelligence that the living world exhibits. It ignores the manifestation of a general intelligence in every operation of Existence. It ignores the phenomenon of an individualized intelligence, rising out of these general processes of Existence.

It is demonstrated that the highest principles of Existence are Intelligent Principles.

It is demonstrated that the certainties of Existence are due to Intelligent Principles, as sustained by Force; and that the causes of things are dependent upon the conditions supplied, as these bring into operation the Law of Production.

The Law of Perpetual Youth is revealed by that principle which impels man to fight for life, after reason has ceased to justify the instinct and action. The action does not arise from Individual Intelligence.

To discover the law that discloses the process by which Perpetual Youth is attainable, leads us back in our search to the General Principle of Intelligence.

To trace the evolution of physical bodies is a great achievement. To trace the evolution of Intelligence is a greater one.

The Eternal Principles of Existence first form the organism, then raise it to the plane of Individual Intelligence. From this point, Individual Intelligence evolves by individual effort.

We must now recognize a particular principle, soundly sleeping in the mineral, dimly dreaming in the vegetable, arousing from slumber in the animal, and plainly acting in man. This principle directly governs the evolution of man from his earliest stages of existence.

From inferences that reason cannot resist, we are constrained to hold that human effort should be so directed, that Individual Intelligence would evolve in perfect harmony with the General Principle of Intelligence. For in that way only could Individual Intelligence serve to cooperate with the General Principle of Intelligence, in the consummation of the Grand Designs of Eternal Formation.

It must be the plan of Eternal Formation, that harmony and cooperation should be secured in all processes and operations, as between Individual Intelligence and General Intelligence. Otherwise, discord and devolution must result.

To accomplish the plan, there is implanted in the body of every living creature, an irresistible urge to live, which makes an animal fight for life after reason has ceased to justify the action. But upon man alone was there bestowed the marvelous powers and capacities, which were designed to enable him to rise above that plane, where Grim Death takes its toll.

By the development and employment of these strictly human powers and capacities, man can accomplish that which no other living creature is competent to accomplish. He can secure such complete harmony and cooperation, as between Individual Intelligence and Eternal Intelligence, that he is able to dominate, control, and master his environment. That was the eternal plan.

By such complete harmony and cooperation, man could supply conditions that would raise him to a plane far above that of all other living creatures. That was the eternal plan.

By such harmony and cooperation, man would work in perfect correspondence with Eternal Intelligence, carrying on to completion the Grand Plan of Eternal Formation. He would in this way gradually ascend in the scale of Existence, as he has up to the point where we now find him, until he would arrive at last to that perfect plane of Perpetual Youth. He would then secure the fulfillment of his highest desire, and this would be the consummation

of the Grand Design of Eternal Formation. That was the eternal plan from the beginning.

The logic and soundness of this doctrine is seen from many angles.

As the development of Individual Intelligence proceeds, the qualities of Will and Desire slowly increase, from the lowest of the animal plane upward; and they exert an ever-increasing influence upon the conduct of the animal. The highest point is reached in man.

As the qualities of Will and Desire increase, the conduct of the animal appears less automatic and instinctive. It yields more to individual Intelligence, and less to General Intelligence. The highest point is reached in man.

Here is the plan under which man has evolved. It shows that he was bestowed with power that made him the master of his destiny. This complete freedom from all restraint, was intended for his higher evolution and elevation. It was intended to lead him to Eternal Existence and Eternal Knowledge.

But the perverted state of human Will and Desire has defeated the Original Plan of Eternal Formation.

Strange as it may appear, as the conduct of the animal becomes more subject to Will and Desire, and less subject to Eternal Intelligence, the more faulty the conduct becomes. The highest point is reached in man.

The deviation from the true to the false, arises directly from the ever-increasing influence of Will and Desire. These qualities exert a controlling power over the animal, through the formation of habits. The highest point is reached in man.

If the habits be good, the results are correspondingly good. For the conditions supplied determine the results obtained. But, unfortunately, the habits more often are faulty. As they grow faulty, their effect is to weaken the body, physically, mentally, and morally. The highest point is reached in man.

The more the faulty habits are followed, the more they weaken; the more they weaken, the more they control; the more they control, the more they degrade. The highest point is reached in man.

The fated animal at last degrades, from a master of its conduct, under the infallible guidance of Eternal Intelligence, to a slave of its harmful habits, under the degrading influence of Will and Desire. The highest point is reached in man.

Plants, guided solely by Eternal Intelligence, and animals of the lower order, where Individual Intelligence operates in conjunction and cooperation with Eternal Intelligence, are free from the influence of Will and Desire. They live and thrive in harmony with their environment—and, for them, this is perfect existence.

Man, and the higher order of animals, guided less by General Intelligence and more by Individual Intelligence, as influenced by Will and Desire, place themselves in a hostile attitude with their environment, and become the miserable victims of their own degrading errors. The highest point is reached in man.

The aim and end of Hindu philosophy is to free man from the enslaving chains of Will and Desire. These are the enemy of mankind.

As the flame is dimmed by the smoke, and the bright metal by the rust, so are the Reason and Understanding of man obscured by this foe, called Desire. "It rageth within him like a fire, and is difficult of being extinguished."

The senses and the mind are its seat; and through these it serves to confound and confuse Discrimination.

The first task is to conquer this foul dweller in the mind. Mastering first the senses, and sense organs, the student then proceeds to put to death this thing of evil.

The senses are great and powerful; but greater and more powerful than the senses is the mind; and greater than the mind is the Will; and greater than the Will is the Real Self.

Thus recognizing the Real Self as higher than all, the student proceeds to govern the Personal Self by the power of the Real Self, and thus conquer this foul monster, Desire, most difficult to seize, and yet possible of mastery by the Real Self—then bind him fast for evermore, thy slave instead of thy master.

Thus reasons the Hindu philosopher.

Chapter No. 18

Cycle of Intelligence

Existence embraces a general purpose for the evolution of man. Man embraces a particular purpose of evolution above the animal plane. The combined and cooperative effort of both Eternal Intelligence and Individual Intelligence to accomplish this purpose, constitutes the Principle of Perpetual Youth.

Eternal Production reached its highest point in evolution, when it produced man and endowed him with the highest degree of Individual Intelligence. At this point, Individual Intelligence should take up the work and complete the purpose of Eternal Intelligence, viz: the evolution of conditions that lead to Perpetual Youth.

Eternal Intelligence is engaged in a process of completion. Individual Intelligence is engaged in a process of completion. Eternal Intelligence will have achieved its purpose and fulfilled its destiny when it evolves Individual Intelligence into Eternal Intelligence.

All phases of Existence travel in cycles. Intelligence, Force, Matter—all these travel in cycles.

In the process of Eternal Formation, the work is directed by Eternal Intelligence. The first evidence of the existence of Eternal Intelligence is observed in the conduct of the Atom.

The evidence of the existence and presence of Eternal Intelligence gradually increases, as we pass upward through the mineral and vegetable kingdoms.

We may not attribute Individual Intelligence to the Atom, or to any portion of the Mineral World. But Individual Intelligence becomes clearly evident in the Vegetable World.

For example, the Indian licorice plant plays the role of floral barometer. Its blossoms are so sensitive to weather changes that their petals foretell rainstorms, cyclones, hurricanes. The Compass Plant displays such a sense of direction, that its flowers and the tips of its leaves point to the true north.

The Venus Fly Trap catches and devours insects, and even small animals. The two leaves of the plant appear to form a harmless cup, fringed with sensitive tenacles. Inside the cup is a sweet, sticky substance that exudes a pleasant odor which acts as a lure to insects. The instant the tip of an insect's wing touches the tenacles, the two halves of the cup spring shut, imprisoning the insect, which the plant absorbs as food.

The Bladderwort is an aquatic plant that captures swimming insects and small fish in the same way. The Madagascar Pitcher Plant is capable of capturing and killing a rat in its twin leaves. It is more cruel than the plants mentioned. The interior of its green trap is studded with tiny spikes which impale and hold the victim

fast, until the plant consumes as much as it wants of the animal.

Reaching the lowest order of the Animal World, there appears the manifestation of Individual Intelligence slightly higher than that exhibited in the highest of the Vegetable World. As we ascend the scale, the degree of Individual Intelligence steadily develops, until man is reached.

The degree of Individual Intelligence exhibited by the lowest order of man, is but slightly superior to that exhibited by the highest order of the animals next below him, which approach him most nearly in form and structure, as the Chimpanzee, the Orang-utan, and the Gorilla. Ascending the scale of man, we come to the marvellous Individual Intelligence exhibited by the brain of a Newton, a Lavoisier, a Darwin, a Kant.

Man was surprised when he discovered the presence and operation of what he termed Universal Law. As he pursued his investigation along this line, it came to appear that there were many laws. Deeper investigation disclosed the presence of but one Law (Intelligence), with many phases.

This knowledge leads from multiplicity to duality—and finally to Unity. As man passes on to Unity, he is able to observe at last the Great Oneness of Eternal Existence. He is able to discover that the states of consciousness, as Time and Space, God and Satan, Good and Evil, Life and Death, Health and Disease, are perversions of interpretation.

As man evolves to the plane of Unity, he reaches that stage of development where Individual Intelligence acts in harmony with Eternal Intelligence. This is the point where Individual Intelligence merges back into Eternal Intelligence, from whence it came. This completes the circle, as described in the Law of Cyclicity. This leads Individual Intelligence back to perfect correspondence with Eternal Intelligence—which is Perfect Life.

Perfect Life is Perpetual Youth. Perpetual Youth is Eternal Existence and Eternal Knowledge.

The general purpose of Eternal Intelligence, and the particular purpose of Individual Intelligence, are the same—the attainment in man of Perfect Intelligence, Perfect Life, and Perpetual Youth.

The Law of Existence rests on the Law of Intelligence. It moves forward towards its purpose, in spite of the errors and obstructions of man. In spite of his ignorance, man is indirectly guided and educated by the immutable principles of Existence, which he cannot alter nor violate. Thus led in spite of himself, he is slowly and gradually advancing to a higher plane.

The final triumph of the living organism over an apparently hostile environment, is the commonest fact of experience. The power of Individual Intelligence to modify, dominate, and conquer environment, testifies to the supremacy of the living organism over environmental influences.

Eternal Intelligence governs the mathematical progress of Matter. It accomplishes this end thru and by vibratory correspondence between single particles of material substance. This general purpose is maintained by the action of the atom in seeking vibratory correspondence in other atoms of opposite polarity.

In the inorganic realm thus appears the first manifestation of the Eternal Process that later develops man.

With the dawn of man there begins a new era. While Eternal Intelligence completes man, the Individual Intelligence of man completes the work of Eternal Intelligence. From the dawn of man, this effort begins. With

the dawn of man comes the last link that completes the circle.

Herbert Spencer says:

"Perfect correspondence would be perfect life. Were there no changes in the environment but such as the organism had adapted changes to meet, and were it never to fail in the efficiency with which it met them, there would be eternal existence and eternal knowledge."

One of the most startling achievements of physical science, is a definition of Eternal Physical Life. Of Spencer's profound observation, Prof. Henry Drummond says:

"He is analyzing with minute care the relations between Environment and Life. He unfolds the principle, according to which Life is high or low, long or short. He shows why organisms live and why they die. And finally he defines a condition of things in which an organism would never die—in which it would enjoy a perpetual and perfect life."—Natural Law in the Spiritual World.

Drummond then shows that man, by means of his more complex organism, is better equipped with "adapted changes" than any other animal, to meet and master his Environment. He continues:

"The organism then with the most perfect set of correspondences, that is, the highest and most complex organism, has an obvious advantage over less complex forms. It can adjust itself more perfectly and frequently. But this is the biological way of saying, that it can live the longest. And hence, the relation between complexity and longevity may be expressed thus—the most complex organisms are the longest lived."—Ibid.

The attainment of that Perfection described by Spencer is a possibility. It rests upon perfect correspondence as between Eternal Intelligence and Individual Intelligence.

Man is endowed with individual intelligence not merely to seek that which is harmonious, but also to repel that which is hostile. This is in accord with the mathematical principle of vibratory correspondence.

Man, by reason of his physically perfect body, his great endowment of intelligence, his great powers and capacities, with the inspiration of a higher element, moves into higher activities and higher necessities, far above the purely animal plane.

Equipped with the physical instrument that readily responds to his Will and Desire, man enters upon the quest of Perpetual Youth, which lies far above the purely animal plane.

Man demands, primarily, correspondence of his organism with its environment, rather than the mere satisfaction of its physical desires.

The animal lives merely for the moment. Man lives for Eternity. The animal is satisfied when its stomach is filled. Man is satisfied with nothing less than knowledge of Perpetual Youth, and how to attain it.

Man enjoys the lower satisfactions of the animal. He is capable of pure animal contentment. But his higher nature and higher intelligence demand higher satisfactions than those of the purely animal plane.

The lower elements correspond with the animal's constitution, and satisfy its desires. But the lower elements have no power to satisfy the constitution and desires of man.

In the lower elements man has sought for the secret of Perpetual Youth. But his failures have taught him that high quality comes not from low quality.

In the lower plane man has sought for the higher, or the road leading to it. His failures have taught him that the road to the higher plane lies not without.

In the plane of temporal things, man has sought for the eternal. His failures have taught him that the tem-

poral is merely the visible manifestation of the Eternal, which is invisible.

Man is learning that the Regenerative Power lies within, not without. He is learning that the elevating power lies within, not without. He is learning that the fountain of Perpetual Youth lies within, not without.

The improvement and elevation of man must come from individual effort. The effort must be directed by a better knowledge of the law.

As man learns the law, he will live the law. As he lives the law, he will secure better correspondence of individual intelligence with eternal intelligence.

Perfect life will come from perfect correspondence of individual intelligence with eternal intelligence. This constitutes the principle of Eternal Existence. Out of this arises the states of Perpetual Youth and Eternal Knowledge.

The impossibility of Perpetual Youth is not proven by its absence. The Earth itself was once absent from our solar system. It existed as a gaseous, invisible form. It was a possibility, but not a reality. Under the Law of Eternal Formation it was transformed from a possibility into a reality.

Perpetual Youth is a possibility. Under the Law of Perfect Correspondence of Individual Intelligence with Eternal Intelligence, it will be transformed from a possibility into a reality.

Anything is possible; and everything is certain within the limits of that possibility.

An examination of the Law of Perpetual Youth reveals the possibility of the process. The application of the Law will set the process into operation. The operation of the process will produce the requisite conditions of Perpetual Youth. The conditions of Perpetual Youth will evolve the state of Perpetual Youth.

The fact that man has capacity to conceive the state of Perpetual Youth, and to formulate its law, forces the world to accept the Doctrine of Perpetual Youth as a part of Eternal Truth. Its fulfillment is as certain as its conditions are possible.

Chapter No. 19

Eternal Force

The second element entering into the composition of the Eternal Trinity, is Force.

In Lessons No. 1 and No. 3 of our course in the Science of Health and Natural Healing, we discussed at some length the subject of Force.

In every department of Existence, work is done. In the lessons just mentioned, we learn that there are no means of doing work, producing effects, performing functions, except by the use of Force.

If something from nothing is an impossibility, if perpetual motion is an absurdity, how shall we account for the existence of the Universe, except by the presence and operation of Universal Force?

Physical science denies the existence of a General Principle of Force. It denies such existence just as stubbornly as it denies the existence of a General Principle of Intelligence. Through the medium of Prof. Ludwig Buchner, M. D., it contends that Force and Matter are fundamentally one and the same. He observes:

"No force without matter—no matter without force. One is no more possible, and no more imaginable by itself, than is the other. Separated from each other, each becomes an empty abstraction or idea, which is useful only as showing two sides or manifestations of the same existence, the nature of which in itself is unknown to us.

Force and Matter are fundamentally the same thing, contemplated from different standpoints."

Moleschott voices the same view when he says:

"Force is no impelling god, no entity separate from the material substratum. It is inseparable from Matter, is one of its eternal indwelling properties."

Again Buchner remarks:

"To put it more accurately, Force may be defined as a condition of activity or a motion of Matter, or of the minutest particles of Matter or a capacity thereof."

Physical science falls into the same error with reference to Force, as it does with respect to Life. It defines the Function of the living organism, as Life. It defines the Activity or Motion of Matter, as Force.

To hold that Force is one of the "indwelling properties" of Matter, is equivalent to holding that the Earth, Sun, Moon, Planets, and Stars produced themselves, and sustain themselves.

If a grain of sand could not produce itself, if man could not produce himself, it follows by logic as well as by law, that the Universe could not produce itself. The parts are produced as the whole is produced, and the whole is produced as the parts are produced. It is unthinkable that there is one order of work for the whole, with a contrary order of work for the parts.

Physical science holds that all Motion is Force. It holds that Force and Energy are one and the same, and it uses the terms interchangeably. It holds that Force is one of the eternal indwelling properties of Matter, and says that without Matter there is no Force.

Common observation shows that Matter produces no Motion, save at the expense of Force received from some other source. Matter moves not of itself. It moves not by virtue of an inherent power. Perpetual motion is a delusion.

Matter moves by reason of Force received from some external source. Motion is work, or the process of doing work. The Worker is Force, under the control of its corresponding law.

The difference between Force and Motion, is the same as the difference between Cause and Effect. Force is Cause; Motion is Effect.

Modes of motion are sensible, measurable, comparable, producible, transformable. Force is insensible, immeasurable, incomparable, non-producible, non-transformable, indestructible.

Motion, energy, work, process, phenomenon, effect, result, are largely interchangeable terms. All are modes of motion, and arise from the action of Force as it operates upon Matter.

It may be said that motion or energy does work, performs function; but it must be understood that it is Force that produces the motion or the energy. While motion or energy is transformed into the work done, the Force persists, unaltered, ever ready to act upon the materials involved, as conditions or occasions bring it into action.

In all operations, in all phenomena, the Force of Production must exist before the processes and products. Movement precedes effect, and Force precedes movement.

All phenomena, all modes of motion, all effects, are the result of invisible and insensible principles, as these act upon infinite particles of matter.

The quality and quantity of Force used in a given work, is determined by the work done. The Kind of Force that does the work, is exactly determined by the Kind of Function that it performs.

The amount of Force expended upon a body, in producing a change either in its motion, its position, or its mole-

cular condition, is the exact equivalent of the energy exhibited by such body.

A machine, once set in motion by the application of Force, can do work by virtue of, and to the extent of that motion.

But no machine, nor combination of machines, can exhibit more power than that expended upon it.

The same rule applies to Universal Existence. Every plant, every animal, every planet, exhibits change in motion, position, or molecular condition, by virtue of, and to the extent of the amount of Force applied to it, or expended upon it.

The earth, the sun, the moon, would be and remain motionless, but for the Force expended upon them.

Existence is dependent upon the presence of Force, under the control of its corresponding law. The Force present must be at least the exact equivalent of all that follows.

Some one has said:

The Force that formed the grains of sand,
And grows and garbs the Eagle's wing;
That Force propels the blood in Man,
And makes and moves each living thing.

Lesson No. 7, Chapter No. 20

Eternal Matter

There is a natural body and a spiritual body. The natural body is of the earth, earthy; the spiritual body is the Lord from Heaven.

This declaration of Paul refers back to the statement in Genesis, that God made man of the dust of the ground, and blew into his nostrils the "breath of life," and man became a "living soul."

The natural body is composed of substance called Matter. It is that part of man which we can see, feel, and smell. It is the only part of man that physical science recognizes. Science asserts that the "spiritual body" is a myth.

Matter, as such, is indestructible. It cannot be annihilated. No grain of dust can vanish from the universe. None can enter it.

Chemistry has taught that the unceasing changes of phenomena, which daily pass before our eyes, do not consist in the formation of Matter previously non-existent, nor of the destruction of Matter then present, as was once supposed.

The formation and destruction of organic and inorganic forms and figures consist in a continual and unbroken rotation of the same substance, of which the mass and the quality remain unaltered and identical.

By the aid of the balance, Matter has been pursued through its manifold and mysterious changes, and it has been found to issue from a combination, the same in mass and in properties as when it entered the combination.

The calculations founded on the Law of the Indestructibility of Matter have proved universally correct.

An atom of oxygen, of nitrogen, of hydrogen, of iron, is everywhere and under all conditions one and the same, endowed with the same inseparable properties, and can never become anything else.

Be it where it may, an atom is the same everywhere. It leaves every compound the same as when it entered the compound. It can not originate anew, nor vanish out of existence. It can only change its combinations.

A simple elemental atom is an immortal being. It remains unchanged in its being under the many attacks levelled against it. It is probably in a condition of cease-

less movement and change of form, but it remains none the less evermore the same.

An atom of hydrogen remains such, regardless of the test to which it may be submitted. It enters and leaves each combination and compound, the same in quality and quantity.

The atom is indestructible. It cannot be annihilated. That which can not be annihilated cannot be created. The atom is eternal.

Physical science has shown that an absolute vacuum cannot exist. The infinity of space is set down by reason as axiomatic. The logical conclusion from these facts is, that space must be filled with Matter, and that this condition must have existed from eternity.

The next conclusion is, that there could never have been a time when the Universe did not exist in some form. It was never created; it always was.

A beginning and an end of the Universe as such, are positively inconceivable, and the thought must be relegated to the limbo of superstitious fancies.

The phrases mortal body and immortal spirit are not exact statements. The physical body, in its form and shape, is indeed mortal, but, as to its constituent particles, it is immortal.

Not in death only, but throughout life, the body changes constantly, as we have said. But in the wider sense, it is immortal as to its materials, since not the smallest particle of its composition can be annihilated.

Today the indestructibility of Matter is a scientific fact, firmly established and no longer denied. Nor is this truth of recent discovery.

Former philosophers possessed some knowledge of the indestructibility of Matter. The knowledge rested more on intuition. It was not a scientifically known and established certainty. The experimental proof thereof could only be yielded by modern balances and retorts.

In 1528, Sebastian Frank, a German, said:

"Matter was from the beginning, and is hence eternal and unending. The earth, the dust, every visible thing indeed perishes; but we cannot say that that perishes out of which they are made.

"Substance abides eternally. A thing falls into dust, but out of the dust another is developed. The earth, as Pliny says, is a phoenix and remains once for all. When it becomes old it burns itself to ashes, that out of them a young phoenix may arise, the former but rejuvenated."

Giordano Bruno, who was burned alive by the priests in Rome in 1600, because they considered his philosophy as heresy, remarks:

"Matter as the Absolute includes within itself all forms and dimensions. But the infinity of forms under which matter appears, is not accepted by her from another, nor, as it were, only in outward appearance, but she brings them forth from herself, and bears them from her own womb. When we say there is death, there is only the outgoing towards new life, a losing of one union which is the binding into a new."

A far more remote age was also acquainted with the outlines of this truth, which is rapidly becoming the corner-stone of every exact or experimental philosophy.

Empedocles, a Greek philosopher, 450 B. C., says:

"They are children or persons of narrow views who imagine that anything originates which before was non-existence, or that anything can wholly die or perish."

Before him, the Greek philosopher Anaxagoras, B. C. 500-428, had taught:

"Existence in space neither increases nor diminishes."

Democritus, his contemporary, and the famous parent of the materialistic philosophy of the old world, and of the theory of atomicity, formulated very plainly the hypothes-

is of the indestructibility of matter, and defined the position as follows:

"Out of nothing arises nothing. Nothing that is can be annihilated. All change is only the union and separation of particles. The varieties of all things depend on the varieties of the atoms in number, size, form, and arrangement."

Chapter No. 21

Infinity of Matter

As Matter is without beginning in Time, so it is without beginning in Space.

Matter withdraws itself from the limitations imposed on man's finite brain by the conceptions of Time and Space. These conceptions are false; they depend upon appearances. As man is prone to judge things by appearances, he cannot free himself from illusion.

Whether we investigate the extension of Matter in the smallest or the greatest, we nowhere find an ending. Whether we call to our aid either experiment or reflection, we nowhere find a final form.

The discovery of the microscope opened up worlds before unknown. It revealed a fineness and minuteness of organic forms, and of organic form elements, undreamed of until then. Man began to cherish the audacious hope of finding trace of the final organic element. He expected to discover the very basis of both physical and spiritual existence. This hope slowly vanished in proportion to the improvement of his instruments.

In the hundredth part of a drop of water was discovered a world of tiny animals. Some were of the daintiest and prettiest form. They moved, digested, assimilated, eliminated, and lived like other animals. By the fashion of their movements they plainly showed that they possessed the two chief marks of living animal forms, to-wit: Sensation and Will.

The smallest of these, under the highest magnifying powers, are barely recognizable as to their outlines, making their internal organization entirely unknown. It is also unknown what yet smaller forms of living things can or may exist. This thought makes Cotta remark:

"Shall we with yet improved instruments see the Monads as giants in a dwarf world of still smaller organisms?"

The wheel animalcule, formerly mistakenly classed among the Infusoria, measures from 1/120th to 1/240th of an inch, has a gullet, toothed jaws, stomach, intestines, glands, ovaries, eyes, blood, and nerves.

A drop of sea-water contains a host of the most various and curious forms as balls, crosses, baskets, screws, stars, chess-like figure, horns, caps, helmets, etc. Each of these forms represents a fully developed, independent living creature, with capacity of sensation and ability of movement.

The swift Monad measures but a twenty-four thousandth part of an inch. Several millions of them may be found in a drop of liquid.

The Vibriones, microscopic animals of the smallest kind, appear under magnification as heaps of tiny, quivering, scarcely perceptible points or threads, sometimes straight, sometimes twisted like a corkscrew. Of these it is estimated that more than four thousand millions would occupy a cubic line.

The spores of a fungus discovered in Italy are so small that a human blood corpuscle, under the microscope, looks like a giant beside them. The blood corpuscle itself is so small, that the smallest drop of blood contains more than five millions of them.

The Ascaris, a round worm, lays about sixty million

eggs, and almost as many ovules are produced by a single orchid.

In these minute bodies resides the profound mystery, from which spring living forms resembling the parental form in all its peculiarities—a specially complicated collocation of the material elements, of which man can form not the slightest conception; for his magnified power of vision here comes to an end.

Still less is the microscope able to explain the arrangement of internal condition of animal or human seed, in which a single cell of great minuteness is able to determine, often to the finest shades, the physical and mental nature of a future being, during the course of a whole life.

As minute as these bodies are, yet they are visible to man's enlarged power of vision.

By the later method of spectrum analysis, the presence of particles are revealed that lie beyond the limits of man's direct perception. This method reveals the presence of the third part of the thousand-millionth part of a gramme of a heavy body, as table salt floating in the air of a room.

This particle of salt is composed of an indefinite number of atoms and molecules, grouped together. The interspaces that separate these minute bodies of matter from one another in this particle of salt, must be as wide, and as enormously great, in comparison to their size, as the interspaces that separate from one another the planets of the sky.

"The most powerful microscope," says Prof. Valentine, "will never bring within our view, either the form or the position of the molecules, nor even those of the smaller groups of atoms. A grain of salt, so small that we can scarcely taste it, contains myriads of atom-groups, which no human eye will ever see."

Prof. Thompson, an English scientist, has calculated that if a drop of water could be expanded to the circumference of the earth, and if each single water molecule of that drop were expanded to the same relative size, then each of these molecules, or distinct water particles, which, in their turn, are composed of atoms of hydrogen and oxygen, would be about the size of a bullet.

This is far surpassed by the calculations made by other scientists upon the molecular constitution of the lightest bodies known, viz., the gases.

The so-called kinetic theory of gases, advanced by Clausius and Maxwell, puts the number of molecules in a cubic centimeter of gas or vapor at no less than twenty trillions, their relative distances from one another being from three to four millionth of a millimeter; and that 144 trillion molecules of pure hydrogen gas weigh the thousandth part of a gramme.

Carus Sterne states that there are six trillion molecules in a thimbleful of gas. Prof. Kundt endeavors to give an idea of this number as follows:

"If a printing press were able to print every day a lexicon containing three million letters, it would then have to work continually for 64,000 years in order to print as many letters as there are contained molecules in a thimbleful of air."

Individual molecules do not lie close one on the other. They are so widely separated in consequence of their so-called molecular spherules, that, according to Clausius, they in reality occupy only the three thousandth part of the entire space.

The velocity with which these molecules vibrate has been reckoned at 1700 meters per second for the lightest gas, hydrogen. The molecules of the heavier gases vibrate with a slower velocity. In a medium velocity of

475 meters, the number of repulsions between the molecules is reckoned at 4700 millions per second.

Crookes, an English scientist, reduced inclosed gases by mechanical and chemical methods to such a state of rarefaction, that he obtained the remarkable phenomena of "radiant matter" or the so-called "fourth state of aggregation of matter," wherein the less constrained molecules move among themselves more easily and swiftly.

This phenomena proves that it was an error to suppose that by such rarefaction there could be obtained a vacuum or space emptied of air, or even a condition of matter approaching thereto.

If a globe measuring 14 centimeters in diameter, and which should, according to the best authorities, contain a quadrillion of gas-molecules, were exhausted to the millionth part of its atmosphere, there would still remain in it a trillion molecules, according to Kalischer.

In order to give an idea of this vast number, the same writer makes the following calculation:

"If in such an exhausted globe, a hole could be made of such minuteness that in each second of time a hundred million gas molecules could enter through it, then must about 400 million years pass away before the globe would again contain air of the original density of the atmosphere."

The vaporous mass from which was evolved our planetary system, as we shall later explain, including the sun, must have had a greater extension than the orbit of Neptune, the outermost planet known to man.

If this mass of matter were again reduced to its original vaporous form, and distributed over a ball that had a circumference equal to the orbit of Neptune, the matter would be so rare, that the density of that primal mist or gas would be only the 553 millionth part of that of our atmosphere. According to Radenhausen, it would have one ten-millionth of the density of hydrogen, the lightest of all known physical bodies.

According to Helmboltz, a single grain of solid earthy substance would, if made equally rare, fill many million cubic miles.

Astronomers assert that the primal sphere of our solar system had a radius of two billion miles. Then the density of the primal gas from which our solar system evolved would have been the 600,000 billionth part of the density of hydrogen.

Modern physicists have denied the existence of ether as a distinct substance, and accept it instead as an excessively rare gas, or rarefaction of Matter. Secchi holds that it consists of the primitive atoms of unknown primal matter, from which were evolved in separate groups, those erroneously named elements of original matter. All forms of matter would thus be constituted of ether.

Spiller asserts that ether, as the universal force-ended matter, the one primal energy of the universe, is the universal—will or the energy—matter, the unwearied architect to whom all atoms must yield obedience without volition, and—

"which without personality or self-consciousness, dictates all natural laws, from the gravitation of the greatest and most distant worlds, to the chemical action of the body-forming and, to man, invisible atoms of matter."

He calls his system Etherism. If the theory be correct, that the matter filling the interplanetary spaces is only the remains of the former primal vapor, then it must be far rarer than it originally was, since the materials have been taken out of it for the making of the solid bodies evolved therefrom.

An atom is the name given to the smallest particle of a chemical compound of elemental matter, which is con-

sidered as incapable of further division, or the division of which is beyond finite comprehension.

The physical bodies built up by groups of two or more atoms are called molecules. The molecules are integrated and disintegrated by virtue of a peculiar power, called attraction and repulsion, existing in relation to the atoms. These properties are known as positive and receptive. This is the foundation of the Law of Polarity.

A molecule may be regarded as somewhat resembling in miniature the systems of the universe. The separate atoms of which it is built may be compared to the separate celestial bodies, joined sometimes in pairs, sometimes in a system.

But the word Atom is only a name for an artificial idea, resulting from the craving of man's brain for limits in space, and which limits are required for the sake of scientific objects.

The science of chemistry is impossible without atomicity, and every theory or concrete representation in chemistry must be at an end without the idea of atomicity. Since atomicity is an assumption, so the science of chemistry is an assumption.

Atomicity is merely a working hypothesis, and man remains without any actual knowledge of that which he calls an atom. He knows nothing of its size, weight, form, color, character, etc. He knows not whether it is elastic or fusible, whether it is angular or spherical, etc. But scientific speculations as to the shape and properties of atoms have not been wanting. Scientists are the world's champion speculators. Their knowledge is largely assumptions.

Man has not seen an atom; he may never see an atom. Speculative philosophers deny its existence. They cannot admit that a thing can exist, the division of which cannot be imagined. They declare that it is impossible both logically and empirically.

The unlimited divisibility of atoms, or of the molecules composed of atoms, can be doubted when considered from either a theoretical, a metaphysical, or an empirical viewpoint; and it can only be maintained that man is not in a position to divide them further by the chemical and physical forces known.

If it be true, as chemistry teaches, that a molecule of quicksilver is a hundred times as heavy as a molecule of hydrogen, then must the former, in comparison with the latter, have a comparatively large size, and hence must be divisible.

Instead of being regarded as elements, or original bodies, atoms may themselves be compounds, and may consist of units of a higher grade, as molecules consist of atoms.

Atomicity, or the explanation of the whole by the parts was founded by the Greek philosopher Leukippus, 500 B. C., and was developed by his disciples Democritus, Epikurus, and Lucretius.

The idea of Atomicity was banned from general knowledge by Christianity, and from science by the Socratic philosophy. It was resuscitated by Gassendi, Hobbes, Dalton and others in the centuries extending from 1592 to 1844.

Lavoisier, towards the end of the last century, proved the indestructibility of the atom, and upon his demonstration founded modern chemistry.

Modern investigation seems to disprove the existence of atoms. It seems to prove that atoms exist only as centers of vibratory waves. Dr. H. H. Sheldon, professor of physics, University of New York, says:

"We live in a world of waves. The further we delve

into the ultimate structure of Matter, the more obvious it becomes that nothing exists except in wave form.

"Electrons, long thought to be the ultimate particles of which all Matter is formed, have now been shown rather conclusively to have a reality only as a wave form, and an atom consists of a bundle of such waves. . . .

"We as individuals undoubtedly have no existence in reality other than as waves, multitudinous and complicated knots, perhaps, in what we call ether."

"We are analogous, in a sense, to the sounds that issue from a grand piano, when a chord is struck, or when a sympathy orchestra sounds."

Neither in observation nor in thought can man, in contemplating Matter in minuteness, reach a point at which he can stop; and there is no probability that such a point will ever be reached.

Stewart says:

"Everywhere we find that the limitations of our reasoning faculties in respect to space and time, shut out the possibility of our becoming accurately acquainted with these exceedingly minute bodies, which are none the less the raw material out of which the universe is built."

John Tyndall, the famous English scientist, suggested a yet unmeasured field of scientific imagination. For man here has to deal with bodies so infinitely small, that in comparison with them the test objects of the microscope are literally immeasurable.

Prof. Buchner says:

"As the distances in space of the planetary realms merely give us a dizzy notion of immeasurability, without leaving any definite impression on the mind, so the quantities with which we have here to deal, leave with us a dizzy feeling as to the infinitely small."

As the microscope guides man in the world of the infinitely small, so does the telescope direct him in the world of the infinitely large. Here also astronomers audaciously dream of penetrating to the very limits of the universe. The more they perfect their instruments, the more immeasurably do the worlds expand before their astonished gaze.

The light and white mists seen, by the naked eye in the vault of heaven, have been resolved by the telescope into myriads of stars, of worlds, of suns, of planetary systems.

The Earth, so fondly and foolishly deemed the very crown and center of Eternal Existence, has fallen from its fancied exaltation to a mere atom, moving in infinite space.

Grove says:

"All our experiments yield us not the slightest trace of a limit; each increased power of the telescope only opens to our gaze new realms of stars and nebulae, which, if not consisting of galaxies of stars, are self-illuminating matter."

W. Meyer observes:

"With each sharpening of our tools which bear our gaze into the waves of light of the furthest starry realms, new waves of suns break forth from the limitless ocean of the stars."

G. J. Klein remarks:

"Even with the most powerful telescopes, we see so many faintly-shining stars, that we are unable to doubt that on the further side of these, there are yet others which will become visible by larger instruments."

Secchi states:

"From all these experiments, we conclude that the depth of celestial space cannot be sounded, and that we shall never succeed in reaching its bounds. We should vainly strive by a cumulation of resemblances to give even an approximate idea of the immeasurableness of the starry universe."

The distances in space, as calculated by astronomers, are so vast, that man's intellect grows dizzy as he contemplates them, and his fancy tries in vain to follow the conceptions suggested by them.

In order to find a mathematical expression for the enormous distances in space, astronomers have adopted the so-called light-time, based on the extraordinary velocity of light, which travels at the rate of 186,000 miles per second.

A year of light-time means nearly six billion miles.

The so-called fixed stars are those which appear to show no movement under observation.

Centauri is one of the nearest and brightest of the fixed stars. It is said to be nearly 22 billion miles away, or about 3 3-4 years of light time.

The distance to the star 61 Cygni is about 400,000 times the distance between the Sun and the Earth, or about 37 billion miles.

The distance from the Earth to the brilliant Sirius, or the dog-star Aquarius, is estimated at 17 light-years, or more than a million times the distance between the Earth and the Sun.

Traveling at the rate of 18 3-4 miles per second, it would require 30,000 years to travel from the Earth to the nearest fixed star.

The above-named stars belong to the group lying near us. The distant fixed stars are reckoned at a distance of hundreds and thousands of light-years.

The number of the fixed stars, or Suns, lying beyond the range of our solar system, has been increased by the giant telescopes to about 20 millions. We can see some 4,000 or 5,000 of them with the naked eye.

These millions of suns are separated from one another by the enormous spaces that we have described. Each one of them belongs to a definite and comparatively much limited star-system, in addition to which there are countless other and mostly larger systems.

This system of stars, of which our Sun and its satellites form only a small part, stretches in form like a somewhat flattened lens through space, and is bounded at its edges by two almost parallel annular aggregations of suns, which are visible to us in the form of the well-known milky way (via lactea).

The distance of these from the earth is calculated at from 4,000 to 5,000 light-years. According to Madler's calculation, it requires 9,000 years for light to travel around the ring of the milky way from one end to the other.

Our sun stands to one side of the center of the system of fixed stars. It is about 573 light-years from the center of the ring, and lies about a thousand light-years nearer to one side of the inner milky way than to the other. This vast system probably revolves round a common and as yet undiscovered fixed point or center.

The powerful telescopes show that this vast system, with its countless hosts of stars, with its distances and extensions escaping from man's grasp, is but a finite limited part of the immeasurable universe, and that in distances, in comparison with which all the bewildering dimensions of the ring of the milky way are infinitely small, there exist other world-systems which lead their course quite independently of ours.

There are the so-called nebulae, those forms in the deepest depths of space, whose position, shape and condition show all imaginable variety, and of which, since W. Herschel first intimately observed them, considerably more than 6,000 are known at present.

They often appear to the eye as mere shining dots, and sometimes cannot be seen without the greatest difficulty; yet part of them by far exceed in their extension that of the milky way; and they, like the latter, must either consist of millions and billions of celestial bodies, or of plana-

tary systems coming into existence, under the Universal Law of Eternal Formation that produced the Earth.

These are merely phrases, with which man is unable to connect any idea, for he has no sort of terrestrial measure for them. Only the word "infinite" is and remains applicable here.

Pascal, the French philosopher, says:

"The universe is a circle whose center is everywhere, and whose circumference is nowhere."

If from these cold facts, any conclusion is to be drawn as to the antiquity of the world, it then cannot be doubted that the present order of the celestial bodies, that which we call in the widest sense, the order of the universe, must have existed for millions, and may be for billions of years, in the same or in similar order as it appears today.

As man gazes at the firmament, he reads there only the record of past ages, or of occurrences that took place before the earth was evolved from its primitive nebulae.

When man observes a change in the Sun, he can only say that it occurred seven and a half minutes ago, for light requires that length of time to travel from Sun to Earth.

If Neptune, the most distant planet of our system, were destroyed by any catastrophe, it would not vanish from our sight for four or five hours later; for that is its distance from the Earth, as reckoned by light-time.

If Vega, in the constellation of the Lyre, were suddenly to cease to exist, we should behold it shining in the sky for eighteen years to come; for the rays of light that strike the earth in witness of its existence, quitted it eighteen years before.

The stars whose light is visible to man by the aid of his best telescope, are calculated to be at a distance of from 2,000 to 3,000 years of light-time.

The ray that brings man tidings of their existence, left its source about the time that Home sang his songs, or the great sages of Greece, lived and taught.

The light we see from the constellation known as Ursa Major started on its journey to our earth two million years ago.

A hundred million years ago, when the first living forms began to appear on the Earth, then sprang from yonder nebulae the ray of light that strikes our eye today as a witness of their existence.

That even these stars do not signify the limits of the world-filled realms of space, may be deduced from the law of gravitation as well as from analogy. Empty, boundless space is a logical and an astronomical absurdity.

Grove says:

"To suppose the stellar universe to be bounded by infinite space, or by infinite chaos, that is to say, to suppose a spot—for it would then become so—of matter in definite forms, with definite forces, and probably teeming with definite organic beings, plunged in a universe of nothing, is, to my mind, at least, far more unphilosophical than to suppose a boundless universe of matter, existing in forms and actions more or less analogous to those which as far as our examination goes, pervade space."—Correlation of Physical Force, 6th ed. p. 125.

Man is unable to find limit to Matter in the minute, and still less is he able to find limit in the vast. He is forced to pronounce Matter to be infinite in both directions—in the great as in the small, and to be independent of the limitations of space and time.

If the laws of thought postulate an infinite divisibility of Matter, if, according to these laws, it be also impossible to imagine limit to space and nil beyond, there is a remarkable and satisfying unanimity between the laws of logic and the results of scientific investigation.

In our work on Psychology, we had an opportunity of

proving the identity of the laws of Human Thought with the mechanical laws of Eternal Existence on other points as well, and to show that the former are the necessary products of the latter.

Lesson No. 8, Chapter No. 22

Seven Phases of Law

Intelligence, or Law, directs and controls all operations. No man can gaze upon Visible Existence, without being struck by the orderly trend manifested in all operations and productions.

The student should realize that as there is only one Primary Force and one Primary Matter, so there is only one Primary Intelligence or Law. He should also realize that as there are many phases of Primary Force, and many phases of Primary Matter, there are likewise many phases of Primary Intelligence or Law.

There are Seven Major Phases of Primary Intelligence or Law, and Seven Minor Phases of each Major Phase.

In a musty old book of Arcane Teachings are given the Sevenfold idea carried out with great detail, particularly as to the Seven Phases of Universal Intelligence or Law that regulate Eternal Existence. These Seven Phases are enumerated in the following order:

Seven phases of Law	}	<ol style="list-style-type: none"> 1. Law of Genesis 2. Law of Purpose 3. Law of Analogy 4. Law of Sequence 5. Law of Vibration 6. Law of Balance 7. Law of Cyclicity 	} Eternal Intelligence
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1. Law of Genesis. This is the law of formation. It is the law by which all new formations and organizations are brought into existence. It is the law by which all things are former and produced. One of its principal phases is the Law of Polarity, which impels to union two opposites that vibrate in harmony with each other.

2. Law of Purpose. Under the influence of this law, universal order is maintained in all operations, from the grouping of atoms in the formation of the smallest bodies, to the arrangement of the planetary bodies in the constitution of the gigantic solar systems.

3. Law of Analogy. Through the operation of this law there can be traced a perfect agreement, or an exact correspondence, between all forms of manifestation in whatsoever direction man may investigate. The great Hermetic axiom, "As above, so below; as in the higher planes, so in the lower; as is the microcosm, so is the macrocosm," is revealed through the operation of this law. An ancient Arcane axiom, "Ex Uno disce Omnes" (By the discovery of one, learn thou of all), applies to all those diverse but intimately inter-related plans and productions of Existence.

4. Law of Sequence. This is the Karmic Law, the basis of Lex Talionis, or Law of Retaliation, generally known as the law of Cause and Effect, which manifests itself in every operation throughout the Universe, despite the frantic endeavors of humanity, and medical science, to evade its effect. By its operation we learn that we must reap just what we sow. Nothing can occur by chance; there must be an efficient precedent for every consequent.

5. Law of Vibration. The union of elements is governed by this law. Everything is perpetually vibrating. The rate of vibration is the factor that determines the plane of existence. Invisible substance is invisible because the atomic elements of the substance vibrate at such a high rate of speed, that they are invisible to the

eye. A rock appears solid because of the low rate of speed at which the atoms of the rock vibrate.

6. Law of Balance. In this law lies the explanation of equilibrium, or compensation. It teaches the fallacy of perpetual motion; it teaches that something from nothing is an impossibility.

7. Law of Cyclicity. All things move in immutable circles. This includes everything from atoms to planets, and is easily explained and understood by considering the atoms of water.

As invisible gas meets a cooling temperature, its rate of vibration is lowered, and certain of its elements change to vapor; a lower temperature changes the vapor to drops of water, that fall as rain. A still lower temperature changes the water to ice.

Reversing the process, by raising the temperature, the rate of vibration is increased, and ice changes to water, then to vapor, then to steam, and then to invisible gas.

The practical object of understanding and applying the Seven Phases of One Law, is to enable the student to discover the vast Unity of things. As the student moves toward the knowledge of Unity, he will observe that the Seven Phases of Law, each with its many and various phases, are but stepping stones which he will no longer need, after he has attained to the Plane of Unity, and sees all things as One.

As the student rises to the Plane of Unity, he will pass beyond the World of Duality, where man shares his knowledge with the beast.

None can reach perfection, except they rise above the plane of Duality. No one can rise above the plane of Duality, who thinks only of a two-fold division.

The one who reasons from a premise founded on a double principle, lives in the world of Duality. To such a man there is no Unity.

Chapter No. 23

Eternal Unity

What is Reality? How shall we know?

We behold the Visible World, called Matter; and no one can tell us what Matter is, or is not.

We behold the operations and workings of an unseen something, called Force; and no one can tell us what Force is, or is not.

We behold moving objects, which we call living things, varying in size from tiny specks that we cannot see with the unaided eye, to the largest creatures that roam the earth.

These living things have been given various names, but no one can tell us what they are, why they are living, of what they are made, from whence they came, or whither they goeth.

As we study and trace the mystery, we come at last to a point beyond which we cannot go; for we find there that Matter melts into mystery, and the evidence of the presence and operation of Force vanishes from view.

In losing these things that appear to us as Forms in Motion, we are informed by our Reason that they are Effects, which are the Product of a Cause.

Men have generally believed in the existence of One Reality, but have always been divided as to the sum and substance of that One Reality.

All philosophies and experiences abundantly indicate, that the visible world is the effect or shadow of an invisible world, and to which various names have been applied.

The invisible world is manifested to us in two forms, to-wit, Force and Matter.

Their utterances have a wise sound, when the Scientists say, that Force is one of the eternal indwelling properties of Matter, and attempt to show by logical argument that, as Mohr says, "we can think of no Force without a Material substratum." But they express only the outer appearance, and fail to find the inner secret of the wise. They speak the truth in part—the part that is apparent—but the missing part is by far the deeper portion.

The Scientists have found the Shadow but not the Substance. They have found the Relative but not the Real; they have found the Covering but not the Kernel; they have found the Changeable but not the Changeless; they have found the Made but not the Maker.

Buchner believes that the phrases "mortal body" and "immortal spirit" are misnomers, and says that exact thought might reverse the adjectives. Then we would have the phrases "immortal body" and "mortal spirit."

This reversal of adjectives avails nothing. We find ourselves at the same place where we are when we declare, "No Force without Matter, and no Matter without Force. Paraphrasing the text into no body without spirit, and no spirit without body, leaves us right where we began. In the finale, there must be One Real, and not two, even though some should prefer the terms Force and Matter.

The Scientist speaks about the Immortality of Matter, the Immortality of Force, the Infinity of Matter, the Immutability and Universality of Natural Laws, of Motion and Form, of Thought and Consciousness. But he says nothing about what he thinks lies back of these. In fact, he contends that these, in themselves, are the beginning, the middle, and the end.

Buchner carefully observes:

"The laws by which Nature works and acts, in her endless movements, in her ceaseless being and becoming, in building-up and destroying, are not, as the child-like phantasy of nations used to imagine them in ancient times and as weak and uncultivated minds still believe at this day, laid down and dictated to Nature by some law-giver or law-givers, standing outside or above Nature, but are the natural and necessary expression of the interaction of all physical forces."

Many authors use the word "Nature," as Buchner uses it here, but none of them pause to describe or define what they mean by the term. What is Nature? Of what is Nature composed? Whence came Nature? If Nature works and acts, whence comes the Force necessary to the performance of these works and acts?

The laws by which Nature works and acts, says Buchner, are the natural and necessary expression of the interaction of all physical forces.

As Nature works and acts, there is a natural and necessary expression of the interaction of all physical forces, from which arises certain laws.

Thus reasons the Scientist, as he attempts to explain the Riddle of the Universe. He says that Matter, in the form of Man, possesses mind, sensation, and consciousness, which result as a mode of motion from the interaction of physical forces.

Thus speak those who cannot rise above the plane of illusion. They worship the Relative instead of the Real.

Universal Law is not made. It always existed, being coeval with Force and Matter. It is the immutable rule that describes and directs the manner in which work is done.

From unknown time, man has tried to form a conception of the Great Reality, and apply an appropriate name to the image of his conceptions. The theologians use the term God, and describe their God as a supreme Being of all Love.

Such misguided men live on the plane of duality. They

have not freed themselves from their belief in the pairs of opposites. Since their Deity is all Love, they must have a Devil, an Evil Spirit, that is all Hate.

Each man's God, that is to say, his conception of Deity, is man himself at his best, magnified to infinity. Likewise, his Devil, is but himself at his worst, magnified to infinity.

By his Deity and Devil we shall know the man himself. For the fruits of his thoughts are the descriptions of his inner nature. They indicate the plane on which he lives.

The foolish fail to realize, that when they define their God, and attribute to him certain qualities, they deny the existence of the object of their worship.

Spinoza has well said, "to define God is to deny Him." For to define an object means to limit it. If we attempt to limit the Infinite, we have no Infinite.

The God of Theology, who is all Love, would lack the capacity to Hate, and is thus more limited than man. The Devil of theology, who is all Hate, would lack the capacity to Love, and is also more limited than man—for man has capacity within himself both to Love and Hate, being thus the equal of the combined forces of the Deity and Devil of theology.

Such is the Deity and the Devil of those whose eyes have not been cleared of smoke of illusion. They have no conception of the Great Reality. They worship the shadow, while the substance escapes their notice.

We cannot define a thing, except by comparing it with something else—and where shall we find that with which to compare the Infinite? It is the All. It is not Law, Force and Matter, and yet from It all these properties emanate, and must exist therein. For that which is in the manifested, must be in the manifestor.

It is impossible for us to conceive of that lying beyond our observation and experience. The most reliable information to be had regarding the Great Reality, must come to us, not from without, but from within.

I and my Father are one, says the Philosophy of the Ages. So every man can equally say the same of himself. For these immortal words are expressive of the most revolutionary and salutary of all truths.

Since man has within himself all the potentialities of his own existence, then every representative of the race can and should say, I and my Father are one.

On this point, Angelus Silensius, the poet, said:

Stop man! where dost thou run?
Heav'n lies within thy heart;
If thou seek'st God elsewhere
Mised, in truth, thou art.

This sublime truth constitutes the most ennobling and inspiring part of man's knowledge. And it was naturally discovered by him after long ages of investigation and toil. It is not a so-called Divine Revelation.

Observation and experience can never discover the secret that we are striving to know. By reasoning within ourselves only, are we able to grasp the faintest conception of the Absolute Unity.

Observation and experience show that the Visible World is the reflecting of a vast Invisible World. Reason declares that the Invisible World is clearly seen in the mind, being understood by the things made Visible. Our great work is to infer the Invisible from the Visible, the Unconditioned Reality from the Conditioned Relativity.

As we pass on from the Condition to the Unconditioned, from the Finite to the Infinite, from the Relative to the Real, we go beyond the World of Duality.

The World of Duality is the plane on which man shares his knowledge with the beast, and above which they can never rise, who think only of a two-fold division,

who reason from a premise founded on a double principle.

This is the plane on which an inevitable Dualism bisects all things, so that each is but a half, and suggests another half to make a whole; as subjective, objective; shadow, substance; motion, rest; male, female; spirit, matter; cause, effect.

The philosophical exposition of the nature of things by the adoption of two dissimilar primitive principles, not derived from each other, has led to the promulgation of the doctrine, that there must be a Cause for every Effect, and that nothing can exist without a Cause.

Rt. Rev. Wm. Montgomery Brown, D. D., says:

"The conception of God, as an explanation of the Universe, is becoming entirely untenable in this age of scientific inquiry. The laws of the persistence of force and the indestructibility of matter, and the unending interplay of cause and effect, make the attempt to trace the origin of things to an anthropomorphic God, who has no cause, as futile as is the Oriental cosmology which holds, that the world rests on an elephant, and, as an afterthought, that the elephant stands on a tortoise.

"The inflexible laws of the known universe cannot logically be held to cease where our immediate experience ends, to make way for an unscientific conception of an uncaused and creating being. The Creation idea is unsupported by evidence, and is in conflict with every scientific law."—Communism and Christianity, p. 14, 10th Ed.

Philosophers, authors and educators who think and live in the World of Duality, in the Realm of Cause and Effect, who reason and cogitate from this premise, are unable to conceive of that grand Unity, where all things melt and merge into one Unconditioned Reality.

These men do err in the beginning, when they declare and affirm that the universe was created by God out of nothing. Those equally narrow-minded ones, who hold the opposite view, assert that if the existence of God could be proven, those so proving, would have to admit that He came out of nothing, or at least from something which did come from nothing.

We agree with those, who reason and cogitate from the plane of dualism, that every effect involves the existence of cause. Every effect must have its cause, for no effect can produce its own cause.

All phenomena are effects, which are declared by reason to be the product of causes. Also, the order of development is from Unity to Diversity, from one to many, from a single seed to a tree bearing many seed, from one principle to products innumerable, from unity of cause to multiplicity of effects.

Reversing the order of investigation, we discover that Causes become less numerous as we trace backward, and this fact has warranted many to assume, that all Causes are traceable finally to one Great First Cause, as the source of all, and whose existence accounts for all.

Even at this point, we still find ourselves on the Plane of Dualism, with Effects depending upon Causes, and a Cause necessary for every Effect. We are faced with the unthinkable alternative of assuming a Causeless Cause, or an effect without a Cause.

Herbert Spencer pursued his investigation back until he arrived at the hypothesis of a First Cause, and there he stopped and stated that we have no alternative but to regard the First Cause as Infinite and Absolute.

Grindon traced Force back until he came to the conclusion, that there is always a still anterior force, which cannot be found except by the light of Theology, and ended by saying:

"In philosophy, as in trouble and in death, willing or unwilling, we must go to God at last."

These observations serve no other purpose than to push the solution of the problem back one step. Unless

God can exist without a cause, we are still faced with the work of accounting for the existence of the First Cause."

The confusion that surrounds our subject and clouds our reason, comes from our dualistic conception of things. This condition has arisen from observation.

Being unable to reason beyond the plane of dualism, man has postulated a mysterious First Cause, and has proceeded to construct his religions, philosophies, and doctrines. He has merely assigned to the agency of First Cause all the varied phenomena of Existence, the character of a First Cause remaining completely unknown and undefined, and its capacities for the production of marvels being regarded as without limit in any direction.

All that man observes in the relative realm of the five senses, is the result of a Cause. When he discovered the inseparable union between cause and effect, he believed that he had accomplished a great achievement—and he had. For by a knowledge of this law, he was able to solve many otherwise unsolvable problems. But it is the knowledge of this law that now prevents him from solving the greatest of all problems.

Why should we suffer the Law of Cause and Effect to bar our further progress. Why halt here, and declare that beyond lies nothing? Why shall we think only in terms of duality? Must this doctrine be accepted as perfect and final, and all attempts to search beyond this be abandoned? It seems that we have stopped at the very threshold of our greatest discovery.

So long as we shall not think beyond shadow and substance, rest and motion, male and female, force and matter, cause and effect, that long shall we remain as believers in the doctrine of dualism. So long as we hold to this belief, we shall never attain to the higher spiritual knowledge, which lifts the wise above the plane of Relativity.

Buchner says:

"No force without matter—no matter without force. One is no more possible, and no more imaginable by itself than the other. Separated from each other, each becomes an empty abstraction or idea, which is useful only as showing two sides or manifestations of the same existence, the nature of which in itself is unknown to us."

Force and matter, cause and effect, the plane of duality, showing two sides or manifestations of the same existence, the nature of which in itself is unknown.

The knowledge of that very fact should spur us on to greater activity, for it tells us that our goal lies ahead, and that we are on the right road.

Then why stop and say that there is nothing beyond this point, because the nature of it is unknown to us? Having arrived at the place where the search begins in earnest, we should continue on, and not throw up our hands and quit.

Just as we trace all things back to a single cause (force), with a single effect (matter), so by proceeding beyond the Realm of Duality, we enter at last into the eternal realm of Monism, which makes all that is, what it should be—AN ABSOLUTE UNITY.

In the Realm of Absolute Unity, Cause (Force) and Effect (Matter), which are but manifestations of the Absolute Unity, melt and merge into one, and disappear from our senses, as Buchner shows, and we arrive finally in the presence of the great and sublime Unconditioned Reality.

Buchner discovered that all things spring from one vast Unity, yet while considering the Duality, the two sides or manifestations of the same existence, as he terms it, he refuses to accept the Unity, because the nature of it, he says, is unknown.

All Visible Existence arises from the Invisible. It is

a question of lowering the temperature and decreasing the vibratory rate. As the vibratory rate decreases, polarity becomes effective, particles unite according to their affinities, and (1) gases, (2) liquids, and (3) solids result.

The photosphere of the Sun contains in a gaseous state all the metals composing the planets and satellites.

A change in the vibratory rate of these gases, causing also a fall of temperature, induces their slow condensation into metaloids.

A ray of matter contains in a state of essence, extremely refined, all the elements of the metals in the universe.

By lowering the temperature and thus decreasing the vibratory rate of the particles of steam, vapor results. Continuing the process, vapor is reduced to water, then to ice.

That might be termed a physical demonstration of the principle of involution.

A block of ice is a solid. At one time it floated in space as invisible gas.

Reversing the process, we apply heat to the ice, raise its temperature to 33 degrees F., quicken the vibratory rate of its particles, and reduce the ice to water, then to vapor, and then to steam.

That might be termed a physical demonstration of the principle of evolution.

The first starts from the positive direction, from above downward, going toward the receptive or negative; the second, upward from the negative, going toward the positive. In the end, all is one.

In a somewhat hazy way, man realizes that all things are parts of a vast Unity. Having been schooled to consider the parts only, and to regard them as springing, in some unaccountable way, from a Supreme Being that is not only unknowable, but divorced from all connection and relation with the parts, it shocks the uninformed to be faced with the fact, that Force, Matter, and Law, when conceived in their essence, are without existence beyond man's consciousness.

We have seen that man has not been able to penetrate beyond the range of Matter. Matter may be divided and subdivided until it passes beyond the range of human powers and machines to detect its presence and existence.

Man's knowledge of Force is based solely upon the observable action and activity of Matter. Of Force he knows nothing, except by the effect of its action upon Matter.

Man's knowledge of Law, now in its infancy, is based solely upon the orderly trend of Matter in motion. He knows nothing of Law, except by the regular conduct displayed by Matter as it is activated by Force.

These facts become more apparent as man becomes more familiar with the Seven Phases of Law. As his knowledge of law increases, he becomes more able to observe the essence of Unity. He rises above the conscious plane of Force, Matter, and Law, and discovers at last that these exist only on the plane where consciousness of duality reigns.

Cause and effect, force and matter, space and time—these belong to the realm of duality. They are phenomena of the relative realm, and are without place in the Absolute Unity.

Man observes the law of cause and effect in its operation, and his reason declares that nothing can be without a cause. That is correct, so far as phenomena are concerned; for all phenomena are relative, and are the effect of a cause. But back of the cause and effect, back of force and matter, appears the Absolute Unity, in which

cause and effect, force and matter, and the entire world of duality, melt, merge, and disappear.

The Absolute Unity is not Force, yet from it emanates all Force. It is not Matter, yet from it emanates all Matter. It is not law, yet from it emanates all Law. It is not Intelligence, yet from it emanates all Intelligence.

Intelligence is manifested by relative living forms, from man down to the grain of sand, and we know that it must emanate from the Absolute Unity. For how could Intelligence rise from Matter, which has no intelligence?

This statement does not mean that the Absolute Unity thinks in any such sense as man thinks. Being the source of all that is, being omniscience, it does not have to gather knowledge, as man does, by the process of thinking; for it possesses all knowledge.

At this point it is not amiss to notice what some authors call "constructive thoughts," and assert that "thoughts" manifest into objectivity and manifestations, becoming Creation.

Created things, according to these teachers, are "thoughts of God." This is a vain attempt to pattern God in the image of man, having God think as man thinks, and work as man works. It is the effect of such silly teaching that is responsible for much of the fallacy in which man is now floundering.

As soon as man enters this realm of reasoning, he then and there limits and defines the Absolute Unity, reducing it to a Conditioned Relativity and destroying its essence.

The greatest human intellects have shown us that the most exalted efforts of their conceptions compel them to state, that the Absolute Unity cannot be referred to as possessing attributes or qualities capable of being expressed in any language, however perfect, employed to describe the things of the relative realm.

All our ideas arise from our experience, directly or indirectly. So we are not equipped with words with which to think or speak of that which transcends experience, although our Reason informs us that Reality lies back of our experience.

Philosophy finds itself unable to do more than bring us face to face with high paradoxes. Science finds Truth ever escaping its net. So that Man is compelled to look within for the Spirit—the Real Man—the only place where he can come in touch with it.

This must be the answer to the Riddle of the Sphinx—"Look within for that which Thou needest."

But while the Spirit may be discerned only by searching within ourselves, we shall find that once we realize the Absolute Unity is, it will be less difficult for us to see countless evidences of its action and presence by observing the various manifestations of Life without.

When we rise above the Relative, when we leave the Physical and ascend to the Spiritual Realm, we then perceive that the Universe is a living Unity, with each and everything throbbing and pulsating with the Cosmic Life Force.

Back of all shapes and forms there is one Cosmic Life, omnipresent and eternal, constantly manifesting its presence in an infinitude of living forms.

All living forms are but centers of consciousness in the Unconditioned Reality, depending upon it for development, enfoldment, expression, and manifestation.

This doctrine may sound like Pantheism, and yet it is not the Pantheism of the schools.

Pantheism is defined as "the doctrine that the Universe taken or conceived of as a whole, is God"; or that God consists of the combined forces and laws manifested in the Universe."

These definitions do not describe the conception of the Unconditioned Reality of our Philosophy. They simply smack of Materialism of a superfine quality.

The Pantheistic God is merely the whole of all the parts. And since all the parts are Relative, how can a combination of the Conditioned Relativity make the Unconditioned Reality? The Relative must ever remain the Relative, and cannot be changed by being combined or enlarged.

The Unconditioned Reality is not a remote Being, directing the affairs of the Universe at long range. It is immanent in all things, all forms, all substance, manifesting in us and constructing us into individual centers of consciousness, in pursuance with the great law of being.

The Unconditioned Reality is all that we are, it is the Real Self, and yet, for lo, these many ages, men have sought for it here and there in the underworld, and prayed for it to exhibit itself and prove its existence.

Well may it say to us: "Hast thou been so long time with me, and hast thou not known me?"

This is the one great tragedy of Life—that the physical man is the false man, and yet, the only man that we know; while the Real Man, the Inner Man, the Spiritual Man, we know not.

Those who live only for the physical, die and perish with the physical. But the wise, rising above the plane of illusion, and finding the Real Self within, and knowing what he has found—even death fades away from such a one, for he knows that he has life everlasting.

The Real Man, the Spiritual Man, the Unconditioned Reality, is neither born, nor does it die. Unborn, undying, perpetual and eternal, without beginning and without end, immortal and indestructible, it has endured and will endure forever.

QUESTIONS FOR LESSONS NOS. 5, 6, 7, 8

1. (a) Name the elements of the Eternal Trinity. (b) What object did man first worship as Creator, Destroyer, and Saviour?
2. (a) What is the limit of knowledge? (b) What do you understand by Universal Law? (c) Was Universal Law decreed by a Law-giver?
3. (a) Distinguish between Eternal Intelligence and Individual Intelligence. (b) In what parts of Existence is Eternal Intelligence most prominent? (c) In what parts of Existence is Individual Intelligence most prominent?
4. (a) What principle reveals the law of Perpetual Youth? (b) How can man accomplish what no other living creature can accomplish? (c) Why has he so far failed to rise above the purely animal plane?
5. (a) From whence comes Individual Intelligence? (b) How can Individual Intelligence be elevated to Eternal Intelligence?
6. (a) Does science consider Force and Matter one and the same? (b) Is Motion the same as Force? (c) Give the difference, if any there be, between Motion and Force.
7. (a) Is Matter destructible? (b) Do the elements of Matter remain the same? (c) Do the elements of Matter in a living body, as a man, differ from those in a Tree?
8. (a) Has man been able to reach the limits of Matter in any direction? (b) What is Gas? (c) What is Ether? (d) How fast does light travel?
9. (a) Name the seven phases of law. (b) What is accomplished by understanding the seven phases of law?
10. (a) What is Matter? (b) What is Force? (c) What is Law? (d) Can the Existence of these three be separated? (e) How do we know of their existence?
11. (a) Why has man believed in a God and a Devil? (b) Is the existence of the God of Christianity possible?
12. (a) From whence comes visible things? (b) Explain how visible things are produced. (c) How would you make a block of ice, weighing a ton, float in the air? (d) Give the one chief difference between the spiritual man and the physical man.



CREATION

Lessons Nos. 9, 10, 11, and 12

Lesson No. 9, Chapter No. 24.

ETERNAL FORMATION

In the beginning, God created the heavens and the earth. And the earth was without form, and void (Gen. 1:1, 2).

The first word in the Hebrew Torah, "berashith," is commonly rendered in English as, "in the beginning."

There was no beginning. There was never a beginning. This phrase can have no necessary reference either to time or to place. It is equivalent to, "at the starting point" of the existence of the earth.

The Eternal Trinity, (1) Intelligence (Law), Force, and (3) Matter, is the three Grand Elements of Eternal Formation. Of these and by these all things are, and without these nothing is, can be, or could be. Nor is anything more needed to account for all that is.

The Eternal Trinity is the ultimate of Existence. It is without beginning and without end. It is: (1) Non-producible, (2) Non-transformable, (3) Indestructible, (4) Indispensible, (5) Eternal, (6) Infinte, (7) Absolute.

These are the primal, indispensable, eternal, and absolute agencies of formation and production. All things are made of them; and without them was not anything made. They are the true Light, which lighteth every man that cometh into the world. They are in the world, and the world was made by them, and the world knew them not.

There is a beginning for every organized form. The earth had a beginning, as to its organized form. But there is no beginning for the Eternal Trinity that produced and organized the earth.

There was a time when the earth was without form, and void. That was in the beginning. Not in the beginning of Eternity, which never had beginning; but in the beginning of formation, production and organization of the earth.

As there was never a beginning, so there was never a creation. To create means to bring into being out of nothing. Something from nothing, which would be creation, is an absurdity and an impossibility.

Of the creation theory George Henry Dole remarks:

"The theory of creation by the fiat of an Almighty has failed to satisfy inquiring minds of deeper discernment. Law, order and development are so related and conjoined, that the mind will not bring its searchings to an end, and rest its reasonings in the belief that God, without the observance of laws as revealed in Nature, by word of mouth, called out of nothing the varied forms in the universe into existence."—*Philosophy of Creation*, p. 3.

All things are the product of pre-existing force and substance. The order of Existence, and the manner of Production, are revealed in the Law of Cyclicity, to which attention shall be directed at the proper place.

Under the Law of Cyclicity, substance moves in circles,

eternal and immutable, as we shall see. This Law, which has had little attention until now, must have been known to early man, for it is mentioned in the Bible in these words:

"The invisible things of him from the creation of the world are clearly seen, being understood by the things that are made."

Every phase of Existence indicates the following order:

1. Harmonious relation. 2. The whole, being composed of the parts, makes every part consistent with the whole. 3. Perfect analogies exist between: (a) every particle, (b) every part, (c) every process, and (d) every production.

Lavoisier and Mayer have shown that the universe was not created from nothing; for Intelligence (Law), Force, and Matter, which enter into its constitution and construction, are eternalities and universalities.

Kant and Leplace have shown that the earth, and the celestial bodies, were not created by a supernatural power, but were evolved by eternal force from gaseous nebulae.

Kepler and Newton have shown that these bodies are not governed in their movements by a supernatural power, but by the law of gravitation.

Darwin and Wallace have shown that all living forms are growths, and not outright creations.

The substance of the teaching of these eight mighty men may be summarized as follows: The Universe has within itself all the potentialities of its own existence, making it —(1) Self-existing, (2) self-sustaining, and (3) self-governing.

This is the conclusion of science. We shall not dispute it, so far as the logic of actual physical facts is concerned. These facts are observed in Existence. Science has discovered them to man. But it has discovered only a limited range of data; and is not able to demonstrate all of the facts that it has found. Its theories as to the *Factors and Causes of Existence*, are faulty and full of errors.

Physical science is not entirely responsible for its errors. Neither a man nor a school of men should be condemned for that which has not been discovered. But mere theories and assumptions should not be proclaimed as proven facts, and given to the world as truth. Science is guilty of this crime.

In all of its investigations, physical science strangely disregards the most marvelous facts of Existence, to-wit: The omnipresence of Intelligence (Law), and the omnipotence of Force. Here lies its leading error. This is the error that robs the world of a guiding intelligence, and leaves Existence without an animating Force.

The Science of Existence begins with an acknowledgment of the Eternal Trinity. With The Three Grand Elements, it accounts for all Formations, all Productions, all Processes, and all Phenomena.

The Astronomers have said, "Give us Matter, Motion, and Law, and we will construct the Universe."

The Science of Existence declares: There must be Intelligence (Law), Force, and Matter, for these are exhibited in every Formation, every Production, every Process, and every Phenomena. Man cannot successfully deny the existence of that which may be seen and demonstrated.

The Science of Existence embraces what the facts of Existence exhibit and demonstrate, and accepts as truth that which daily experience proves there is and must be.

Physical science has shown that the earth was once a shapeless mass of gases, revolving rapidly in space. The spectroscope, under the light of knowledge, has definitely demonstrated that there is in existence at this time, other great sources of gaseous substances, from which planets are being evolved.

It is in exact accord with the principles of our Science, that even the earth was once a vast body of excessively rare gas, or rarefaction of infinite particles of matter, which physical science calls Ether.

In his book the *Ascent of Man*, Prof. Huxley says:

"The earliest condition in which science allows us to picture this globe is that of a fiery mass of nebulous matter. At the second state it consists of countless myriads of similar atoms, roughly outlined into a ragged cloud-ball, glowing with heat, and rotating in space with inconceivable velocity.

"By what means can this mass be broken up, or broken down, or made into a solid world? By two things—mutual attraction and chemical affinity. The moment when within this cloud-ball the conditions of cooling temperatures are such that two atoms could combine together, the cause of the Evolution of the earth is won. For this pair of atoms are chemically 'stronger' than any of the atoms immediately surrounding them.

"Gradually, by attraction or affinity, the primitive pair of atoms—like the first pair of savages—absorb a third atom and a fourth and a fifth, until a 'Family' of atoms is raised up which possesses properties and powers altogether new, and in virtue of which it holds within its grasp the conquest and servitude of all surrounding units.

"From this growing center attraction radiates on every side, until a larger aggregate, a family group—a Tribe—arises and starts a more powerful center of its own. With every additional atom added, the power as well as the complexity of the combination increases.

"As the process goes on, after endless vicissitudes, repulsions, and readjustments, the changes become fewer and fewer, the conflict between mass and mass dies down, the elements passing through various stages of liquidity finally combine in the order of their affinities, arrange themselves in the order of their densities, and the solid earth is finished." (p. 337).

We have seen that cometic matter, or the substance of which are composed those remarkable knights-errant of the sky, is so fine or rare, that a cubic mile of it, according to the calculations of astronomers, would weigh but a few grammes.

The Eternal Trinity entered into the formation of the earth, as it enters into the formation of every part of Existence. The Three Grand Elements unite in every formation, and are present in every organization.

The Intelligence (Law) and Force that condense round drops of water from invisible vapor (matter), and transform the drops into balls of ice, called hail, are the very Intelligence (Law) and Force that condensed the invisible gases of space into a round mass, called the earth.

The elements and principles involved in the formation of hail-stones, are the same that are involved in the formation of worlds. The whirling bubble on the surface of a brook, reveals the secret of the mechanics of the sky. A little water made to rotate in a cup, explains the secret of the formation of the Earth.

Propelled by Force, under the direction of Intelligence (Law), rarefied particles of Matter, whirling in infinite space, were drawn, as a whirlwind draws particles of dust, into closer and closer relationship.

Tremendous friction was occasioned by the process and the particles became hot. The friction increased in ratio with the lessening of space between the particles, until at last the relatively close union of heated particles finally formed a great sphere of molten matter, which shone out like a scintillating star, as gigantic tongues of fire flashed from its flaming depths.

Controlled by the law of gravitation, the igneous orb majestically whirled and floated in its place, being and becoming one of the Sun's satellites, and finally, the home of man.

The colossal planet Jupiter is said by astronomers to show the image of a world, still in the course of formation.

The Earth has now been revolving around the Sun so many millions of years, that science can do no more than roughly guess at the vast period of time. Some scientists are content to estimate that it has been doing this for ten million years, others place the time at ten billion years.

The first and only clouds that floated over the new-born earth, were fire-born mineral and metallic sublimations, rising from the oceans of tossing lava and leaping flame. But as ages passed and the crust cooled, the surrounding gasses condensed into vapor, forming into a great layer of dense, dark clouds, incessantly pierced with shafts of lightning, accompanied with peals of thunder.

From the clouds, moisture, in the form of rain, descended toward the white-hot earth. Before the rain could reach near the earth's surface, the drops were vaporized by the intense heat which met them, and the vapor rose once more as clouds, to fall again as water, when the cooling air above had made them too heavy to float. The process was repeated for countless ages, before the earth cooled sufficiently to allow the rain to reach its surface.

As the rain at last reached the hot earth's surface, it formed into pools, which filled the fissures in rocks and lava. The water in the pools was boiling hot and from its surface clouds of vapor incessantly rose, as steam from a gigantic caldron.

This process continued for centuries, before the earth was cooled sufficiently to stop heating to the boiling point, the water that rippled over its surface.

The Planet Jupiter now appears to be in a similar condition. Everything that can be distinguished on Jupiter, indicates a marked instability. It is characterized by dark and light zones, arranged in a general way parallel to the equator, and whose number, importance, appearance, and coloring vary from one time to another. The same observations apply to the numerous spots with which these zones are often scattered. No satisfactory explanation has yet been given of these strange formations. It is supposed that they are caused by prodigious disturbances of a gaseous medium—that is to say, of a very dense atmosphere, whose opacity conceals from us the actual surface of the globe Jupiter.

As the earth's surface cooled, and the rains fell, the pools grew larger, until the whole earth was in time covered with a shallow sea. The water of this primitive ocean, at first boiling hot, gradually cooled to a point where living forms could endure the heat.

The conditions now growing favorable for the appearance of "living matter," the Life Principle, for the first time on earth, appeared active in primitive protoplasm, and the waters brought forth abundantly "*the moving creature that hath life.*"

The theory of the production, formation, and evolution of the earth as published by physical science, is summarized briefly by George S. Clason as follows:—

1. **GAS.** Whirling clouds of gas brought together by gravity.
2. **DUST** Gas evolves into chemical compounds, and chemical compounds evolve into vapors, liquids, and minute particles of solid matter, revolving in a sphere many times larger than the size of the present earth.
3. **FIRE** The revolving mass contracts, the friction of contraction generating terrific heat. A molten sphere is formed, pelted by rain from without, eruptive from within.
4. **WATER** Rain turned to steam, then chilled in space, finally cools the earth's surface and settled upon it, a hot all-enveloping sea.
5. **EARTH** Temperature fell as earth cooled until finally the point is reached where living things made their appearance.

Chapter No. 25

ETERNAL PRODUCTION

In the Great Stone Book is written the story of Eternal Production.

In this book is the history of the earth's ages, showing in its rock pages, as they are scanned by the Geologist, the various stages of Production, from the first sea-weed to the first animal, from the first animal to the first man.

Geology shows that land first appeared above the ancient sea in what is now known as Eastern Canada.

The "Canadian Hills," extending from the base of the Rocky Mountains to the Atlantic Ocean, are the world's oldest mountains. The eroding work of countless centuries has worn them down to ridges. But they are rich in geological pictures and stories.

Across New York state, from east to west, appear a number of parallel ridges. These are said to be ancient Silurian beaches—the successive shores of receding seas.

1. More than ten thousand different kinds of shell fish, star fish, cuttle fish, mollusks, squids, marine worms, crabs, and Crustaceans of every kind, infested the seas and beaches of the Silurian Age.

Later in the Silurian Age, more sea fish appeared. In Europe, 110 kinds of fossil fish have been found belonging to this age.

2. The Devonian Age succeeded the Silurian. In this Age huge swarms of fish of every conceivable description appeared. Land vegetation appeared also.

Sea-weed was about the only plants of the Silurian Age; but in Devonian times forests came into existence, composed chiefly of giant ferns, pines, club mosses, and a kind of yew tree.

3. The Carboniferous Age now begins. Gigantic convulsions bring the Allegheny mountains above the surface of the sea, which sea up to this time, had covered nearly all the earth's surface.

New types of animals appear. The fern forests increase in size. Club mosses, "horse tails," cycads, etc., reach a height of 100 feet.

The atmosphere is heavily laden with carbon dioxide. Deadly for man, or other warm-blooded land animals, but ideal for plants, and they grew profusely and of great size.

Reptiles make their first appearance. They lived in the water, but came out on the shore to sun themselves. They were cold-blooded and resembled great lizards. Their rate of respiration was exceedingly slow, and they could go for an amazingly long period of time without taking a breath.

It was so with all the reptiles of the carboniferous age.

The climate of the carboniferous age was hot, the air was heavy. The forests were deathly silent. The giant ferns, club mosses, horse tails, and cycads dripped with

moisture, that rose as vapor from the thousands of black, stagnant, silent pools.

The forests grew, matured, decayed, and fell. Other forests grew in their places and, in their turn, decayed and fell. Millions of years rolled on; the strata of vegetable matter, former forests, were turning into material which Man was to name "coal."

4. Comes now the Permian Age. This age was one of transition. New red sandstones, shale, clay, chalk, and rock salt deposits are peculiar to this era. They are found in both Europe and America. Owing to the great changes in geological structure and strata, this age is called the Permian Revolution.

5. The Triassic Age comes now and brings in more reptiles and lizards. This lizard resembled modern crocodiles, being four or five feet long and partly a water reptile, although it could exist on land.

Large crocodiles appear—bigger and of better organism than those that now sleep on the banks of the Ganges, in India, and the rivers of Africa.

The fossilized remains of the Triassic crocodile have been found in the pure marine strata of Germany, showing that this part of the world was once covered with water.

6. After the passing of a few million years, there comes the Jurassic Age. It is so called because of the mountains where the impressions on the rock leaves of the Great Stone Book are more vivid than anywhere else.

The Jurassic age was one of the most dramatic, from an animal standpoint. It teemed with living forms of all kinds, except human. The seas swarmed with water animals, the air was filled with insects; the land was covered with creatures, ranging up to the gigantic dinosaurs in size.

This age produced the powerful reptiles that ruled land, sea and air.

Enaliosaurus, rulers of the sea, Pterosaurs, rulers of the air, and Dinosaurs, rulers of the land, under whose mighty tread the earth must have trembled.

The largest land animals that existed on earth are the Dinosaurs. The lizard-footed variety, called the Cet. inosaurus, frequently reached a height of 15 feet when on all fours, and attained an average length of 100 feet. Its structure indicates that it was a vegetarian, not dangerous to other animals, reptiles, or fish, but big enough to have crushed most of them by simply stepping on them.

In the winter of 1929, Barnum Brown, curator of Fossil Reptiles, American Museum of Natural History, New York, made the most important find of Dinosaur tracks ever unearthed. He also found two complete Dinosaur skeletons, which are among the five or six largest so far discovered. As assembled, the skeletons are 15 feet tall and 80 feet long. A single hip bone weighs 4200 pounds.

The discovery was made in the "Painted Desert" of Arizona. Three hundred Dinosaur tracks were found in Jurassic sandstone, made at least 120 million years ago. In one case there were 13 tracks in line of stride, all made by a single animal. In another case there were 11 in line. Perhaps many more tracks would have been found, had additional rock been lifted.

The Brotosaurus Dinosaur, a smaller variety, reached an average length of 50 feet, and a weight of about 40,000 pounds.

7. Millions of years pass, and the Cretaceous Age arrives. Vast forests of pine have sprung up. The sea serpent appears in the ocean—a huge, sinuous writhing, voracious, dangerous animal, which could swim for thousands of miles without tiring, and was liable to hoist its ugly head high above the water anywhere at any time.

Birds make their first appearance. They were mostly of the wading and swimming variety. Kansas has the honor of having most of their fossilized remains, where about twenty specimens have been discovered.

8. We now reach the Cenozoic Age. For the first time there is recorded in the Great Stone Book, the existence of herds of pre-historic animals, the Mammoth, the Mastodon, the Sabre-Toothed Tiger, the Elk, and cave Lion.

This Age geology has subdivided into three periods, principally for greater facility in studying the shell forms of this epoch. They are called the Eocene, or Dawn of the Recent; the Miocene, the Less Recent; and the Pliocene, or the More Recent.

The animals of the Eocene period resembled in many respects those of today. In the Miocene period many elephants and salamanders appeared and thrived in the temperate zones. The Pliocene period was that of the Great Ice Age.

Positive evidence that the whole Northern Hemisphere was once covered with a thick sheet of solid ice is found in deep scratches on stones, mountain sides, and stratified rock; in the presence of great boulders, not related to the formation of the regions, and in the fact that a thick blanket of "till" or boulder clay covers the land. The coat of ice is said to have extended to the 38th parallel of latitude.

Geology mentions the Great Ice Age as though there had been but one. Some authors assert that there have been as many as four or more.

Man now appears. The first traces of man are found in the gravels of rivers and lakes of Europe, in the form of rude stone implements, tools, etc. Skulls, bones, and whole skeletons have been found in caves and other places.

The geological times in which these primitive people existed have been determined from the association of their remains with those of certain mammals, and with strata and layers of gravel.

There are indications that man existed long before the Great Ice Age. According to the findings of Geology, man existed at a time anywhere from 60,000 to 100,000 years ago. Some authors place the dawn of man back to a million years.

According to modern estimates the first animals came into existence about a billion years ago in the Proterozoic period. This period was followed by the Paleozoic, which began about three hundred million years ago, and is known as the Age of Fish. Then came the Age of Reptiles, beginning about two hundred million years ago, followed by the Age of Mammals, beginning about sixty million years ago.

Two methods have been used in determining the age of the earth. The first is based upon the rate of deposit and upbuilding of sedimentary rocks. The second calculates the rate at which common salt is extracted from the land and deposited in the ocean. Imprints of fossil animals upon the several rock-layers also reveal the age of different strata. The discovery of radium afforded the latest gauge for estimating geologic time.

The physicists now state that former calculations have been far too modest, and that we must go back still further to reach the actual beginnings of the earth. Their "radio-active clock" indicates that the earth is 1,600,000,000 years old.

In point of geologic time, most of the present mountains are relatively young. The oldest of these is the Appalachian range, which was formed during the Permian period, about 230,000,000 years ago. The Rocky mountains appeared at the close of the Cretaceous, 100,000,000 years ago,

while the Swiss Alps are of much later development, having been formed at the close of the Miocene, about 15,000,000 years ago.

Even the Himalays are relatively young when compared with the earth's antiquity. They had not taken on their full gigantic proportions until the close of the Eocene, approximately 45,000,000 years ago.

The existence of Man in ancient times, before the dawn of history, is divided by science into: (1) Stone age, (2) Bronze age, and (3) Iron age.

Years ago, in Neanderthal, Germany, a human skull was found in a cave, attached to an almost complete skeleton. Big bones, heavy protuberances for muscular attachments, and other evidence, showed the skeleton to be that of a man, of great size.

Two other skeletons subsequently found in a cave in Belgium, were similar to the above; and geology has concluded that the earliest men were very large, and very powerful.

The long history of the earth and its family is divided into eras, as follows:

1. Azoic or Archeozoic—80,000,000 years ago.
2. Proterozoic—60,000,000 years ago. Beginning of living matter in the form of sea weeds and similar crustaceans.
3. Early Paleozoic—36,000,000 years ago. Development of first jelly fish, animalculae, sea scorpions and trilobites.
4. Later Paleozoic—26,000,000 years ago. Development of fish, amphibia, and beginning of land vegetation.
5. Mesozoic—14,000,000 years ago. Land overgrown with vegetation more luxuriant than any that follows in later periods. Reptiles grow to enormous size and thickly populate sea and shore.
6. Caionozoic—4,000,000 years ago. Development of land animals, age of mammals. Birds make their first appearance.

We now pass on to the Glacial Ages, and come to:
550,000 B. C.—End of Pliocene and beginning of Pleistocene. Remains of *Pithecanthropus erectus* (ape-man of Java) of this time discovered.

550,000 B. C. to 100,000 B. C.—First Glacial to Third Interglacial Age. Rough but good implements made by man. Heidelberg man (fossil jaw discovered) ascribed to this age, but not with certainty. Also the Piltdown skull (fossil).

50,000 B. C.—Fourth and last Glacial Age. Well shaped implements characterized this age. Neanderthal Man ascribed to this age. Numerous skulls and bones found.

35,000 B. C. to 15,000 B. C.—Late Paleolithic. Increasing multitude of remains of true man.

1,500 B. C. to 1930 A. D.—Age of Civilization. Historical period.

Man is the last of the known living forms to appear. He is already ruler of the earth, and the conqueror of all living things.

The completion of the present age, called the Cenozoic, many millions of years in the future, will determine the destiny of man, and tell whether he is to be succeeded eventually by some still higher form of living matter, or whether he will evolve still farther, by his own efforts, to a higher plane of Existence.

Lesson No. 10, Chapter No. 26.

THE FLOOD

We have related the theory of the Formation of the Earth as formulated and accepted by physical science. The theory agrees with discovered facts, and appears reasonable.

In this theory, some authors have attempted to solve the riddle of the Flood of the Bible. Isaac Newton Vail observes:—

"As the years roll by, the Deluge asserts its immortality, as an old-time memorial . . .

"As far back as the summer of 1874, I published a little volume to show that the Deluge occurred as a philosophic necessity, arising from a world-condition that no longer obtains. In that work it was maintained that a vast cloud-canopy of primitive earth-vapors, such as now envelope the planets Jupiter and Saturn, lingered as a revolving deluge-source in the skies of antediluvian man. . .

"When we turn our telescope towards the skies, we find two giant planets, and perhaps others, still involved in aqueous clouds, adequate to deluge a world like ours from pole to pole. . .

"The remarkable persistency with which the memorials of a Flood have lived in human thought, as the ages rolled on, is a fact of momentous import.

"Not alone have the echoes of a terrible world-catastrophe been preserved and transmitted to us thru the ancient Semitic races, in substantial and circumstantial detail. Hundreds of years, it may be hundreds of centuries, before the historic birth of the Hebrew people, a record of the sweeping cataclysm was made in clay tablets, and kept in imperishable stone, in the childlike simplicity of a primitive tongue, and buried for more than 4,000 years from the gaze of men.

"Even before they were hidden by the dust of centuries, the nature of that visitation had become so clouded by the mist of time, that these annals of a hoary past show by their very diction, that the theme of the Deluge was then old, and of oblivious import.

"There is a citadel of testimony to be found in the deluge narratives, in the true interpretation of statements, that have been altogether misunderstood, because we are not familiar with those world-conditions that made a deluge not only possible, but a necessary thing.

"I say necessary, because we know that all our oceans HAD TO FALL FROM THE SKIES. For all the mighty waters that now wash the world's trembling coasts, were sent as high as the inveterate heat of the igneous earth could urge them; and it now devolves upon the thinker to tell how and when they came back.

". . . How many of us reflect, when we see a pond, a lake, a sea, or an ocean, that every drop of it was formed in the world's great laboratory of implacable flames, and driven as steam to the lofty skies?

"Here is something also brot from afar; and as intelligent investigators, we must trace the waters back to their original home. They have come from the telluric heavens, and we want to know how they came back.

"We must now admit that during an immeasurable lapse of time, the young earth was surrounded by a vast ocean of watery vapors, such as now envelop the planets Jupiter and Saturn, which vapors were competent in their fall to deluge the earth a hundred times; yes a thousand times.

"Is it an impossible thot, then, that some of that vast primordial ocean lingered on high, and fell after man inhabited the earth? We know it is said that when the earth cooled, the waters fell, and thus far we can all agree and stand on the same rock foundation of admitted fact.

"Here, too, is the prolific source of variant thot. Geologists generally have maintained that this great world-fund of waters fell back on the earth immediately after it cooled, and that even the oceans rolled over the solid planet, as they do today, when it was yet hot and seething, and that they were vaporized and driven back to the skies, again and again.

"We cannot view it that way, and are forced to part company here with the great school of geological scholars. We believe that it is mathematically and mechanically demonstrated that a small portion of the earth's fire-formed waters came back in that early age.

"The logic of eloquent facts, crowding to testify before the world's great jury, shows that the watery vapors, driven from the world furnace, were eventually made to revolve long as a Saturn-like ring system. This being true, those vapors could not fall, except in a progressive decline, lasting thru immeasurable ages.

"Rings cannot fall directly to the earth, so long as they have a revolving movement. . . but must linger as great cloud-belts or bands, such as we see today in the firmament of the planet Jupiter.

"Here is an opportunity for the formation of opposite schools of thot. The old school sees the vapors return as hot and steaming waters to the earth, and begin their eternal round of destructive and constructive processes.

"The new school of annular students sees a vast amount of the primitive vapors in a ring system which drops them in the fullness of time, as great Jupiter-like clouds upon the earth.

"The old school sees a vast down.rush of waters in archean time. The new school sees that fund of waters carried away down the flood of time, and dropped in grand installments, all along the ages.

"In fact each grand installment is credited with the task of making one of the ages, and the *Deluge of Noah* is made the last installment.

"Each installment brot down from the lofty skies an addition to the ocean; and with a vast amount of other tellurio-cosmic matter, made large additions to the earth's strata. . . .

"It is difficult to find a competent cause in the formation of Ages, if we do not delegate the office to annular installments

"What closed the Cambrian age, and made the board outlines of the Huronian age? What closed the Huronian and ushered in, in succession, a new environment stamped in unmistakable characters in the Silurian? Refuse to give ring installments the credit, by giving additions to the oceans, and the old school is compelled to doubt the existence of "geologic ages."

"We have never yet heard of an attempt to explain why ages came and went. Why, in the roll of ages, the earth leaped again and again from a lower to a higher plane.

"We state it as the conviction from a life of close study, that if the waters had all fallen immediately after the earth cooled, there could have been but one age after that; and that the succession of ages is evidence of the consecutive fall of rings.

"This annular theory necessarily leads to the conclusion, that in the gradual and progressive decline of rings, canopies must result, and "Deluges" must result from the gradual collapse of canopies.

"Rings must decline, of course, into the equatorial atmosphere of a planet. The centrifugal motion of the rotating earth, with its resisting atmosphere, would resist the downward movement of such vapors, which would seek to fall toward the point or points of least resistance.

"The poles of the planet are such points. Hence, the ring vapors must float from the equatorial to the polar regions, and owing to the excessive slowness of the fall of all revolving matter, a canopy must become a cloud satellite to its primary world; and it is my care to prove that the infant race of men saw such a canopy of watery vapors move from the equator to the poles, while it re-

volved about the earth, and finally saw it break from its celestial fastenings and desolate the planet. . .

"In any effort to exploit the canopy origin of the flood, we must not divorce it from a competent physical cause, nor from essential world-conditions. The Deluge must be treated from the standpoint of geological causes, and as one of the grand stepping stones leading from one age to another—out of one world-condition to another.

"Had the Flood of Noah been of such stupendous magnitude and severity as some of those that marked grand world-revolutions of geologic time, such as buried in one vast grave-yard the Tertiary dead, we would today have seen the result in the immortal impress of a dying world-stage on the pages of time.

"In this instance, it has not left so much of a rock-record as it has a record preserved in the fossil beds of that.

"The Deluge (of Noah) was a weak and expiring effort of old conditions. Decrepit causes in world evolution were ending their long career. This, of course, predicates that the last of earth rings, as geologic agents in world-making, had so far descended as to make a universal world-roof over this planet.

"Such a vapor roof would be a universal watery heaven instead of a starry heaven. It forces us to concede that the skies of antediluvian man were preparing for an inevitable world baptism, a desolating flood-plunge in medial latitudes, and vast snow avalanches in polar lands. . .

"The earth holds buried in its rocky bosom the eloquent records of abounding tropic life, and it is admitted that in the efforts to fathom this mystery, the stoutest scientific minds have been stranded for nearly a century.

"Let us imagine a vast ocean of vapors, sent to the skies from the molten earth, and there divided and subdivided into annular sections, each section coming down into the atmosphere in its own fullness of time, and spreading as a vapor canopy from the equator to the poles. . .

"Each time, as each installment reached the atmosphere in its fall, it would produce on the earth certain tropic conditions, and keep it in those conditions for millions of years, it may be.

"Could inventive Nature contrive a more efficient scheme for producing those garden scenes that meet our gaze all thru the carboniferous age?

"Look at the interminable jungles of that era . . . We cannot fail to see that the primitive, sooty, carbon-laden vapors, which went up in the molten era, had come back to make a carbonaceous world-environment, for the installation of that abounding growth of vegetation.

"We cannot satisfactorily account for the vast deposits of carbonaceous matter, without the innovation of a carbonaceous environment by the return of sooty carbon as vegetable food for the plant-world, by which the air, earth and seas became charged with the very elements that installed exuberant vegetable life.

"This primitive carbon element, sent up from the molten earth, and the vegetable growth it impelled, under hot-house conditions, lie buried today in the coal measures of the world.

"The remarkable deposits of this carbon, filled with vegetation, more abundant in the regions toward the poles, where canopies must decline, and the more remarkable fact of the utter absence, so far as we know, of vegetable coals in the equatorial earth—the very home of vegetation in all ages—forces the resistless conviction upon us, that canopies and canopy down-falls made the ages, and the Deluge canopy becomes more and more probable.

"The most puzzling picture of the "ages" is the sudden

and sullen reign of death in the very empire of abundant life—a deadly march of continental glaciers over the ruins of a tropic world.

"That periods of tropic growth and abounding animal life have ended in excessive cold, is a fact so fully established that no one now attempts to gainsay it. . .

"Then, too, some of those warm periods have so suddenly closed, that summer is actually found in the icy grasp of inveterate winter. . . Here the lingering canopy assumes stalwart pretensions.

"The same vapor world-roof that made a tropic earth from pole to pole, swarming with living forms, before the canopy fell, changed those conditions as it fell, and we have an opportunity to estimate its suddenness and efficiency.

"A canopy of primitive vapors, as before stated, must fall largely in polar regions, and fall there as immeasurable reaches of snow. Such a fall would send the chill of winter and death into the very midst of summer life. . .

"Immediately prior to one of the great ice periods, the woolly rhinoceros and hairy mammoth, and their congeners, lived in pastures, at least semi tropic, under the arctic circle. Today their remains are entombed in ice and frozen earth on the very spot where they lived. As we can place no limit to canopy snows, we can understand why these huge quadrupeds are sealed away in the eternal glacier.

"Glaciers are formed of snows, and the icy piles that contain their dead, must have been at one time measureless snow-falls that filled the valleys and over-topped the mountains.

"The mammoth has been found in many places in the frozen world, in such condition as to leave no doubt that it was suddenly overtaken on its grazing ground, and buried on the spot in unknown depths of snow. The snows that buried these huge animals, fell suddenly on a world of pastures, as all-involving avalanches.

"Mammoths have been found in the ice and frozen soil of Siberia and Alaska, with food in their stomachs undigested, the flesh preserved and devoured by bears and wolves, as they gnawed it from its frozen matrix. Their fat has been rendered and used in lamps. The very pupil of the eye has been preserved, and the blood vessels unaltered. Suddenness is the epitaph inscribed over the polar grave-yard.

"These facts offer the strongest testimony of the theory that all the glacial epochs, and all the deluges the earth ever saw, were caused by the progressive and successive decline of primitive earth-vapors, lingering about our planet, as the cloud-vapors of the planets Jupiter and Saturn linger about those bodies today. . .

"During the igneous age, the oceans went to the skies, along with a measureless fund of material and metallic sublimations. If we concede that these vapors formed into an annular system, and returned during the ages in grand installments, some of them lingering even down to the age of man, we may explain many things that otherwise are dark and perplexing today. . .

"How could the earth's molten furnace form the ocean of aqueous vapors and send them to the skies, without forming a limitless amount of snow and ice to return sometime to the earth?

"So long as physical law holds the helm of order in the scheme of Nature, it must get its snow first, and then grow cold. This fact compels us to fall back on the fires of the igneous earth for a competent source of energy—to

ral atoms represents the principle that governs all other physical unions.

It is thus clearly seen that the sexualistic quality of the animal world, vastly transcends the mere physical function of generation. Its uses and purposes are not limited to plants, animals and mankind. It extends downward, in a decreasing degree, and includes all the mineral world.

Physical science holds that the quality of Sex represents only a set of physical organs. This is to be expected of an institution which denies the existence of Life as a positive Entity; which studies man wholly through the organs of generation and digestion; and which evolves him from a cell in the slime of the sea.

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Lesson No. 11, Chapter No. 29.

LAW OF RELATION

Man is an absolute, intergral, and inseparable part of the Earth. Out of it he came, on it he lives, from it he can never depart. It is his eternal home.

The Rocks that build the mountains blue,
The Gold that makes the slave a king,
Are Matter just as sure and true
As Dust that builds the throats that sing.

Man's origin, formation, organization, and existence are subject to the laws and conditions which have to do with, and which enter into, the origination, formation, production, organization and maintenance of the earth, and of everything on it. Consequently, between man and all Existence, there is and there must be:

1. Homogeneous constitution. 2 Analogous formation. 3. Absolute relation.

Darwin appears as the first noted discoverer of these three primal principles of Eternal Formation and Eternal Production. The announcement of his discovery shocked a deluded world.

The announcement of great truths is always shocking. It upsets the tradition and theories of established institutions, and exposes their professors to ridicule and criticism. Darwin's discovery did these things, and the storm aroused by his discovery shows no signs of abating. The church is fighting desperately to hold its position.

Before Darwin's day, man was considered as being entirely separate and distinct from the rest of Existence, or Creation, as it is called. He was considered as having little or nothing in common with the beasts, birds fishes and plants.

A different order of beginning, being, existence and ending were man's. His body was constituted of refined stardust. He alone was created a "living-soul." After death, he alone became an angel, and his "soul" soared up to high heaven, there to live on and on in peace and plenty, happiness and harmony. His body, at death, was preserved from decay by embalming fluids, and was placed in a carefully constructed sepulchre, to be ready to answer the final call for "the resurrection of the dead."

As Darwin uncovered and unfolded the evidence that proved the absolute homogeneity, analogy, and relativity existing between man and the entire animal kingdom, the world looked on in amazement, while theology stood aghast.

Physical science, with alacrity, grasped the findings of Darwin, assumed the existence of a living cell, and quickly evolved a man. Theology grasped the pen, mightier than the sword, and dispatched preachers to the pulpits,

to defend its doctrine of Divine Creation.

Primitive man thought the universe a trivial affair, with sides, ends, top, and bottom. The earth on which he lived was flat, and was anchored in the midst of the surrounding seas, or fixed in some way in its place. It was roofed with a firmament composed of some thin, solid substance. In the roof were windows for the rain to come thru—the waters that were stored above the firmament—and to it were attached the sun, moon, and stars, to give light to the men on earth. Above the firmament were the abodes of the gods.

As primitive imagination grew, a belief arose that under the earth was a sort of basement, or underground world. This was the abode of the spirits of the dead.

In the early half of the second century, Ptolemy a famous mathematician and astronomer of Alexandria, advanced a somewhat modified theory of the universe. His theory furnished the framework for Dante's great poem, and Milton's epic.

In this theory, the earth was at the center, and was surrounded by a series of concentric crystal spheres. To the first and smallest of these was anchored the moon; to the next the sun, and to the rest in their order, the then known planets. Outside of these was one, to the surface of which were attached the fixed stars. Beyond this was still another, close to heaven itself, which was supposed in some mysterious way to be moved by divine power, and in its motion, to carry around with it all the others.

This theory holding the thought of men until in the fifteenth century, explained the movements of the celestial bodies.

Then came Bruno, Copernicus, Galileo, Kepler, Descartes, and Newton, Bruno was burned, Galileo imprisoned and compelled to repudiate his discoveries, Copernicus dared not tell the world, while living, of what he saw, Descartes was terrorized, and Newton bitterly opposed. That is the way the world welcomes the teachers of truth.

In the year 1327 A. D. Cecco d' Ascoli, an eminent astronomer, was burned alive by the church, because his teaching was contrary "to the narrative of Moses," and because he held that the stars were not the abodes of angels.

About the time that Columbus was discovering a new continent, Copernicus was discovering a new universe. Fear of the church restrained him from disclosing his findings. After waiting thirty years for it to become safe to give his thoughts to the world, he wrote his "Revolutions of the Heavenly Bodies," and dedicated it to the pope.

The publication of the work was a problem. If the church discovered the work, it would be seized and destroyed. Finally at Nuremberg was located a printer, who assured its safety and publication. Thus sneaked into the world the modern doctrine of the earth's movements.

The first copy of the work was delivered to Copernicus a few hours before his death, as he lay on a sick bed, from which he never arose. This was in 1543. His death was timely. It saved him from persecution. The church placed his book on the Index, and Christians were forbidden to read it.

For nearly 70 years the work of Copernicus was allowed to slumber. Then came Galileo, and proclaimed the earth's movements. The church acted. The work of Copernicus was condemned; Galileo was forbidden to teach or discuss the theory. All books that affirmed the motion of the earth, were interdicted by the church. To read them was to risk damnation.

The strife waxed and grew. The church acted again. Bruno was burned at the stake. Galileo was intrigued against, spied upon, lied about, summoned before the Inquisition, threatened with torture, forced to recant and silenced.

Pope Paul V. issued his decree, affirming that "*the doctrine of the double motion of the earth about its axis and about the sun is false, and entirely contrary to Holy Scripture.*" This decree also condemned the works of Copernicus, and all other works "*which affirm the motion of the earth.*"

The church brought Galileo once more before the Inquisition, and he was forced to make, under oath, the following declaration:

"I, Galileo, being in my 70th year, being a prisoner and on my knees, and before your Eminences, having before my eyes the Holy Gospel, which I touch with my hands, adjure, curse, and detest the error and the heresy of the movement of the earth."

Galileo was exiled by the church from his family and friends, and forbidden to follow his profession. Orders were given by the church in 1663 to permit no new edition of his works to be issued, nor the works of others on the same lines.

The edition of the Index printed in 1835, is the first one from which was omitted a condemnation of the works in favor of the idea of the double motion of the earth. It was not until 1885 that Catholic Christians were allowed to read and believe the enlightening works of Copernicus and Galileo.

The church forced Buffon, the great naturalist, to make this recantation:

"I abandon everything in my book respecting the formation of the earth, and generally all which may be considered as contrary to the narrative of Moses." — Lyell, *Principles of Geology.*

It is sad but true that this is the manner in which the church has barred the way of human progress and discovery.

The fable of creation, the Garden of Eden, the Serpent and the Fall, borrowed from Babylonian or Persian tradition, and taught by the church as divine truth for more than nineteen hundred years, has obstructed and prevented scientific investigation. All such investigation was forbidden as heresy, and the guilty were punished, executed, and burned.

For fifteen hundred years, the church hindered scientific investigation as to the fundamental facts of Existence. Then men began to fight against the church for intellectual freedom, so that to think would be safe. This freedom was partially achieved after a long, bitter, bloody struggle. Then for the first time, since the dawn of christianity, men were in a position to attack with safety, and with hope of its solution, the sublime mystery of Existence.

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Chapter No. 30.

LAW OF EVOLUTION

In the modern world there were foregleams and precursors of what in future ages will be regarded as the most distinguishing feature of the nineteenth century—the Doctrine of Evolution, framed by Buffon, Goethe, Lamarch, Darwin, Spencer, Huxley, Haeckel and Fiske.

Never, since the morning of humanity, has a work met with such a tempest and storm of obloquy, abuse and ridi-

cule, as did the work of Darwin. Here was flat denial of revelation; here was blasphemy; here was the degradation of man, making him akin to all the lower orders of living forms on earth.

The witty paragraphists of the newspapers have found in the supposed monkey-origin of man, infinite fund for ridicule, from that day to this, developing many varieties of wit, and exposing the fact either that they were too ignorant to know what they were discussing, or that they were willing to accept the charge of ignorance because it afforded them an opportunity to appear smart.

What was the discovery? That all living forms on earth are growths, not outright creations. That all living forms are intimately related. That they are all made of the same material. That they all came into existence in the same manner. That the same elements exist in each. That they have a common origin. That they all live, and move, and have their being by reason of a common Animating Principle.

Though the highest among them, man is only a phenomenon, on a level with the rest, related to the rest, not excepting the lowest. Man differs from the rest, only in that he is more perfect in organization, and therefore more able to express more fully and completely, that which the rest express in a lower degree.

Being parts of the cosmic plan, a microbe and a man are on the same footing, both as to origin and destiny, and as to their having within themselves all the power that is available for making the most and best of their respective lives.

We are part

Of every rock and bird and beast and hill,

One with the things that prey on us,

And one with what we kill.

So far as man is concerned, the Grand Process of Production began in the formation and organization of the earth. After the earth was made a home for living things, then living things began to appear. They could not appear until the earth became a harmonious and hospitable environment for their existence. It would be a physical impossibility for any living form to appear, until the environment was entirely and completely favorable for such appearance, and maintenance.

Finally man appeared. His appearance was produced by the same means and methods that produced the appearance of the first living thing.

The first living form did not evolve from an inferior living form. There was none from which the evolution of the first living form could occur. Neither did man evolve from an inferior living form. There was no necessity for such evolution.

The Grand Process of Production that produced the earth, has produced all things that followed. Being competent to produce our Solar System, it is competent to produce the earth. Being competent to produce the earth, it is competent to produce the first living form on earth. Being competent to produce the first living form, it is competent to produce all other living forms—including man.

The Eternal Trinity is the common ancestor of the Earth, and its wonderful Family, including all flesh. This is the substance of the teaching of Evolution.

The word Evolution, in its true sense, means to unroll or unfold. The tiny bud on a rosebush becomes a beautiful rose by the process of evolution. The small acorn becomes a giant oak by the process of evolution. The seed of man becomes a full-grown man by the process of evolution.

The process of evolution never changes nor develops an acorn into a pine tree, nor the seed of an ape into the figure of a man. The process of evolution develops the individual, but it never CHANGES the species.

The Doctrine of Evolution does not teach, that one species of animals, either directly or indirectly, developed from or into another species. It does not teach, that man originally sprang from another species. These theories are taught by the enemies of Evolution. They are taught in order to discredit the findings of Evolution, and to uphold the theory of the church, relative to Divine Creation.

The Doctrine of Evolution teaches, that all Existence has a common Ancestor. It teaches that all things have a Common Origin. It teaches that Man originated in a purely natural way, under the operation of the Law of Eternal Formation, the same as have originated all other living forms. It teaches, and shows, that man sustains to the whole and to every part of Existence—

1. Homogeneous constitution.
2. Analogous formation.
3. Absolute relation.

The Doctrine of Evolution recognizes as a fact, that apes existed at the same early time that early Man existed. It shows that an ape does not walk naturally upright on its hind legs, as man does, although it does occasionally do so. It shows that there is a wide distinction between the highest form of ape, and the lowest form of man.

The Doctrine of Evolution shows, that no ape ever had the intuition to fashion implements of chase, defense, and warfare; that no ape ever had the intelligence to till the soil; that no ape ever had the ability to talk.

The Doctrine of Evolution shows, that the most striking difference between the highest type of ape and the lowest type of primitive man, lies in mere instinct on the ape side, and spiritual intuition on the man side. It shows that the gap between the two is immeasurable.

By the Doctrine of Evolution alone, can it be shown that all phases of Existence present perfect analogies between:

1. Every particle of Matter.
2. Every part of the Universe.
3. Every product of Eternal Formation.
4. Every process of Eternal Production.

When the body of man is compared to each and every part of the Organic Realm, the foregoing deductions become demonstrable facts. Beale, after making a careful investigation of the proposition, uttered his startling findings in these words:

"There is, indeed, a period in the development of every tissue of every living thing known to us, when there are actually no structural peculiarities, whatever—when the whole organism consists of transparent, structureless, semi-fluid bioplasm—when it would not be possible to distinguish the growing, moving matter which was to evolve the oak, from that which was the germ of a vertebrate animal.

"Nor can any difference be discerned between the bioplastic matter of the lowest, simplest, epithelial scale of man's organism, and that from which the nerve cells of his brain are to be evolved.

"Neither by studying bioplasm under the microscope, nor by any kind of physical or chemical investigation known, can we form any notion of the nature of the substance which is to be formed by the bioplasm, or what will be the ordinary result of the living."—*Bioplasm*.

Such findings dismayed theology, for they endanger the creeds upon which theology is based. These creeds begin with "I believe." Not one begins with "I know." The creeds must be maintained, and every doctrine or discovery that threatens them must be opposed and suppressed. Any theory that will serve to support them, is eagerly wel-

comed. No theory in this respect is ever too ridiculous for profound consideration by theology.

Theological writers are kept busy, striving to maintain their creeds. Prof. Henry Drummond takes up his pen, and attempts to rise to the role of an oracle by declaring:

"There are a great many different kinds of Life. If one might give the broader meaning to the words of the Apostle: 'All life is not the same life. There is one kind of life of men, another of beasts, another of fish, and another of birds.' There is the Life, or the Artist, or the Potter, who segments the worm, the potter who forms the dog, the potter who moulds the man.

"What goes on then in the animal kingdom is this: The Bird-life seizes upon the bird-germ and builds it up into a bird, the image of itself. The Reptile-life seizes upon another germinal speck, assimilates surrounding matter, and fashions it into a reptile." — *Natural Law in the Spiritual World*, p. 292.

The inconsistent part of Drummond's proposition appears in the fact, that while there are many different "kinds of life," and a different "potter" that moulds the different "kinds of life," all "kinds of life" come from one kind of material—one clay. This fact Drummond admits in these words:

"Take the ovule of the worm, the eagle, the elephant, and of man himself; let the most skilled observer apply the most searching tests to distinguish one from the other, and he will fail.

"But there is something more surprising still. Compare the next two sets of germs, the vegetable and the animal, and there is still no shade of difference.

"Oak and palm, worm and man, all start in life together. No matter into what strangely different forms they may afterwards develop, no matter whether they are to live on land or sea, creep or fly, swim or walk, think or vegetate, in the embryo, as it first meets the eye of science they are indistinguishable."

The human potter, from one kind of clay moulds with proficiency and skill, anything and everything, from plants to peacocks, from monkey to man, from men to angles, from angles to gods, according to a certain definite plan. But the Infinite Potter, being less adept and less skillful than the finite potter, is incapable of doing this; so there "must in short be as many potters as there are forms," says Drummond.

Why does he advance this view? There is a purpose back of it. He has a pet theory to support, and here is the way he weaves his yarn:

"There is another kind of life of which Science as yet has taken little cognizance. It obeys the same laws. It builds up an organism into its own form. It is the Christ-life.

"As the Bird-life builds up a bird, the image of itself so the Christ-life builds up a Christ, the image of Himself, in the inward nature of man.

"When a man becomes a Christian, the natural process is this: The living Christ enters into his soul. Development begins. The quickening Life seizes upon the soul, assimilates surrounding elements, and begins to fashion it. . ."

A beautiful theory, but as base as it is beautiful. It is a typical illustration of the astute manner in which certain writers turn and twist words and phrases, in order to fabricate support for their absurd theories and philosophies.

Man deliberately shuts his eyes to truth, in order not to see and believe. He will not have it that the same phase of Eternal Life that animates his form of clay, is the same as that which animates the form of the bat, baboon, and bobcat, the jack-rabbit, jackal, and jackass.

Theology will not have it, that the same phase of Eternal life which animates the physical form of the pope, priest and preacher, is the same which animated the physical form of the subtil serpent of the Garden of Eden.

Wood, the Naturalist, in the preface to his great work in three volumes, concludes with these words:

"Every being that draws the breath of life, forms part of one universal family, bound together by the ties of a common creaturehood—and as being ourselves Members of that living and breathing family, we learn to view with clearer eyes and more reverent hearts, those beings which, although less Godlike than ourselves in their physical and moral natures, demand for that very reason our kindest sympathies and most indulgent care. For we, being made in the image of God, are to them the visible representations of that Divine Being who gave the Sabbath alike for man and beast, and who takes even the sparrow under His personal protection.

"It is a great thing to be acquainted with the material framework of any creature, but it is a far greater thing to know something of the principle that gave animation to that structure."

These are the conclusions of a man who spent his life in the study of the lower animals; and this was written in 1853, in the day when the study of the living creatures about him inspired a simple piety in the heart of the great student, and led him to see that "every being that draws the breath of life, forms part of one universal family, bound together by the inseverable ties of a common creaturehood."

Giordano Bruno taught this doctrine. For his teaching the church burned him on the pyre in February, 1600. In his last moments, an idolatrous monk thrust a crucifix thru the blaze to the burning man. But the dying martyr turned away his head, more in pity at such ignorance than in aversion at the offer.

"God," said Bruno, "is in every blade of grass, in every grain of sand, and in every atom that floats in the sunshine." But "the vulgar creeds of religious bodies have not dared to reveal the Truth in its purity and essence." "Rather would the church cover the truth with allegories with myths and mysteries, which they call sacred; and humanity, adorning the veil, failed to lift itself up to see the idea behind it. Men saw through the teachings of the church the shadow rather than the light."

The reason that the church burns men for making such declarations, is that it brings man down, in that respect, to a level with the beasts of the field. "It might guarantee the Immortality of every living thing," observes Drummond. He continues:

"In the dog, for instance, the material framework giving way at death, might leave the released canine spirit still free to inhabit the old Environment. And so with every creature that had ever established a conscious relation with surrounding things.

"Now the difficulty in framing a theory of Eternal Life, has been to construct one that will exclude the brute creation, drawing the line rigidly at man or at least somewhere within the human race."

It is theology that draws the line, and declares who and what shall have Eternal Life. The Eternal Trinity receives no consideration in the proposition. Those intelligent men whose senses are offended by such silly doctrine, who search for and discover truth, who report honestly upon their findings, are burned as a reward for their work.

Man associates with the animal kingdom here on earth, and makes beasts of burden of many of them. His progress, of which he is so proud, would have been vastly retarded, but for the aid of the faithful horse. Still, in building a "theory of Eternal life," he considers none that does

not "excuse the brute creation," and burns those who do not so believe.

Solomon was more of a scientist than a theologian. He observed:

"I said in mine heart concerning the estate of the sons of men, that God might manifest them, and that they might see that they themselves are beasts.

"For that which befalleth the sons of men befalleth beasts; even one thing befalleth them: as the one dieth, so dieth the other; yea, they have all one breath; so that a man hath no preeminence above a beast; for all is vanity. All go unto one place; all are of the dust, and all turn to dust again.

Who knoweth the spirit of man that goeth upward, and the spirit of the beast that goeth downward to the earth? —Ecc. 3:18-21.

Job remarked:

"For vain man would be wise, though man be born like a wild ass's colt."—11:12.

Job thought that the hope of a tree for Eternal Life had a far better foundation than the hope of man for Eternal Life. He said:

"For there is hope of a tree, if it be cut down, that it will sprout again, and that the tender branch thereof will not cease. Though the root thereof wax old in the earth, and the stock thereof die in the ground; yet through the scent of water it will bud, and bring forth boughs like a plant.

"But man dieth, and wasteth away; yea, man giveth up the ghost and where is he? As the waters fail from the sea, and the flood decayeth and drieth up; so man lieth down, and riseth not; till the heavens be no more, they shall not awake, nor be raised out of their sleep."—14:7-12.

Theology does not teach the doctrine of Job. It teaches the doctrine of the resurrection, by which it is understood, according to Paul, that "the trumpet shall sound, and the dead shall be raised incorruptible."—1. Cor. 15:52.

If theology should accept the doctrine of Job, it would be forced to disband. For this very good reason it has elected to espouse the doctrine of Paul, and the people pay the price. The doctrine of Job is never mentioned.

Man, in his development, from the embryonic cell to birth, writes the history of the Law of Production, and in the evolution his body, illustrates the direct manner in which the work of production is performed.

As the earth, in its form and formation, illustrates the form of every grain of sand that goes to make up the whole, so man, in his form and formation, illustrates the form of every living thing that makes up the whole of the animal kingdom.

From the embryonic cell to birth, man passes through the different forms of ameba, the worm, the fish, the lemur, with all that went before, intervened between, and followed after, demonstrating that all representatives of the animal kingdom are (1) homogeneously constituted, (2) analogously formed, and (3) absolutely related.

Prof. Moore has clearly shown this. He states:

"The embryonic development of a human being is not different from the embryonic development of any other animal.

"Every human being, at the beginning of his organic existence, is a protozoan, about 1/125th of an inch in diameter. At another stage of development, he is a tiny sac-shaped mass of cells without blood or nerves, the gastrula. At another stage he is a worm, with a pulsating tube instead of a heart, and without a head, neck, spinal column, or limbs. At another stage he has as a backbone a rod of cartilage extending along the back, and a faint nerve cord, as in the amphioxus, the lowest of the vertebrates. At another stage he is a fish with a two-chambered heart, meso-nephric kidneys, and gill-slits, with gill arteries leading to them, just as in fish. At another stage

he is a reptile with a three-chambered heart, and voiding his excreta through a cloaca like other reptiles; and finally, when he enters upon post-natal actualities, he is a sprawling, squalling, unreasoning quadruped.

"The human larva, from the fifth to the seventh month of development, is covered with a thick growth of hair, and has a true caudal (tail) appendage, like the monkey. At this stage the embryo has in all thirty-eight vertebrae, nine of which are caudal, and the great toe extends at right angles to the other toes, and is not longer than the other toes, but shorter, as in the ape.

Physical science has seized upon these facts, and with them it has attempted to show that man is merely the outgrowth, by a process of evolution, of the lowest form of living matter. It has missed the great truth that these facts prove. It fails to see in them the unerring work of a Master Hand, that never changes models or patterns. It fails to observe that Man was the ultimate goal of production, when the first living cell was made, millions of years ago.

We are now dealing with Infinite Intelligence and Eternal Formation. From the first particle of matter to the finished product, every step follows in perfect order, sequence, and unison. There is no tearing down and starting over anew; there is no change of materials or models; there is no waste of labor, no wrong use of material.

The blue-print lay before the workman when the first blow was struck; the end was known from the beginning; the product is a perfect picture of the plan, when the finishing touch was applied. That finishing touch produced Man.

Strictly speaking, Existence is not a relation, but a whole. From beginning to end, all are made of one material—but one Matter with its two ends. Compound it as you will, star, sand, fire, water, plant, man, it is still one material, and betrays the same properties. The direction is forever onward, but the worker never changes materials, using the first elements in the most advanced stages.

Because the history of production is characterized in his brain, man is the prophet and discoverer of its secrets. *The intelligence of Newton is the same intelligence that produced the arrangement which the intelligence of Newton now discovers.*

If man were merely a higher development of a lower animal, the earth would swarm with hybrids, and there would exist a countless series of experiments between men and monkeys—entities that could not be classified as either animals or men.

True Evolution teaches the possibility of self-improvement, by the law of the survival of the fittest, and by selection. It shows that man is able, by the law of improvement, to develop better varieties in any species. It shows that many species starting low, have risen to a higher plane by the law of self-improvement.

But all improvement occurs within the species. No species has developed from another species. No species will ever develop from another. No species can ever develop from another.

Like begets like is the law. It has no exception and has never been violated. To make claims to the contrary is to stand in the light of the grossest ignorance.

The question of evolution is like all other questions. It expresses polarity; it has its positive and negative aspects. Every question has two sides, so long as Truth is ignored.

With each discovered Truth, profound mysteries are clarified, puzzling problems are solved, and long series of bitter arguments are ended.

Truth teaches that Life does not build up a Christ. Life

builds forms—not forms of Life, but forms of minerals, vegetables, animals and men. Life builds forms through which to express itself on the visible plane. It is the kind of form that determines the kind of expression which Life will manifest through that form.

Those who are too weak to forego the lust of the flesh and take their conduct in hand and build a Christ, lull themselves into blissful ignorance by thinking that this will be done for them by a Christ-life. But truth does not change because it is not believed. Man's thoughts change him, but not the things about which he thinks.

Reptile-life and Bird-life is Eternal Life expressed thru these forms. Human-life is Eternal Life expressed thru the human-form. Christ-life is Eternal Life expressed thru the human-form that departs and conducts itself in a Christly way.

In the face of this fact, which none can dodge, man may weep with Solomon:

For in much wisdom is much grief: and he that increaseth knowledge increaseth sorrow.—Ecl. 1:18.

Lesson No. 12, Chapter No. 31.

LAW OF CYCLICITY

Things which are seen, were not made of things which do appear (Heb. 11:13).

From a vast mass of invisible vapor was made the earth on which men live. From the Earth, a vast mass of invisible vapor is constantly floating off into space. But in due time it returns again, under the Law of Cyclicity.

The substance of which all physical forms are made never at rest. It moves in an endless, regular, constant circle, from the invisible to the visible, and back again. Water, wood, iron, and stone are subject to this law of Eternal Existence.

The body of man is only as solid and substantial as the Matter of which it is composed. All solids and liquids arise from the combination of invisible gases. In the final analysis, the body of man is nothing more nor less than a compound of invisible gasses. About 85 per cent of the invisible gases of which the human body is composed are called oxygen, hydrogen and nitrogen.

Of oxygen, Arthur Vos, M. D., writes:

"In combination with other elements, oxygen is found in larger quantities than any other element or combination of elements. For instance, the entire world is nine-tenths oxygen. One-fourth of the air we breathe, and eight-ninths of all the water in the universe—the water we drink, consists of oxygen.

"The solid matter of the earth is 60 per cent by weight and 90 per cent by bulk of oxygen. A man weighing 150 pounds, is composed of 100 pounds of oxygen by weight. If the oxygen contained in his body were set free, it is estimated that it would fill 750 cubic inches of space."—*Philosophy of Health.*

Prior to 1774, oxygen, as such, was unknown. Its discovery in that year by Joseph Priestly marked the beginning of a new epoch in the history of chemistry. He also discovered other gases; but his discovery of oxygen was far the most important. It demolished a time-honored theory over which physical scientists had puzzled for years.

Matter comes into visible existence thru the fromation of invisible particles into visible compounds, under the influence of the Law of Polarity or Affinity.

The working of this law is well illustrated in a consideration of water. This fluid is one of the simplest and

most volatile substances of the many combinations of matter. A consideration of it is sufficient to explain the proposition, since the same philosophy is employed in the explanation of other compounds of matter.

Water is a substance that is visible to the human eye. It is said to be formed by a combination of two invisible gases—oxygen and hydrogen. The formation occurs under the influence of the Law of Polarity.

Before their combination, these two gases are invisible. This is due to the high vibratory rate of their molecules and atoms. By combining, the size of the mass is increased, with a corresponding decrease in the vibratory rate. This makes the compound visible.

Visibility is not always a result of the size of the mass. The rate of vibration enters into the proposition. A large cannon ball, shot through space at terrific speed, is invisible to the sense of sight. If the rate of speed were high enough, a body the size of the earth could pass before our eyes, and yet not be seen.

The combination of oxygen and hydrogen depends to a certain extent on the temperature. A certain degree of heat separates them, and the water becomes vapor. A lower degree of heat condenses the vapor, and water results. A still lower temperature reduces water to ice—a solid that will sustain the weight of heavy objects.

By raising the temperature, the ice becomes liquid, due to the expansion and increased vibratory rate of its molecules and atoms. At a still higher temperature, the liquid becomes gas—a substance invisible to the eye because of its greater expansion and greater rate of vibration.

As the gas floats off into space, it meets the cooler air, and condenses into drops, too heavy longer to float. The drops fall as rain, and the accumulated drops gather in pools, lakes, rivers, and seas. Under the influence of heat, resulting from the friction of the rays of the Sun with the atmosphere, the surface of the water expands into vapor once more, and floats off into space.

By the application of heat, all the various compounds are dissolved into simpler compounds. The process may be continued, by increasing the degree of heat, until even the Earth itself would return to the shapeless mass of gases that is once was.

But nothing is ever lost. As wood burns, it appears that its particles perish, or are destroyed. The destruction is apparent only. The balance of the chemist shows that the wood and its constituent particles have lost nothing. On the contrary, it shows that the total weight of the constituents of the wood has increased. It shows that the products, gathered and weighed, consisting of the gases evolved in combustion and the ashes left behind, not only contain all the matter of which the wood originally consisted, although in a different form and composition, but that, in addition, other chemicals are contained therein, with which the constituents of the wood united during the combustion.

The dead body of a man is buried. Years afterwards the grave is opened. Nothing is found but a heap of dust. Physical science has shown that not even the smallest particle of the body has been lost. The elements of which the body was composed, have left their former combinations, and returned to the eternal cycle through which matter is constantly passing.

The infinite particles of matter are themselves unalterable, indestructible. Today in this, tomorrow in that combination, they go to build up, by the variety of their positions or their unions, the countless shapes and forms in which Matter presents itself, speeding from one to another in a ceaseless and endless change and flow.

The eternal cycle of infinite particles, changeless in themselves, is called the transmutation of matter. Physical science offers countless examples and proofs of this phenomenon.

The changes and cycles through which matter passes, and which physical science has partially followed by balance and measuring-rod, million-fold and ten million-fold, are without limit and without end. Intergration and disintegration, composition and decomposition, construction and destruction, clasp hands everywhere and eternally, in an endless circle.

In the air man breathes, in the water he drinks, in the food he eats, he takes in Matter that once constituted the bodies of his ancestors. Nay, he himself gives off each second to the external world, a portion of the Matter forming his body, and shortly thereafter he retakes this substance, similarly given off by his neighbor.

Dust to Dust is the law. From the invisible to the visible and back again, is the eternal cycle of Existence. The process does not denote the beginning and the end of substance. It denotes the changes in the condition and the position of substance.

The state and position that Matter shall occupy, is determined by the combination of Matter, as influenced by the surrounding environment.

This philosophy clears up, for the first time, the mystery surrounding the statement:

"The invisible things of Him from the creation of the world, are clearly seen, being understood by the things that are made."

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Chapter No. 32

LAW OF CHANGE

Change is permanent, perpetual, and eternal. It is a condition of Existence. Dust to Dust is a fact of common observation.

The Law of Change is the Law of Integration and Disintegration—the Law of Construction and Destruction. It is the Preserver of Existence. But it becomes the Destroyer of Existence upon a change of conditions.

Certainty is the product of immutable law. Under the same conditions the same results are obtained. Under a change of conditions, there must be a corresponding change of results.

This fact is true in either chemistry, mechanics, physics, or physiology. The causes of things are dependent upon occasions and conditions, as these bring into operation the Law of Production.

Out of a paucity of elements a plenitude of compounds appear. Whenever two or more primal elements are brought together under favorable conditions, the Law of Production evolves a compound that is necessarily different from any of the elements. This compound may be the human body, but it is subject to change with every change of conditions—as the facts of chemistry daily prove.

Living bodies are the crowning features of Existence. They are not less provided for than an atom of dust or a drop of water. They are subject to and are controlled by law. Upon the law depend their stability and existence.

Everything in accordance with law, without a single exception in the Universe, is a fact of observation and the testimony of physical science.

A discovery of the law confers unlimited power upon man. It reduces the complexities of Existence to the simplicity of science. It uncovers the secrets of the Earth's treasures. It makes man the master of his destiny.

The first step towards exact knowledge is a discovery

of the law. All investigations, inductions, and speculations are worthless until the law of operation and production is discovered.

But the mere discovery of the law is not sufficient. We must secure the correct formula of it, so that it shall constitute a yardstick for all future measurements.

The existence of the law of gravitation was known long before Newton's day, and its applicability to the affairs of mechanics was everywhere acknowledged. But it was Newton who first conceived, and finally demonstrated its universality. He gave the world the correct formula of the law:

"Every particle of matter in the universe is attracted to every other particle with a force directly proportioned to the mass of the attracting particle and inversely as the square of the distance between them."

With this knowledge, scientists at once began to measure distances, determine weights, predict conjunctions and eclipses, describe the revolutions of the planets, while many otherwise puzzling problems of science were explained, and the certainties of astronomy took the place of the previous speculations and superstitions.

The Law of Existence is as immutable and as universal as the law of gravitation. This is the formulary of it:

1. Every particle of matter in the organized body is constantly changing;
2. Existence requires that every change be fully and completely met;
3. Perfect equilibrium must be maintained;
4. The result is perfect correspondence;
5. Perfect correspondence is perfect life;
6. Perfect life is perpetual youth;
7. Perpetual youth is Eternal Existence.

At no time are visible forms completely composed of the same material of which they were composed a moment before. With every tick of the watch, parts of the living body are returning to dust. With each breath that passes from our nostrils, we exhale parts of our body. With the passing of every second of time, cells are wearing out, and passing off as waste, in the form of gases and vapors. Within a year, or less, the entire body, cell by cell, disintegrates and goes to dust—for Dust thou art, and unto Dust shalt thou return.

But, under the Law of Integration, new cells are born and built into the body as rapidly as the old ones wear out—so that in the space of a few months, each person has a body that is new from the body that he had a few months before, with the exception of the bony structure, the skeleton frame, which is harder than the rest of the body, and therefore less liable to the Law of Change. But even the bones in time are completely renewed, the same as are the softer tissues and cells.

The Law of Change is constantly at work disintegrating physical forms and returning them, part by part, to primal elements. But the law is just as constantly repairing and re-constructing them again, of new material.

The Law of Change is little understood by the average individual. It has scarcely been considered by physical science.

Physical science attempts to account for the death of living things under the law of wear and tear. It asserts that man's body wears out under the same principle that governs a man-made machine. It holds that as purely mechanical devices deteriorate and fall to ruin, so the living body must in time decay and go down to dust.

Physical science appears to have missed the great fact of Existence. It believes that the vital organs deteriorate with age, and that decrepitude is a condition of years. It holds that "old age" is unavoidable, and death is inevitable. Experience seems to prove the truth of these con-

clusions. But experience is that only which has been, and not that which should be.

Under this belief, physical science has searched only for ways and means to patch and repair an organism, whose final decay and end were believed to be certain. It has entirely disregarded the CAUSE responsible for physical decay.

The Science of Existence teaches that if decay be prevented, disease is impossible, and that in the absence of disease, there can be no physical death.

To prevent decay is possible. Anything is possible, yet everything is certain within the limits of the possibility.

The secret of preventing decay is revealed in the Law of Change. It is from the operation of the law that decay proceeds. Here alone can it be prevented. The method is simple when the process is explained, and the results are sure when the conditions are supplied.

Decay and death result from the failure of man to co-operate with the Law of Change. The failure may result from ignorance or disobedience. The effect is the same in either case.

Under the Law of Change, it is possible for one to improve each day the stability and integrity of his body. Co-operation with the law is the only requirement demanded.

The cause of things are dependent upon occasions and conditions, as these bring into play the Law of Production. The results obtained in every operation always correspond with the conditions supplied.

If a man supplies the conditions of degeneration, the process of the Law of Change is that of degeneration. If he supplies the conditions of regeneration, the process of degeneration is halted, and becomes that of regeneration.

The Law of Growth and the Law of Cure spring from the operation of the Law of Change. By knowing and obeying the law, one is able not only to remove his ailments, both physical and mental, but he is able to conquer such weaknesses as he may have inherited from his ancestors.

The inherited defects of the body will disappear as the old cells decay and pass away, and new cells are born and built in their places. But this is true only when one learns how to co-operate with the Law of Change, and supplies the requisite conditions.

By formulating the Law of Existence, we have defined the conditions of—(1) Health, (2) Regeneration, (3) Long Life, (4) Perpetual Youth, (5) Decay, (6) Disease, and (7) Physical death.

Now, by analyzing and explaining the Law of Change, the Science of Existence puts into the student's hands, for the first time, the great principle underlying — (1) Perpetual Youth, (2) Eternal Knowledge, and (3) Eternal Physical Life.

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Chapter No. 33

LAW OF BIRTH AND DEATH

There is no Birth nor Death.

Man speaks of Birth and Death, and believes that the former begins his existence, while the latter ends it. This belief is based on a fallacy that has no foundation in fact.

The terms Birth and Death are relative only. They refer to certain and definite processes of Life as it operates upon Matter. They do not refer to Life and Matter, for these do not begin in Birth, neither do they end in Death.

Men speak of the birth of a child. This is understood to

mean the beginning of that child. The child is a definite organization of Matter, animated by the Life Element. The beginning of the Matter and of the Life Element did not begin with the birth of the child. Life and Matter are without beginning and without end.

From an invisible speck of Matter, in the uterus of the female, Eternal Formation begins to construct a man. With material, brought to the place by the blood-stream of the mother, the formation of the body is carried on by the processes of construction and destruction. These processes begin at the point indicated, and go on steadily and continually in the body, throughout one's physical existence.

The tiny form of the new person increases in size. That is because the process of integration (construction) exceeds that of disintegration (destruction).

At the end of approximately 275 or 280 days, the work of formation has sufficiently progressed, that the new organization of Matter is ready for removal from its matrix. When the removal has occurred, men say a child is born.

There is nothing new about the child, except its own distinct organization. The Force that animates the form, and the Matter of which the form is composed, have existed always. They existed before the formation of the Earth.

The terms Birth and Death refer properly to the results. Birth and Death commenced the instant that the Life Element seized upon the invisible speck of Matter, and began the formation of the new organization. Every cell of the body, from the first moment, goes through the regular and continuous cycle of Birth and Death.

This is the Law of Birth and Death: The cell comes into existence. That is its birth. It performs its office, and then it decays, dissolves, and passes away, becoming waste that is thrown off from the body. That is Death.

Birth and Death arise as the result of the operation of the Law of Change. This operation reveals the process of Eternal Formation. It shows how Suns, Stars, and Planets are made. It shows how minerals, plants and animals are made. It shows how all things are made and maintained.

It is the operation of the Law of Change that keeps animate organisms from decaying and returning to dust. It is the operation of the Law of Change that keeps animate organisms renewed and repaired. It is the operation of the Law of Change that reveals the Principle of Perpetual Youth.

The secret of Perpetual Youth lies in learning, observing, and co-operating with the Law of Change. Failure at this point is responsible for degeneration, disease, and death.

Birth and Death are co-partners in the operation of the Law of Change. They are terms that should be applied only to the metabolic processes of the body. They do not indicate the beginning or the end of either Life or Matter. For these are eternal and everlasting. They are Eternalities that pass beyond finite comprehension.

Questions

The student should answer the following questions, and submit his answers to Dr. Clements for review and criticism. It is not necessary to copy the question, but the student may if he desires. Simply number the answers to correspond with the number of the question.

The student is not required to answer these questions; but by answering them, he will get more good out of the work.

- (a) What is meant by Eternal Formation? (b) Was there ever a beginning of Existence? (c) Did the earth have a beginning? (d) Name the Creator, and give his (its) seven properties or qualities.
- (a) Give the origin of the earth, and state of what it is made. (b) Name the three grand elements involved in forming and producing the earth. (c) Tell the story of the formation of the earth in not over 200 words.
- (a) Where does science find the history of the earth's ages? (b) What is the Great Stone Book? (c) Under Eternal Production are given 8 ages of the earth; name them in order. (d) In what age did man appear?
- (a) From whence came the water that makes all ponds, lakes, rivers, oceans? (b) What caused the Flood related in the Christian Bible? (c) Is that the only Flood thru which the earth has passed?
- (a) By what is man's knowledge limited? (b) Do things exist that man cannot hear, see, feel, smell, taste? (c) What makes water and glass transparent? (d) Give the primary difference between the physical world and the spiritual world. (e) Is the spiritual world an immaterial world? (f) Can the physical man reach and sense the spiritual world? (g) Can the spiritual man reach and sense the physical world?
- (a) What is the Law of Polarity? (b) How does the law operate? (c) What is the difference, as to the law of polarity, between man and woman and two mineral atoms? (d) What does the quality of Sex represent?
- (a) From whence came Man? (b) Give the three primary qualities that bind into a Grand Unity all Visible Things. (c) What happened when Darwin discovered these three primary qualities in the Animal World, and published his findings?
- (a) What particular institution has hindered man in his search for knowledge? (b) What did this institution do to those who made important discoveries and published them to the world? (c) In what year were Catholics allowed by the church to read the works of Copernicus and Galileo? (d) What is your frank opinion of an institution that seeks, by persecution and murder, to hold man in the bonds of ignorance?
- (a) Name the fathers of the Doctrine of Evolution. (b) What was the substance of their discoveries? (c) When or where did the process begin that finally led to the making of man?
- (a) Does the Doctrine of Evolution teach that man developed from an ape? (b) State briefly what is taught by the Doctrine of Evolution. (c) Give the chief distinctions between the highest ape and the lowest man.
- (a) What facts are proved by comparing the body of man with all other living things, consisting of the plant and animal world? (b) Why does Drummond seek to show that there is one great and peculiar difference between man and all other animals? (c) Is he correct in his deductions and conclusions?
- (a) Did Job believe in the theory of eternal life as taught by the church? (b) Did Job believe in the doctrine of the resurrection as taught by the church? (c) Why has the church ignored the reasonings of Job and advocated the resurrection theory of Paul?
- (a) Of what substance are visible things, including man made? (b) What makes a thing visible? (c) From whence comes the moisture that gathers on the outside of a pitcher of ice water sitting on the table on a hot day in summer?
- (a) State the Law of Change. (b) State the law of gravitation as formulated by Newton. (c) State the Law of Existence as formulated in Chapter 32. (d) What is the one great purpose of the Law of Change?
- (a) What do we really mean by the terms Birth and Death? (b) How is the process of building the body of a new person carried on? (c) When do the processes of Birth and Death begin? (d) What law keeps living bodies from decaying and returning to dust. (e) How may the time be lengthened? (f) Is there any reason why the time could not be lengthened to 1,000 years or more?



Lessons Nos. 13, 14, 15, 16

Lesson No. 13 Chapter No. 34.

TIME

There is no birth and no death in man's existence—except as to the billions of cells of which his body is composed.

When Paul said, *I die daily*, he stated a literal truth, so far as the cells of the body are concerned. And there is no other death.

The cells of man's body are dying hourly. His entire body is dying every second of his existence. But as his body is dying hourly, so is it hourly born. This is the Law of Change, performing its eternal function. Cell by cell, the body dies; and, cell by cell, a new body is born.

The hourly birth and death processes remove from man's existence the deceptive element of Time. There is no such thing as Time to him who hourly dies and is hourly born. Such man is without age. He cannot grow old. His body is always new. His thinking that he is old rests on fallacy. It is a result of the imagination. It is an apparent truth, but not an actual truth.

Time, like old age, is an error of the senses. It has no existence except in the mentality.

Man's sense of Time depends upon his perception of motion, and its contrast of pause. Time is a form of perception, by which man expresses his consciousness of the operation of the Law of Change.

If all were motion, or if all were rest, or if there were no change, there would be no Time. Man cannot think of Time, exception in connection with a succession of changes of things in his consciousness.

A day is the consciousness of the passing of the Sun. An hour or a minute is the subdivision of the day, or the consciousness of the movement of the hands of the clock—merely the consciousness of the movement of things or objects, showing the operation of the Law of Change.

The alternate succession of day and night would arouse an impression or sensation in the brain of a savage. But it does so only because there is a periodical cessation, a pause, a change from motion to rest, or to other motion.

If there could be monotonous motion or rest without break, pause, or change of any sort, such continuous motion or rest would give no sense of time.

If we could imagine a world in which the Law of Change did not operate, there would be no element of Time.

If we were able to rise so high above the earth, that the earth would not obstruct our view of the Sun, the Sun would seem to stand still, and the Law of Change that produces night and day, would cease to operate. It would be always day, with the Sun seemingly in the same spot. It would be a world without motion, without change, and without Time.

The pause between any two movements of the same instrument, is measurable in the movement of some other instrument. But when the pause is never succeeded by a resumption of the motion, such pause is immeasurable. It is eternity with respect to that motion and the Time that it registered; and such Time has forever ended.

As each given or special motion, that is, the motion of each thing that now moves, will certainly come to a final and definite end, eternity, or rest, or nothingness, with reference to such motion, will supervene, and here Time is merged in Eternity.

When our sensations of all motions pause, or are succeeded by their negatives, and there is no rhythmic succession of any sort, then we lose all sense of the passage of Time. This cannot happen to us during normal consciousness, but may be approached in sleep, if the sleep is profound.

In common sleep, we seem to have left, one or two faculties on a sort of sleepy sentinel duty, so that if we are awakened prematurely, we have some idea of the approximate length of Time that we have been asleep.

But in catalepsy, the severance of the consciousness from all relationship with the environment is absolute and complete, so that the patient is not even aware that there has been any pause or cessation in his consciousness; and a person who has been suddenly stopped in the center of a sentence by a cataleptic spasm, has frequently gone on and finished it, upon his sudden recovery, after months had elapsed, of which lapse of Time he was totally unaware.

Persons who are subjects of the strange phenomenon of double personality, are always, while in one state, unaware that Time elapsed while they were in the other state, and vice versa.

Time is an invention of the senses. As a measure, Time is an instrument of our own devising or selection, for the measure of motion, or the extension of some portion of matter. Time belongs to the finite mind, and has no place in the Infinite or Absolute.

Radenhausen observes:

"Beyond the range of human reason, there is neither space nor time; they are arbitrary conceptions of man at which he has arrived by the comparison and arrangement of different impressions which he has received from the outside world.

"The conception of time arises from the sequence of the various forms which change in space (motion), by which the external world acts on the individual man, and so on.

"But externally to ourselves the distinction between repletion of space and mutation of space does not exist, for each is in constant transmutation, whatever is, is filling and changing at the same time, nothing is at a standstill . . . —Isis, vol. IV, p. 172.

Ruckert remarks:—

"The world has neither beginning nor end, in space or in time. Everywhere is center and turning-point, and in a moment is eternity."

Chapter No. 35

SPACE

Human knowledge begins with experience.

Empirical knowledge is a compound of that which man's receives through impressions made upon his brain cells, and that which the faculty of cognition supplies from itself.

Man's knowledge relates to objects by means of impressions that affect the brain. As these impressions are translated, they become thought. From thought arises conception.

All thought, directly or indirectly, relates ultimately to vibratory impressions received by the brain from the surrounding environment.

Man has no knowledge of anything from which he has received no vibratory impressions.

A man born and reared in darkness, like the blind fish in the deep recesses of the sea, would have no knowledge of light, and would know nothing of the absence of light.

A man with knowledge of light, has a sensation of its absence, as when night comes, or when he enters a dark cave.

The sensation derived from darkness does not arise from impressions upon the brain cells. It arises from the absence of impressions. It arises from PERCEPTION. It is a condition produced by reason from positive sensations of light and color that have been experienced. Man compares positive objective impressions and sensations with their absence, and thus obtains a perception of the difference.

If there is a deprivation of anything that man has had, or has experienced, he can perceive the contrast between possession and deprivation.

Opposite every sensory faculty and its stimulation and sensation, man may place its absence or negation, from which he gets no sensation. From this absence, he develops a perception, which comes as a contrast between positive and negative stimulation.

Opposite pairs of this nature may be listed by the thousands. It is the realm of duality. The principle involved explains the problems of Time and Space.

Sound is sensation only. It is produced in man by a succession of vibratory waves, coming from an object capable of vibrating in a manner sufficiently strong to arouse the human ear drum into active motion.

Silence is the opposite of sound. It is nothing with relation to sound. The nothing of silence does not deny the existence of other sensations than that of sound.

If man had never heard sound, he should never have

had any conception of silence. When a sensation of sound ends, he perceives the contrast between sensation and the absence of sensation. He perceives that over the border of sound there is nothing.

By the senses of sight and touch, man gets sensations of the existence of things, and of their having dimensions. He feels and sees along the sides, edge and corners of a house. He perceives that it is bounded by nothing on all sides, except the ground on which it rests. This nothing as a contrast with solid or tangible matter, is called Space.

Space, like Time, has no real existence outside of man's perception of consciousness of the relative position of material objects.

It is illogical to assign dimension to that which has no existence. Yet man speaks of dimensions of a given Space. But Space cannot be measured in terms of space, for its terms are O.

When we measure a box, we do not measure space. We measure the walls of wood of which the box is made.

Space has no attributes, no attraction, no repulsion. It furnishes no terms for its description. It is referred to in terms of Matter. The measurement of Space must be done with material bodies. The distance between two objects is called Space, but it is measured with a material body.

To measure Space, three things or objects are necessary: (1) The object from which the measurement starts, (2) the object with which the measurement ends, and (3) the object with which the measuring is done.

We are unable to conceive of Infinite Space. We must have objects to encompass space before we have measurable space. Then the space between these two objects is measured with a third object, say a yard-stick. What have we done? Simple determined how many lengths of a yard-tick may be laid between the two other objects.

We cannot imagine a point in Space without material objects. Space beginning at bodies of matter, and extending away from them, is measureless and limitless. It is nothing real.

We may start with ourselves and try to imagine a million miles. What have we done? Merely extended our mental yard-stick a certain number of times to an imaginary point in the Nothingness called Space.

As we think of Space as being infinite in the direction of largeness, so we may think of it as being infinite in the direction of smallness. No matter how small an object may be, we are able to think of it as being capable of division and subdivision, and so on infinitely.

Jakob has said:

"The conception of the infinitely minute is as little capable of being grasped by us, as is that of the infinitely great. Despite this, the admission of the reality of the infinitude, both in the direction of greatness and of minuteness, is inevitable."

Radenhausen sums up the proposition in these words:

"The idea of Space is only an unavoidable illusion of our Consciousness, or of our finite nature, and does not exist outside of ourselves; the universe is infinitely small and infinitely great."

The only property assignable to Space is that of extension. That means dimension. But nothing cannot possess dimension—and Space is nothing. A body possesses dimensions because it is substance that may be measured.

Space is a negation. Destitute of value, it is expressed by O. It is destitute of attributes or conditions. It cannot be weighed or measured. It has no density. It

has no resistance. It has no extension occupied or unoccupied. It has no motion nor time. It has no mathematical functions, It cannot be multiplied or divided, nor develop a square root or cube root.

Chapter No. 36 LAW OF KIND

Each after its Kind is the Law of Existence. In this obvious fact lies a secret for which man in all ages has searched.

Life from life, force from force, matter from matter, good from good, evil from evil. Likewise and just as sure, disobedience bringeth decay, decay becomes disease, and disease bringeth death.

The rule is simple; the result is certain. It is science because it is truth. It is disregarded and neglected by the world because it pays no dividends. It is condemned by established institutions because it destroys old sources of income and upsets old theories, worshipped for tradition's sake.

Decay is the cause of disease. In fact, decay is disease. And disease is the cause of death. Death is the finished product of the work of disease—of the work of decay. Death is the finished product of the work of disobedience. Death is the result of evil habits. Death is the reward measured out to the wicked.

The cause of Decay lies in the Law of Change. But the Law of Change, while guilty of the charge, is an innocent agent in the operation, as are the iron wheels of a locomotive that cut in twain the body of him who carelessly falls in their path.

A machine can grind that only which it receives. The finished product can be no better than the material of which the product is made.

If a person (1) breathes impure air, (2) drinks impure water and other foul liquids, (3) eats wrong food, including festering flesh, (4) eats to excess, (5) uses tobacco and intoxicants, (6) misuses the genital organs, (7) and abuses his body in diverse other ways, the body will show the ill effects of this abuse. For the Law of Change must build into the cells, all the deterioration and degeneration that come from these evil sources.

Like begets like. There is no escape from the effects of our work. Man reaps just what he sows—but the harvest is always greater than the sowing. If man sows virtue, he will reap greater virtue. If he sows the wind, he will reap the whirlwind.

The Law of Change is the Preserver of Existence. It is also the Destroyer of Existence. The results obtained depend upon the conditions supplied. If man supplies to his body the condition of degeneration, the Law of Change sets into operation the Process of Degeneration. If he supplies to his body the condition of regeneration, the Law of Change sets into operation the Process of Regeneration.

If man's conduct has been such, that the Process of Degeneration is operating in his body, the process will immediately cease, and become that of Regeneration, upon a change of conditions. A reversal of the lever is all that is necessary. Nothing more is needed. Anything more is superfluous and injurious.

The world is now at the beginning of its knowledge of these things. They have previously received no systematic investigation. It is an unpopular work. Few have courage or desire to engage in it. People shun it, for it goes to the core of one's daily conduct. It tells one what to do, and what not to do, in order to live a righteous

and virtuous life. It shows the certainty of the results that follow.

The findings in this field point the finger of condemnation at the investigators. They recoil as from a deadly serpent—for who is there that has lived a righteous and virtuous life, from the days of Adam down? Who desires to be saved from his sins? Who will forsake the sins that satiate the lust of the flesh?

If man can be saved in his sins, the saving process is welcome. But if the saving process involves the renouncing of evil conduct, if it involves the living of a virtuous and righteous life, it is rejected with scorn, and the advocates of the process are burned and banished from society.

Men follow the line of least resistance. It is easier for us to do as Adam did, and hide ourselves amongst the trees of the garden, than to face our sins, receive our sentence, and strive to live better lives. People had rather worship ignorance and die in sin, than to strive for knowledge and live in truth.

Man thinks that he is a free agent. But he is a slave. He thinks he is searching for truth. But he is searching only for evidence to confirm his fixed beliefs. He is bound as with bands of steel by ancestry, inherited prejudice, racial traditions, environment, and early training. He craves knowledge, but resents and rejects all information that conflicts with his settled opinions.

Humanity receives and accepts advice only when in trouble. When the human ship is breaking upon the rocks of the shallows, then the cry for help is shouted, then the arm of help is welcome. At any other time, if help is offered, it is unrequested—and unrequested help is an imposition, if not an actual insult.

For such, this work is not intended. Time is too precious to be wasted upon those who turn a deaf ear to our warning of stop, look, listen.

This work is the result of long labor and profound study. It contains pearls of priceless value, for those who believe in preparing for events that are certain to come. Its purpose is to reach the real searcher after truth, and teach him how to conduct himself in order to meet the requirements of the Law of Change, that his body will not decay, but will come to a high degree of health, and there remain, *as changeless as the mighty Mississippi*.

The Science of Existence shows how, under the Law of Change, constructive and destructive processes are constantly at work in the body. It teaches that the body at no time is completely composed of the SAME material of which it was composed a moment before. It teaches the great and vital fact that the body, in order to endure, must always be composed of the SAME KIND OF MATERIAL.

The causes of things are dependent upon occasions and conditions, as these bring into operation the Law of Production.

As we change in KIND, to the slightest degree, the material which the Law of Production has prepared for the living body, in that same instant the Law of EACH AFTER ITS KIND is disregarded and violated. In that same instant the Law of Change is transformed, from the Preserver of Existence to the Destroyer of Existence, and that particular organization, then and there, suffers from a process of disintegration that runs in excess of the process of integration, bringing that particular organized form in due time to its end.

The Law of Production evolves the human body as a chemical compound, composed of certain definite elements. The body's existence depends upon the elements that enter into its combination. These elements must be constantly supplied. They must be supplied in the proper quantity. They must be of the proper quality.

Failure in any of these requirements, brings a change of conditions. There must be a corresponding change of results.

One concrete example is better than a page of abstract statements. We shall explain the process by using a river as an illustration. It gives the student a splendid picture of the operation of the Law of Change.

Down thru the ages, the river lies upon the landscape, with size, length, breath, seeming solidity, and seeming permanency. It remains throughout the centuries, apparently fixed and changeless; yet at one time is it composed of the same water that composed it a moment before. Its waters are constantly changing, in relation to its banks and bed, along the whole course, from its source to its mouth; and the time comes, at certain and positive intervals, when the water is completely changed from one end of the river to the other.

The water is leaving the bed of the river by flowing into the trackless ocean, by evaporation, and by exosmosis. New water must be supplied, and in the same ratio as the old water leaves the river.

Failing in this, a time comes when there will be no river. Also, the end of the river will come, if sawdust or sand be supplied to it, instead of water.

The river depends for its existence upon a certain KIND of material. A violation of this law, means the end of the river.

Remember this well, for by this illustration it will be shown how and why the end of all animate existence comes, and why the body decays and goes down in death.

Lesson No. 14 Chapter No. 37

CONDITIONS OF PERPETUAL YOUTH

Anything is possible; yet, within the limits of that possibility, everything is certain.

The causes of things are dependent upon occasions or conditions, as these bring into play the Law of Production.

Perpetual Youth, as a physical state, is dependent upon certain conditions. If these conditions can not be supplied, Perpetual Youth remains a myth. If the conditions can be supplied, Perpetual Youth emerges from a mythicity into a possibility.

Herbert Spencer not only believed that Perpetual Youth is a possibility, but he formulated his belief into law. In his formulary he prescribed the conditions that must be supplied, to make Perpetual Youth a reality.

Physical science believes that decay, degeneration, disease, and death, result from the inability of the living body to meet the various changes of its environment. It believes that there are changes in the environment which the organism has not adapted changes to meet. It believes that the organism often fails to meet effectively, such changes of environment as it has adapted changes to meet.

Drummond espoused Spencer's doctrine of Perpetual Youth, and pointed out that man, by reason of his more complex organism, is better equipped than any other animal, with "adapted changes" to meet, master, and

control his environment.

This being true, it means that man has a more perfect body than any other animal, and that he should live far longer than any other animal.

Some fowls live from 50 to 100 times as long as it requires for their bodies to reach maturity. Man in this country has an average life-span of approximately twice the length of time required for his body to reach maturity. The whale and alligator live more than 1,000 years. Man does remarkably well when he lives 75 to 80 years.

The world looks to physical science for improvement and advancement. But physical science is unable to offer any aid. It is hopelessly confounded the moment it attempts to define the line of demarcation between Life and Living Matter. It declares that Life consists of the total functions of the body. It carefully describes the various organs of the body, and does fairly well in relating what they do. But it is utterly bewildered when asked to explain what CAUSES the organs to do it.

Physical science starts and determines the countless processes of the body with the activities of the magic ooze of the silent chemistry of the body cells. In all its theories and hypotheses science starts with living matter. It makes no attempt to explain why and how matter was raised from non-living to living. It begins its calculations with cells, force, material, and a transportation system, but fails to account for the organization and existence of these.

When the bold skeptic goes outside their institution, and attacks the foundation upon which it rests, the learned scientists close up like clams, and act as did the priests in the time of Galileo, who refused to gaze thru the great man's telescope, lest they see with their own eyes, and be convinced that what he taught was truth.

The result is, physical science has no knowledge of the Eternal Life Principle. It has no knowledge of the basic laws governing the function of the mechanism through which the Life Principle operates.

If one should suggest to the learned professors of medical institutions, that Perpetual Youth is a possibility, they would regard him with pity. If one should suggest that they know nothing of the mysterious principles lying back of physiology, they would throw up their hands in a gesture of indignant horror. Yet their own statements, made in text-books and in public, declare their profound ignorance of these great things.

The student may feel that in our enthusiasm for some new idea, we are constrained to indulge in hyperbole. If he thinks that the learned professors of medical institutions know whereof they speak and write, he should ask them to answer the following questions:

What is Life? What is man? What is mind? What is matter? What is spirit? What is soul? What is thought? What is memory? What is consciousness? What is animal instinct? What is intuition? What is animal heat? How is it produced? What is fever? How does the body maintain its even temperature? Why does the temperature rise and fall in illness? How does the body make blood? How can the blood flow against the attraction of gravitation? What makes the heart beat?

How does the stomach make and excrete gastric juice and hydrochloric acid, while the liver makes and excretes bile and glycogen, and the pancreas makes and excretes insulin? How do the kidneys filter urinary products from the blood? What prevents the blood from passing off

with the urinary products? How does the blood excrete carbon dioxide through the lungs and absorb oxygen? What make the blood clot? How does one kind of blood build teeth, bone, cartilage, nails, nerves, hair, brain, muscle, tendon, ligaments, skin, a transparent lens to allow light to enter the eye at one place, and an opaque coat to keep the light out at other places? How do men see, smell, taste, hear, feel?

Medical institutions cannot answer these questions. They deny the existence of the Force that makes the body function. They teach that the countless processes of the body, which they call life, is started and determined by and with the activities of the magic ooze of the silent chemistry of the body cells. They have labored long to construct a theory to support this teaching. Only a superficial examination of the proposition is sufficient to disclose its falsity.

Medical institutions delight in comparing the living organism to a man-made machine. They assert that, as a man-made machine needs overhauling and repairing occasionally or periodically by mechanics, so the living organism, no less, needs overhauling and repairing now and then by physicians.

At best, only a crude comparison can be drawn between a machine that is made by human hands, and one that is not so made. The difference between the two machines grows more striking, when we observe the many powers possessed by the human machine, none of which is possessed by any man-made machine.

For instance, the human machine is:

1. Self-starting.
2. Self-building.
3. Self-operating.
4. Self-adjusting.
5. Self-governing.
6. Self-repairing.
7. Self-regenerating.

The proposition of comparing the living organism to a man-made machine grows utterly preposterous, when it is known that human hands have made every part that enters into the construction of the man-made machine, while no physician, no chemist, no scientist, with all his learning and skill, can make the simplest part or particle of the human machine, can explain the simplest of its processes, or can duplicate the simplest of its functions.

A machine that has within itself all the potentialities of its own existence, can not be worn out. A machine that is incapable of being worn out, is for that very good reason incapable of coming to an end, without some accident occurring, or without some error committed in its care.

The body is such a machine. It has within itself all the potentialities of its own existence. It cannot be worn out. With proper care, it should, barring accidents, never reach the end of its animate existence.

For the benefit of the student, we shall go briefly into detail, that we may better illustrate our point. For this purpose we shall indulge in the medical error, for a moment, of comparing the living organism with a man-made machine. We shall compare it to a stationary steam engine, that is carefully constructed of the finest steel, mechanically perfect, set in place and operating smoothly, without any undue vibration or friction.

In this comparison, we shall elevate the engine to the high plane of the living organism. Otherwise our com-

parison could not explain the point we desire to illustrate. We must equip the engine with the same self-starting, automatic, and practically unlimited powers possessed by the living organism, which powers have been listed above.

If the engine possessed all these powers, no man could do more for that engine than to supply it with the (1) material it needed, of the (2) kind needed, at the (3) time needed, and in the (4) quantity needed, for its use, maintenance, function, repair, renewal, and regeneration.

If the care-taker of the engine knew his duty, and performed that duty perfectly, that would be perfect correspondence of the engine with its environment; and that, says Spencer, would be eternal existence and eternal knowledge. That would be the condition of Perpetual Youth. The conditions of Perpetual Youth would make the state of Perpetual Youth emerge from a possibility into a reality.

The engine, at the end of ten years, ten thousand years, or ten million years, would be the same, running the same, performing the same, appearing the same, and would be the same in every respect, as it was during the first year of its existence. It would be as impossible for such an engine to grow old, wear out, decay, degenerate and fall to ruin, as for the Sun to rise in the West.

The steam engine, no less than the river, and the living organism, is governed by a positive law. The existence of the engine, like that of the river and the living organism, will come to an end as, if, and when that law is not rigidly observed and obeyed.

For instance, if the care-taker of the engine feeds the engine soft lead, instead of finely tempered steel, for use in renewing and repairing its daily wear and tear, and, in place of high-grade lubricating oil, uses water containing fine sand to lubricate its bearings and joints, what would happen?

Any person, with a particle of intelligence, knows, without experience, that such mal-treatment, such misuse and abuse, would soon derange the engine's smooth operation, weaken its structure, grind out its joints and parts, and start it rapidly on the road to ruin. Its organized existence would come to an end just as quickly as such conduct that destroys, and such habits that kill, had time to bring about its down-fall and destruction.

Here is the cause of degeneration. Here is the work that destroys an automatic machine that is made to go on forever.

The cause of physical decay is not found within the body. The body has within itself, all the potentialities of its own existence. But it has needs that must be perfectly supplied. The moment the care-taker fails and falters in his duty, in that moment begins the degeneration of his machine.

There is nothing in the condition prescribed by Spencer as being necessary to eternal physical life, that is lacking either in the animate organism, or in its environment.

The animate organism could not have come into existence in a hostile environment. For the existence of the environment preceded the existence of the organism, thus making the existence of a hospitable environment a condition precedent to the beginning of physical life.

There is much strong evidence that proves that man has existed upon earth for many thousands of years, and perhaps millions of years. This could not be so if there were, or had been, any changes in the environment which

the human organism had NOT adapted changes to meet.

It is not a hostile environment that brings about the end of physical life. No environment will destroy an organism which can not come into existence until the environment is suitable and favorable for such existence. No environment can destroy an organism which it cannot control and master.

But man has allowed his environments to master and destroy him.

Chapter No. 38

LAW OF USE

There are three chief reasons why it is misleading to compare the living organism with a man-made machine. These are:

1. The body is preserved by use.
The machine wears out by use.
2. The body is not subject to the law of wear.
The machine is entirely subject to the law of wear.
3. The body possesses power of attracting and incorporating into its structure new material to compensate for its constant loss.
The machine lacks power of attracting and incorporating into its structure new material to compensate for its constant loss.

The less a machine is used, the longer it will last. If it is not used at all, and is protected from the elements, it will remain unchanged.

If the living body is not in use, it deteriorates. If an attempt be made to protect it from wear, as by putting the arm in a sling, or by using a crutch in place of the leg, the unused member will waste and wither away.

Use wears out and degenerates the machine. Use preserves and improves the living body.

The busy arm of the blacksmith does not waste with use. It improves in size, strength, endurance, and efficiency.

The busy machine wears out rapidly. It decreases in efficiency, and deteriorates in structure. The time comes when the machine must be stopped, overhauled and repaired. At a later time, it is found more economical to purchase and install a new machine, than to repair the old one.

This is the end of every man-made machine. The length of its life depends upon the quality of the material of which it is made, its use, and the efficiency of the care-taker. If the care-taker is inefficient, or if the material of the machine is of poor quality, its use, and the length of its existence, are correspondingly decreased.

From non-use, the muscles of the body grow soft and flabby. They degenerate and decrease in power. With use, with exercise, they quickly increase in size, strength, and endurance.

The skin on the palms of the hands becomes thin and tender through lack of use. The hands soon blister and pain when used in hard work. But if the work is continued, some skin of extra thickness and toughness will soon be provided.

These examples illustrate the marvelous manner in which the living organism is able to adjust itself to changes in its environment. These examples show how perfectly the organism is equipped with "adapted changes" to meet, master, and control its environment.

The body possesses power to do its own repairing. Its repairing is not done by man. But the body must depend upon its care-taker to furnish material for its needs. If the care-taker fails in his duty, the body must fail in its function.

Every cell, tissue, and organ of the body responds to the law of use. The heart, liver, kidneys, ductless glands—all these respond as perfectly to the law of use, as do the skin and the muscles.

In spite of the vast difference between a living body and a machine, the body, like the machine, does deteriorate.

The deterioration of the machine results from un-compensated wear. The deterioration of the body results from its misuse, and from defective material supplied to compensate for wear.

The defect in the machine is found in the machine itself. It actually wears out by use. It lacks power to attract and incorporate into its structure, such new material as is required to compensate for its constant wear. The care-taker is not responsible for this deficiency. By this service he supplies such demands as the machine has power to make.

The living body does not wear out by use. The cause of its degeneration does not lie within itself. It degenerates by reason of a cause that it cannot control. Its constant demands are not properly met.

The fault is found in the care-taker. He fails in his duty. He fails to furnish the body with proper building material. He subjects the body to great misuse and abuse. The body does the best it can under the inimical conditions forced upon it. The hostility of the environment in time brings about its destruction.

Every instance of illness is a symptom of physical degeneration. As most infants are frequently sick, and as sickness is a symptom of degeneration, this evidence indicates that degeneration begins early in life.

Degeneration begins before birth. It begins before impregnation. It begins in the seed. It began ages ago, as man formed his degenerating habits. It increased as these habits increased. It grows greater with the passing years.

At no age of the earth has man lived under such degenerative influences as surround him today. His greatest food is air; and the air of cities, homes, offices, lodge rooms, and other places, is highly contaminated. It is unfit to breathe.

The length of the human life-span depends upon the care given the body. Nothing supernatural enters into the proposition. It is a case of man's reaping what he sows. The matter is governed by law, not by luck, nor chance, nor by the hand of some mysterious and capricious Providence.

Chapter No. 39

LAW OF REGENERATION

I will praise thee; for I am fearfully and wonderfully made; marvellous are thy works.— (Ps. 139:14).

A man who has not made a careful study of the living organism from the proper viewpoint, cannot appreciate the full significance of the foregoing statement.

The human body is a perfect, automatic machine. It starts itself, it runs itself, it adjust itself, it governs itself, it repairs itself, it regenerates itself. Every cell, tissue, muscle, organ are all of them so ingeniously con-

structured, arranged, and adjusted, that, under normal conditions, the living body functions in perfect unision and harmony, with no undue friction and no unpleasant sensation.

Not only is the body perfect mechanically, but it contains laboratories so complex and complicated, that no scientist nor chemist has ever been able anywhere near to approach, imitate, or duplicate either them or their mysterious work.

Observe the wonders of Eternal Intelligence, Eternal Formation, and Eternal Production. From a tiny acorn, a giant oak is made. With air, sunshine, water, and soil, the hills and valleys are painted all the various hues of the rainbow. With minute particles of matter, worlds, planets, suns, and stars are made.

With the same elements, the living body is built of bone, blood, brain, nerves, nails, muscles, tendons, ligaments, skin, hair. With the same material is made a variety of the same thing, as hard and soft bone; compact and porous bone, voluntary and involuntary muscles; nerves that transmit vibrations which arouse the sensation of taste, touch, smell, sight, sound; hair of many shades, skin of many hues, and eyes of many colors.

In a manner which physical science cannot explain, the living machine begins its independent operation. It begins to function when in size it is so small that the microscope cannot reveal its existence and presence.

With material gathered from its surrounding environment, the living machine is slowly formed and fashioned. It steadily increases in size until maturity is reached. Just why it grows and why it stops growing are conditions that are not definitely known.

The work of construction is carried on by the multiplication and differentiation of millions of minute cells. The cells increase in number by the division of the pre-existing cells into equal parts, and each part possesses properties similar to the whole.

Each cell has a definite life-history. It grows, performs its office, and ceases to exist, either by dividing into two other cells, or by decaying, dissolving, and passing from the body as waste.

While the multiplication-rate exceeds the death-rate of the cells, the physical machine increases in size. This applies to the parts as well as to the whole.

When the multiplication-rate and the death-rate of the cells are equal, the living body, and all its organs and parts, remain in a state of equilibrium. When the cell death-rate exceeds the multiplication-rate, degeneration begins. When the cells are constructed of poor material, degeneration also begins.

When decay and degeneration have proceeded so far, that the body, as a whole, or some vital part of it, can no longer perform its allotted function, the existence of the body, as such, comes to an end, in what men call death.

General decay, degeneration, and death are the logical and inevitable consequence of the loss of the normal power of the body cells.

The loss of this power of the cells to perform their function, arises from the fault of the care-taker of the body. The actual and necessary needs of the living body are not fully supplied. The KIND of material is not furnished. Or the body is subjected to misuse and abuse.

As with the River, so with the body. There is a continual change occurring in the entire structure of the living body, by which its various parts are constantly dissolved and cast off as worn-out material, unfit for further use. Just as constantly, new parts, of new material, are built in their places.

The Law of Change is always working. It is incessantly engaged in the living body, disintegrating old cells and tissues, and rebuilding them again of new material. The cells, tissues, and organs of the body are thus always renewed and always ready to perform their allotted function.

From the Law of Change springs the Law of Regeneration. This is the quality that makes the living machine everlasting. This is the power that would make it go on forever. The body is incapable of being worn out, by reason of this power.

But the Law of Degeneration also springs from the Law of Change. This is the quality that makes the living machine go down to dust. This is the power that prevents the body from living forever. The body is subject to decay, by reason of this power. But the CAUSE of the body's decay and degeneration is not inherent in the body itself.

Whether the Law of Change brings into operation the Law of Regeneration or the Law of Degeneration, depends upon the conduct of man. For the causes of things are dependent upon conditions, as these bring into operation the Law of Production. It is man who, by his work supplies the conditions.

In speaking of the body's powers of repair and regeneration, Dr. H. Carrington says:

"The moment the last morsel of food is digested, and the stomach is emptied, a general reconstruction process begins; a new tissue formation, owing to the fact that the broken-down cells are being replaced by (new) healthy ones—which is Nature's method of repairing any destroyed or injured part of the organism.

"This replacement of cells means gradual replacement of tissue; replacement of tissue means that a new stomach has been constructed—a stomach that is NEW in every sense of the word—as new in every anatomical sense as is the filling in of wounds, or between the fractured ends of bones."—*Vitality, Fasting and Nutrition*, p. 490.

"The moment the last morsel of food is digested, and the stomach is emptied, a general reconstructive process begins." Here is a vital thought. Grasp it, make it yours, and use it for your profit and gain.

The reconstructive process begins after the stomach has emptied. The common custom of eating from three to five times a day, gives the stomach little time to empty itself. The bowels and stomach of most people are never empty. The bowels, especially, are always filled with foul, decomposing waste, of a highly poisonous character.

One meal a day of uncooked food, and not more than two, gives the stomach an opportunity to empty itself. But the way to empty the bowels is to fast for several days. A fast of one day in seven is, perhaps, sufficient for him who eats only once a day of uncooked food.

This phase of the matter will be more fully discussed under the title of Fasting. The foregoing remarks will impress the student now with the virtues of Fasting. They will prepare him to embrace the proposition, when presented.

Carrington is a wise doctor. He has written some remarkable books. He stands head and shoulders above most of that class referred to as the best doctors of the world. He is one of the few whose work is worthy of profound consideration. But his studies of physiology should have taught him that he is wrong in his statement, when he asserts that a "general reconstructive process" does not begin in the cells and tissues of the stomach, until the "stomach is emptied."

Various Anatomists and Physiologists have estimated the length of time required for the Law of Change to renew all the body structure. The estimates range from one year to seven years. Carrington thinks this time limit is too long. He adds:

"Now, since the present modes of living are monstrously abnormal; and since our bodies are, consequently, distinctly abnormal in composition and function throughout our lives, it follows that all such changes will be abnormal also, and that the length of time occupied in all such changes is, at the present day, and under existing conditions, entirely abnormal. . . ."

"It is my contention that, were cell-change not stunted and at times almost checked by the almost entirely monopoly of the vital forces for the purposes of digestion and elimination, it could be definitely ascertained that the body changes with the seasons, as does the snake's skin; and I look for the not distant day when science shall prove this to be a fact—by the observation of normal men and women, instead of diseased ones—the method now in vogue."—*Supra*, pp. 491-2.

The length of time occupied in the changes of the cells and tissues of the body is not a year, nor a season, nor a month. It is not a week, nor a day, nor an hour. Every particle, every atom, every molecule of every cell of the body, is changing every fraction of a second, from the moment of impregnation to the moment of death. These cell changes occur with such rapidity, that no part of the body is ever composed of the same cells of which it was composed a moment before.

A man has a new body every minute of his lifetime. The shape and pattern of the body remain the same, but the cells, of which the body is composed, are renewed every fraction of a second all through life.

Regardless of how many times the Sun rises and sets, a man's body, as to its cells, is never more than a fraction of a second old.

This being true, why does the body grow stiff and feeble, and finally go down in decay and death?

For the same reason that a man dies at the age of 25 or 30.

A man comes down with pneumonia and dies at the age of 30. The doctor says that the disease killed him. If the same man lived until he was 90, then came down with pneumonia and died, the doctor would say again, the disease killed him. If the same man lived until he was 125, then came down with pneumonia and died, the doctor would still say, the disease killed him. Each time the statement would be correct.

But what is Disease? What is this terrible demon that kills men? We have said that Disease is just another name for Degeneration. We have said that Disease is Degeneration.

Degeneration begins in the fluids of the parents from which is elaborated the seed of a new person. Their manner of living keeps the process of degeneration constantly active in their bodies. The seed from such bodies

is degenerated seed. From degenerated seed comes a degenerated infant.

The degenerative process continues until the birth of the new person. It continues during the lifetime of the new person. It continues in the body of the new person, until that body finally sinks down in death, killed by disease—killed by the slow and constant process of degeneration.

During the lifetime of a person, he is sick many times. Each instance of illness frightens him. He fears he is going to die. He calls a doctor to save him. The doctor gives him drugs, dope, and "medicine" to "cure" the disease.

The patient knows nothing about "disease." The work of the doctor proves that he is as ignorant as his patient is. Osler, the greatest physician that ever lived, said:

"We put drugs, about which we know little, into our bodies, about which we know less, to cure disease, about which we know nothing at all."

The Orthopath says, Disease is the cure! To combat disease, means to combat the curative processes of the body. To suppress disease, means to suppress the curative processes of the body. To reduce a fever, to stop a cough, to check a cold, to stop a discharge, as in venereal disorders, means to reduce, to stop, and to check the curative processes of the body.

Each instance of illness is instituted by the body, under the Law of Animation, for the purpose of setting into operation the Law of Regeneration. In other words, sickness—disease—instead of its being dangerous, is a blessing. It is a lifesaver. It is a Regenerative Process.

During illness, the patient is forced to quit most of his bad habits. He has no desire for sexual indulgence, for food, for tobacco, for intoxicants. By weakness he is compelled to lie in bed and rest, desiring only fresh air and water. His stomach and bowels are being emptied of their foul contents; his blood and lymph are being purified of their pollution; his degenerated cells, built of polluted blood plasma, are being disintegrated and their places are being filled with better cells made of better material. Regeneration is taking place.

As the Regenerative Process goes on, the patient in time rises from his sick bed, returns to health, and for a time feels better than he has felt for years. We are speaking of a patient who recovers under the care of a doctor who knows what disease is. Such a doctor is not a medical doctor, for Osler says that medical doctors know nothing at all about disease.

But the recovered patient immediately takes up his regular habits. He knows nothing about the Law of Life that govern human health. There is no school on earth where he could go and learn anything about the Law of Life, outside of the school of Orthopathy. So in his ignorance he again sets into operation, the Process of Degeneration.

Sickness (disease) becomes a Regenerative Process only when the Law of Life is known and observed.

When sickness is regarded as something dangerous, when it is considered as a deadly something that must be "cured," when the doctor who is called attempts to "cure disease" with various treatments, with poisons introduced into the body, the Law of Change is not given an opportunity to set into operation the Law of Regeneration.

Then what happens? Body function is hindered; the process of degeneration continues, and the patient goes

down in death. Disease killed him, says the doctor—while unenlightened people look on and believe.

When a patient of any age recovers from any acute ailment under the regular treatment of a medical doctor, it is because the Regenerative Process of the body is too powerful to be halted and suppressed by the doctor's drug poisons.

When a patient of any age dies from any acute ailment under the regular treatment of a medical doctor, it is because the drug poisons administered by the doctor are too powerful to be subdued by the body's Regenerative Process.

The living organism does not grow stiff and feeble, and finally go down in death because of the rising and setting of the Sun. These conditions are the direct result of degeneration.

Degeneration is a process, set into operation by the Law of Change. It depends directly upon the conditions supplied by man.

Regeneration is a process, set into operation by the Law of Change. It depends directly upon the conditions supplied by man.

Lesson No. 15 Chapter No. 40

LAW OF DEATH

No man ever died a natural death. There is no such thing as natural death.

Death is not a primitive attribute of living matter; it is of secondary origin, says Weismann.

As man-made machine comes to an end, because it is subject to the law of wear. But the law of wear has no effect upon the living body.

The existence of a mighty river would come to an end, if its needs and requirements were not constantly supplied. The river is not subject to the law of wear, but it is subject to the Law of Change and the Law of Kind.

The same law that governs the existence of the river, also governs the existence of the living body. They are both subject to the law of Eternal Formation, Eternal Production, and Eternal Change.

When the body is not regularly furnished with the KIND of material needed, the Law of Change sets into operation the Law of Degeneration. As the cells and tissues under the Law of Change, are renewed and repaired with faulty material, they grow defective, and degeneration results.

Degeneration is disease. The symptoms of disease are the signals of degeneration. Disease is a sign of degeneration. Death is a sequel of degeneration.

All men who have died, have gone down to their graves as a result of some phase of disease. Disease, when duly and truly understood, is merely that sign of physical degeneration. Death, when duly and truly understood, is merely the culmination of degeneration.

If a man live 500 or 1000 years, and die of so-called "old age," the CAUSE of death is degeneration. For without degeneration, there can be no Old Age, and Perpetual Youth becomes a fact.

There is no old age per se. Regardless of how long a man may live, his body, being renewed, hour by hour, and day by day, is never old.

Man's task is to locate and remove the cause of degeneration. This cannot be done by treating the sick body with poisons, or by cutting the sick body with knives.

We must go beyond the body, if we would locate and remove the cause of degeneration. For degeneration, like death, is not a primitive attribute of living matter. It is also of secondary origin.

The first tiny speck of protoplasm that enters into the construction of a new body, is of poor quality. It is elaborated from the vitiated fluids of the mother, whose blood and body, then and there, are in a degenerated state. Her own harmful living habits have made this so.

The father, likewise, contributes his share of the defective material. His harmful living habits have poisoned his blood and degenerated his body. The quality of the seed from him, can be no better than the blood and body that produce it.

The seed is the starting point of the new person. From the degenerated seed of the father and mother, there grows and comes forth, the faulty body of an infant. The degenerative process is continued, as the infant feeds on the faulty fluids in the mother's breast. When the child is weaned, the degenerative process is continued, as the child feeds on the faulty foods found on the dining table.

We must not forget that bad air and bad water contribute their share in the degenerative work. We must not forget that bad habits of all kinds, and all the excessive indulgences of civilization, contribute their mighty share in the degenerative work.

The CAUSE of physical degeneration does not inhere in the body. The causes of things are dependent upon occasions or conditions, as these bring into play the Law or Production.

We sow. The Law of Production begins to operate. We reap as we have sown. If the harvest is poor, the fault lies in the sowing, in the seed, in the soil, in the care, and so on.

Physical degeneration is a condition that results from violated law. The process is set in motion by man's errors of living. It is never halted until man breathes his last, except by instances of illness during his lifetime.

Faulty living habits are too numerous, to make it possible to assign a single one as being entirely responsible for physical degeneration. Every violation of law contributes its share to the whole. The effect of each violation is great or small, in ratio with the gravity of the violation, and the extent to which the violation is carried.

In these lessons, an attempt will be made to arouse the student's interest, and outline some of the many things men do, that have and leave a degenerative effect on the body. This will be sufficient to lead those searching for truth, to investigations of their own. Their discoveries will disclose what to do and what to avoid, in order for man to live healthy, happy and long.

Chapter No. 41

EARLY MEN OF THE BIBLE

If the student has grasped the full significance of the principles discussed in the foregoing pages, he is not now susceptible to shock if the statement is made that man should live at least a thousand years.

Those who profess to accept the Christian Bible as the last word in everything, have seen fit to reject that part of it which states that Adam, Methuselah, Noah,

and others, lived almost a thousand years. Many Christian scholars have sought in various ways to place certain interpretations on the Bible statements, in order to make them convey other meanings.

Some authors are inclined to believe, that the proper names employed in chapters 5, 10 and 11 of Genesis, are the names of persons. This belief is strengthened by the 11th chapter, which takes the lineage of Shem, and under the same names employs language distinctly enunciating their personality. Ages are ascribed to the men, severally, at which their eldest sons were born, and at which they severally died.

In spite of these specific statements, some writers hold that the names of those who are said to have lived so long, are not the names of persons, but are intended to apply generally to cities, countries, and tribes.

If it be true that cities, countries, and tribes are referred to by the proper names used from Noah back to Adam, there should be no reason why the same rule should not hold good from Noah down to Abram (Abraham). For the narrative leads us by regular, continuous and unbroken strides, from Noah, who lived 950 years, to Nahor, who died at the age of 148.

It is written that Adam begat Seth at the age of 130, and died at the age of 930. Seth begat Enos at the age of 105, and died at the age of 912. Enos begat Cainan at the age of 90, and died at the age of 905. Cainan begat Mahalaleel at the age of 70, and died at the age of 910. Mahalaleel begat Jared at the age of 65, and died at the age of 895. Jared begat Enoch at the age of 162, and died at 962. Enoch begat Methuselah at the age of 65, and at the age 365 "God took him." Methuselah begat Lamech at the age of 187, and died at 969. Lamech begat Noah at the age of 182, and died at the age of 777. Noah begat Shem at the age of 500, and died at the age of 950.

Noah was the last of the old patriarchs to pass the ninth century mark. Shem, his son, begat Arphaxad at the age of 102, and died at the age of 602.

From Shem onward, the decline in the length of the life-span is rapid. Arphaxad, Shem's son, begat Salah at the age of 35, and died at the age of 438. Salah begat Eber at the age of 30, and died at the age of 433. Eber begat Peleg at the age of 34, and died at the age of 464. Peleg begat Reu at the age of 30, and died at the age of 239. Reu begat Serug at the age of 32, and died at the age of 239. Serug begat Nahor at the age of 30, and died at the age of 230. Nahor begat Terah at the age of 29, and died at the age of 148. Terah begat Abram (Abraham) at the age of 70, and died at the age of 205, at Haran.

Terah also begat Haran, and Haran died before his father Terah in the land of his nativity, in Ur of the Chaldees. Haran is the first reported of the early Bible men to have died before his father.

The average length of the life-span of the nine generations from Adam to, and including, Noah, is 912 years. The average length of the life-span of the eight generations from Shem, Noah's son, to and including Nahor, is 350 years.

From Noah to Nahor is a space of eight generations. Within this time, the life-span decreased from 950, the age of Noah, to 148, the age of Nahor. This is a decline of 802 years within eight generations.

Nahor failed by 27 years to live as long as his grandson, Abram (Abraham), who died in 1853 B. C. at the age of 175. Nahor failed by 32 years to live as long as his great-grandson, Isaac, who died in 1715 B. C. at the age of 180.

Some authors attempt to show that the age of the old patriarchs was computed in years much shorter than those of modern times. They go so far as to reduce the period three-fourths.

If the last assumption were correct, then Methuselah lived only 243 years, Nahor 37, and Abraham 44. Enoch would have been only 16 when he begat Methuselah, Arphaxad less than 9 when he begat Salah, and Salah only 7 years old when he begat Eber. Adam would have been more than a great-grandfather at the age of 33.

It is written of Isaac, that his age was "an hundred and fourscore years," and that he died, being "old and full of days."—Gen. 35:28, 29.

Computing Isaac's age as above, he would have been only 45 years old at his death — surely not an age that the historian would consider as "old and full of days," when Isaac is but eleven generations removed from Noah, who lived 950 years.

Isaac was 50 years old when Shem died at the age of 602. Esau and Jacob were born just ten years after Shem's death. This brings Shem, the son of Noah, down so near to us, that we can almost reach back, in our imagination, and shake his hand.

The stretch of time, from the time of Adam to the death of Shem, brings us from 1656 years before the Flood to 500 years after the Flood — a total of 2156 years; but we seem to find nothing in the record to indicate, that any change has occurred in the method of reckoning years.

Regarding the early Bible years, W. H. Baxter observes:

"Man used to live healthy for 950 years of 364 days—thirteen times twenty-eight days — and was taller, healthier, and stronger, for we are told 'There were giants in those days,' and in the seventh and eighth chapters of Genesis we shall find numbers of days and months, by which we can verify this."—The Forgotten Law, p. 27.

The Flood began on the 17th day of the second month. The rain was upon the earth forty days and forty nights. The waters prevailed upon the earth 150 days (Gen. 7: 11, 12, 24).

On the 17th day of the seventh month, five months after the flood began, the Ark rested upon the mountains of Ararat (Gen. 8:4). (Five times 28 days are 140 days.)

The waters decreased continually until the tenth month. On the first day of the tenth month, were the tops of the mountains seen (207 days). On the 27th day of the second month, was the earth dried (Gen. 8:5, 14). (374 days after the flood began).

The language used regarding days and months sounds very modern. There is much evidence in history to show, that the Ancients were skilled in astronomy and mathematics. The mystery of the celestial bodies must have excited their curiosity from the first, and a study of these must have engaged their early attention.

There is nothing in the record to indicate that any change has occurred in our Solar System since man has inhabited the Earth.

The Earth turns on its axis once in about 24 hours, and makes a complete revolution in its orbit around the Sun in 365—1-4 days, or one year.

We believe that this has been the regular order of things since living forms first appeared on Earth. We believe that this order of things was known to the first men. We believe that on this order, they based their computations of days and years.

That little, if any, change in the method of computing ages and the length of years has occurred since the days of Noah, is found in the further fact that in modern times many men live to pass the century mark, while Joseph is said to have lived only 110 years, Isaac 180 years, and Abraham 175 years.

Physical science is unable to discover any physiological reason for death. It is even asserted that the human frame as a machine is perfect; that it contains within itself no marks by which we can possibly predict its decay; that it is apparently intended to go on forever; that death is not a primitive attribute of living matter; that there are animals which never die.

If a machine is made to go on forever, it should not be surprising that it could be made to last 900 years with a fair degree of care.

If a machine is made to go on forever, and wears out in 100 years, that is not enough to prove that the machine would not last 1,000 years, with better care.

Chapter No. 42

AGES OF MODERN MEN

Joseph died at the age of 110, Isaac at the age of 180, Abraham at the age of 175; Nahor, eight generations removed from Noah, died at the age of 148; and Peleg, only five generations removed from Noah, died at the age of 209.

These are some of the early men of the Bible, who lived so long that some hold that the names are intended to apply generally to countries, cities, and tribes; while others, admitting that the names apply to individual persons, hold that the ages of the old patriarchs were computed in years much shorter than the years of modern times.

These writers do not attempt to indicate just where the change occurred in the method of computing years. They simply make the assumption, and then assume that their assumption is correct.

We are making no claims nor assumptions, but are merely reciting facts as we find them. The student may accept or reject our statements; but the correctness of our contentions does not depend upon the student's action.

We believe that Methuselah lived 969 years, of years approximately the same in length as the 209 years that Peleg lived. We shall produce for consideration some evidence that has a strong bearing on the case.

In May, 1922, Bessie Fuchs died in New York at the age of 110 years, according to the press. She was survived by 52 children, grand-children, and great-grand-children. Her age at death was the same as that of Joseph of the Bible.

Indian Pete, of the Sibalny Pome tribe of Cahto, Calif., died March 20, 1930, at the age of 122. He was a papoose when James Madison was serving as the fourth president of the United States, and when Robert Fulton's

smoke-belching steamboat was astonishing an incredulous world.

The press of February 2, 1930, contained the following: "Son born to man, 116 years old. Stalinabad, Republic of Tadjikistan, U. S. S. R., Feb. 1.—A son was born to a beggar named Mashnun, who is 116 years old. The mother, age 50, is Mashnun's 17th wife."

In carrying out the 1927 census in Russia, government officials discovered nearly 150 persons who were more than 100 years old. The oldest found was one Ivan Shapkovsky, who presented a birth certificate showing that he was born in 1780, making him 147 years old. His age was one year less than that of Nahor of the Bible.

The press of July 11, 1922, reported the death of John Shell, of Greasy Creek, Ky., U. S. A., who left records showing that he was born September 3, 1788, and was therefore 134 years old. His first wife died a few years previous to his death, at the age of 122. During his lifetime he stated that he remembered a man's coming over the mountains from Virginia and reporting the death of George Washington, first president of this country, who died in 1799.

Zora Agha, a Turk, on November 15, 1929, celebrated his 156th birthday. His age was authenticated by a birth-certificate, by his minute remembrance of events in Constantinople that occurred more than 125 years ago, and by the testimony of a dozen old men, who declared that he was already a very old man when they were boys.

During the summer of 1930, Zora made a visit to the United States. The press on July 27, 1930, contained the following:

"Besides receiving distinguished visitors and admiring girls, and posing for cameramen on the roof of the Woolworth building, Agha sparred two rounds with his great-great-grandchild, Ahmet Mussa, lightweight champion of Turkey.

"Agha, an abstainer from liquor in either brewed or distilled form, came here on invitation of Prohibitionists, who wished to use him as an exhibit of what shunning the wicked bottle can do to help prolong human life."—Tulsa World, July 27, 1930.

Agha's age exceeds that of Nahor's by eight years.

On July 14, 1930, Camila Thaurance, a negro woman of Guantanamo, Cuba, died at the age of 157. She was playing with dolls when George Washington led his forces against the British during the days of the Revolution.

According to an Arabian newspaper, Rafai Rabel, an Arab living in El Kaitun, District of Mit Gamr, celebrated his 157th birthday on May 26, 1929. He states that he remembers George III, king of England, Louis XVI of France, and Napoleon when that great general was a young man. He distinctly recalls the massacre of the Mamelukes by Mahommed Ali.

Deep in the mountains of the province of Szechuan, China, lives Li Chung-yun, who claims to be 252 years old. He says that he was born in the 17th year of the reign of the Emperor Kang Hsi, and he relates many stories of his youth that would appear to prove that he actually remembers events that occurred during the regime of that long-dead Mongol monarch.

In further support of his claim to 252 years on earth, Li can count off 23 wives who have long since gone to

the land from which no traveler returns. His present and 24th spouse is, to him, a mere flapper of 60.

In the year 1827 the Chinese government sent an official felicitation to Li on the occasion of his 150th birthday. In 1877 the government again, by letter, congratulated him on his 200th birthday. In May 1930, at the age of 252, he was lecturing to the students at the University of Chang Fu.

He lectured twice each day, three hours at a time. age of 209.

Twenty-eight sessions in all were held. That task would have taxed the endurance of a man of 35, but Li left each lecture fresh in body and clear in mind.

Through the two weeks, Li behaved like a buoyant young student, who was enjoying the opportunity afforded him to tell some 1500 of his listeners, whose ages ranged from 18 to 80, about the secrets of long life.

To find a man mentioned in the Bible who lived longer than Li, we must go back to Eber, only four generations removed from Noah. Li is 43 years older than Peleg, only five generations from Noah, who died at the age of 209, as we have said.

A prominent physician of Istanbul announced in the Spring of 1930 that he had found a 163-year old woman named Fatma Harum.

William Edwards of Cardill, died in 1787 at the age of 167. Louisa Truxo, a woman living in Brazil, lived to be 174. Petrasch Zartan of Hungary died at the age of 186.

In 1741, the Hungarian John Roven died at the age of 172. His wife, whose death occurred the same year, was 164. Their youngest child, who was living at the time of their death, had attained the age of 115 years.

Thomas Winslow, one of Cromwell's captains, died in 1776 when he was 146 years old. Contemporary with him and of the same age, was Jonas Warren, of Ballydole, who died twenty-one years later at the age of 167.

A judicial inquiry was instituted at Cordova, South America, in 1780, to determine the age of a negress named Louisa Truxo. Another negress, who was known to be 120 years old, testified that Louisa was an elderly woman when she herself was a child. On this basis the authorities concluded that Louisa must be, as she claimed, 175 years old.

Henry Jenkins, born May 17, 1560, at Ellerton, in Yorkshire, England, died in December, 1670, at the age of 169 years. It is said of him, that he was a great admirer of Nature, and extremely fond of fruit.

The records of St. Leonhard's Church, London, show that Thomas Carn was born January 25, 1588, and died in 1795, being 207 years old. His age exceeded by two years the Bible-age of Terah, father of Abram, and by 59 years that of Nahor, father of Terah.

Peter Nedeff, of Sofia, was born in 1798, and remembered Napoleon. At the age of 124 he still plowed in the field, and walked erect. He confessed that he imbibed occasionally, but had never used tobacco.

Hadji Bairamoff, a Mahomedanized Bulgarian, at the age of 125 was still working as a butcher, in excellent health and vigor. He never used tobacco or intoxicants, and had never been ill. His diet consisted chiefly of uncooked vegetables, seldom tasting of cooked food.

In June, 1922, Sergt. Jan Krasanski, a Pole, at the age of 132, presented himself to the Polish government for his share of land provided by the government for war veterans. At the age of 22 he fought in the battle

of Borodino, 110 years before he claimed his land. The report stated that he was full of life and vigor and looked like a sturdy octogenarian.

Thomas Parr, of England, died in 1635, at the age of 152. He was 80 when he was first married. His second marriage was contracted at the age of 122. He remained a farmer until he was 130, being able, until then, to plow and thresh. The last of his days were spent in the luxurious court of Charles I, and it is believed that the change in his mode of living hastened his end. His remains were dissected by Dr. William Harvey, physician of the King, and showed no decay in any organ.

Peter Maffins, in his history of India, tells of Numes de Cugna, who died in the year 1566 at the age of 370.

Nestor, according to Homer, lived for 300 years. Dando, the Illyrian, passed the fifth century mark, making him older than Arphaxad, the grandson of Noah.

According to the press of 1923, Sadhu Swami, known in the Himalayas as Kalambi Baba, and living in the town of Karimganji, India, was said to be over 330 years old. He said that he remembered the first battle of Paripat, which occurred more than 300 years ago, and recalls events which took place during the last three centuries.

To find men in the Bible whose years exceeded those of Sadhu Swami, we must go back to Eber, who lived 464 years, and who was but four generations removed from Noah.

This seems to indicate that there is nothing on which to base the assumption, that the years of the early Bible years were much shorter than the years of modern times.

Chapter No. 43 LAW OF DIET

We have considered the great ages of the early men of the Bible. We believe they lived the length of time as stated. We believe the years of their days were comparatively the same in length, as are the years of this generation. We have found no evidence to warrant a contrary opinion.

From Adam to Noah, the length of the life-span varied but little. Noah lived 20 years longer than Adam lived, and 19 years less than Methuselah. After Noah, a startling change occurs. It is startling because of its greatness and abruptness.

The Flood passes into history, and Noah passes from the stage. Then it seems as though a new race of men come into being.

Noah lived after the Flood 350 years, and died at the age of 950 (Gen. 9:28). Shem, his son, was 100 years of age when the flood of waters was upon the earth (Gen. 7:6). He died at the early age of 602. His life-span was 348 years shorter than that of his father's.

This is the first recorded decrease in the length of the life-span of sufficient length to attract especial attention. From here onward, the decline is great and rapid. From Noah to Nahor, a matter of only eight generations, the life-span diminishes from 950 years, to the astonishingly low figure of 148 years.

Here is a variation so vast, that it cannot be disregarded. Here is evidence to indicate that great physical degeneration has begun in the body. In the search for better health and longer life, here is the field where careful investigation must be made. For here is the field where the first great decline appears to begin.

Let us examine the record with care. It is worthy of profound attention. It contains the secret for which men have long searched. Its discovery means the dawn of a new era in human life. It will furnish a foundation upon which future generations will erect a new civilization.

The physical frame cannot exist without nourishment. Under the operation of the law of Change, the body is continually returning to dust. But it is just as continually being repaired and renewed. The material for this purpose comes from the AIR, the WATER, and from the SOIL.

The food that comes from the soil, while last in the degree of importance, is usually the most difficult to obtain, and is subject to the greatest change. It is a case of the first being last and the last being first. This will be better understood as we proceed.

In considering man's food that comes from the soil, we shall follow the account given in the Bible; for that account seems to be based upon the accumulated experience of the ages. The account states:

"I have given you every herb bearing seed, which is upon the face of all the earth, and every tree, in the which is the fruit of a tree yielding seed; to you it shall be for meat."—Gen. 1:29.

At the conclusion of the third verse of Genesis II, strange though it may appear, another account of the Creation commences with the fourth verse of Genesis II. This account is altogether different from the preceding, and states that "the Lord God formed man of the dust of the ground."

Man appears to be the first thing God made. Then God plants a garden eastward in Eden; and "there he put the man whom he had formed." In this garden God made to grow:

"Every tree that is pleasant to the sight, and good for food."—Gen. 2:9.

That includes and concludes the first list of man's food that comes from the soil. The lower animals were also provided for in this manner:

To every beast of the earth, and to every fowl of the air, and to every thing that creepeth upon the earth, wherein there is life, I have given every green herb for meat; and it was so."—Gn. 1:30.

According to the law of diet as here given, there was not a flesh-eating animal then on earth. That assumption is confirmed by the science of Geology, which is gradually uncovering and interpreting the story of the Earth and its family, as recorded and related, with marvelous fidelity and accuracy, in the Great Stone Book.

The leaves of the Great Stone Book are made of layers of rocks, often thousands of feet in depth, which now cover the Earth's surface.

The history of the evolution of the Earth is written in this book, in the form of queer looking foot-prints, and the fossilized remains of skeletons of strange animals that once lived and thrived. It shows us the picture of a Golden Age of peace and plenty, of contented animals, subsisting on fruits, vegetables, and herbs. Slaying and slaughtering, the eating of flesh and the sucking of warm blood, were then unknown.

Prof. Elliott of Oxford says:

"There was not, so far as we are aware, any carnivorous creatures in the Eocene Period, or one that might

have been a serious enemy (of man—Clements)."—Prehistoric Man.

Henry S. Graves, U. S. Forest Service, observes:

"To primitive man, the forest furnished both food and a home"—Mentor, June, 1918.

J. H. Kellogg, M.D., comments on the matter as follows:

"Flesh-eating was, then, an acquired practice, which was the result of man's forced change from his original environment, where his natural foodstuffs were provided ready at hand in great abundance."—Good Health.

There was never a time in the history of humanity, when the question of diet, in its relation to health and disease, has received the earnest attention that it is receiving now. But each worker has his own pet theory, and his prejudice will not permit him to consider anything that fails to support that theory.

The Law of Diet is as simple and sure as the Law of Gravitation. It was understood by early man, just as it is understood today by the beasts of the field and the fowls of the air. But flood and famine diverted man from the true course, and it appears that the knowledge of diet was lost.

It has remained for Orthopathy to re-discover the lost Law of Diet, and restore it to the world.

Lesson No. 16 Chapter No. 44

THE GREAT COMMANDMENT

Then one of the scribes (a lawyer) came, and having heard them reasoning together, and perceiving that he (Christ Jesus) had answered them well, asked him, saying, Master, which is the great commandment in the Law? (Mark 12:28).

The narrator, in reply to the question, puts into the mouth of his hero, a statement uttered fifteen centuries before:—

"Hear, O Israel: The Lord our God is one Lord; and thou shalt love the Lord thy God with all thine heart, and with all thy soul, and with all thy might (Deut. 6: 4—5 and 10:12). This is the first and great commandment."—(Matt. 22:37, 38; Mark 12:29, 30).

The home of Eternal Life, so far as man is concerned, is the Temple of the Living God. The kingdom of God is within you, and God is within his kingdom.

When we feel the heart jump with joy, when we hear the soft strains of music, when we smell the perfume-laden air, when we behold the babbling brook, when we gaze upon the glories of the Universe, we should remember that man is not Life; that man can do nothing of himself; that man's existence is not separate from the existence of Eternal Life and Immortal Matter.

Our Material body is the visible home of the most majestic power known; the most mysterious Force in the Universe. In this home that Force will tarry with joy and pleasure, so long as the home, by its condition and deportment, is and remains a suitable and worthy abode in which that Force may perform its function.

Since man is the highest form which the Life Principle has made, and since it is only fitting and consistent that he should possess the potentialities of a perfect existence, man is endowed with power, as we have seen, not possessed in the same degree by any other creature. That power is the human intellect, about which more shall be said in the proper place.

By the use of his intellect, man alone is endowed with the capacity to understand his relation to the Universe, and to comprehend the law of his being, which is written

in the inward parts of his physical frame (Jer. 31:33).

The student is not expected to accept literally, the story of early man as related in the first chapters of Genesis. But the Bible appears as the best work of human hands that shows the course of man's decline, and one of the chief causes of his degeneration.

The first demand of the living body is food. Cell by cell, the body is constantly decaying; and cell by cell, it is constantly renewed and rebuilt. The process demands a constant and continuous supply of material. The material comes from the air, water, and from the soil.

The intimate and inseparable relation existing between food and the body, is a condition that should have been known from the beginning of the race.

No living thing can exist long without nourishment. Every plant, every animal, every man, is subject to that Law. The existence of all things depends upon its faithful and rigid observance.

Deny to the animal the nourishment it needs, and see how quickly it weakens and dies. Deny to the plant the various elements upon which its existence depends, and see how soon it withers and dies. Deny even the river the elements of which it is composed, and its destruction is sure and certain.

If there is a tittle of truth in the Bible narrative, the intimate and inseparable relation between food and the body, was known to early man. He learned quickly, by experience, that his first and greatest care, was that of protecting and preserving his body. His constantly wasting and wearing frame made food a primary requisite of existence.

In the beginning of the race, the Philosophy of the Ages has the Creator directing puny man's attention to the fact, that food is a paramount condition of his existence, and that the only way he can destroy his marvelous machine, is to misuse it, and neglect its needs.

By the use of defective building material, the body would be improperly nourished. It would be worse, for it would be poisoned and injured, making its decay certain and its death sure. For the purpose of self-preservation, a check must be placed upon the desire of self-indulgence, the fatal passion, the lust of the flesh.

Man's attention must be drawn to these facts. He must be solemnly warned, that when he fails to furnish his body with proper nourishment, in that day his physical frame will begin to degenerate, and "DYING THOU SHALT DIE."

To impress this truth vividly and indelibly upon man, the Philosophy of the Ages has the first law of the Supreme Ruler to relate to food. Down through the corridors of Time, there has sounded and echoed that Eternal Mandate:

God commanded the man, saying: Of every tree of the garden thou mayest freely eat. But of the tree of good and evil, thou shalt not eat of it: for in the day that thou eatest thereof, THOU SHALT SURELY DIE."—Gen. 2:16, 17.

Here is the first and the great Commandment. It strikes at the roots of the living body. There is no higher law governing the organism. The first law of living matter is the law of subsistence. Violate this law, and "DYING THOU SHALT DIE."

The body is built and sustained by air, water, and food. The quality and integrity of the body must reflect the quality of the substances of which it is made, and on which it is subsisted. The vast importance of

this, the First Commandment to man, will never be fully appreciated nor rightly understood, until it is considered and judged from his exalted angle.

Chapter No. 45

PHILOSOPHY OF THE AGES

In the day that thou eatest thereof, thou shalt surely die!

Man's most difficult task is Obedience. Freedom from all restraint is the only course that satisfies him.

To obey an order means to acknowledge the existence of a superior. Who finds pleasure in bowing his neck and bending his knee to a higher power? Who finds pleasure in the humility of obedience?

Every man hates a master. Every person craves unrestricted freedom, and longs to put away from himself all restraint and servitude. Every boy, subject to a teacher, wishes to be his own master, and thus be free. Every maiden wishes to leave her father's house and to marry, that she may act freely in her own home.

None find pleasure in the humility of obedience; yet—
What doth the Lord require of thee, but to do justly, and to love mercy, and to walk humbly with thy God?—Mic. 6:8.

To be free from all restraints, regardless of consequences; to be subject to no law, but of his own making; and to rule and oppress his fellowman, unjustly and without mercy, is the highest thought of every man. Into all flesh has this feeling penetrated so deeply, that the Disciples were wanting in will-power to resist it—

And there was also a strife among them, which of them should be accounted the greatest.—Luke 22:24.

Man was commanded against eating certain substances; and the penalty for disobedience, the highest penalty known, was prescribed to him and was positive.

Thou shalt not eat of it: for in the day that thou eatest hereof, thou shalt surely die.

It is more difficult for a person to refrain from doing a thing that he is ordered not to do, than to do what he dislikes to do. A man may abhor a certain task, yet will perform it with alacrity; but NOT to do a certain thing, as drink intoxicants, for instance, because the practice destroys health, is where he fails. It is the NOT that makes him fail. He ponders over that which he is ordered NOT to do, until all sorts of imaginations take possession of him.

Instead of the woman's pondering over the terrible penalty prescribed for violating the law, and in that ponderation find the necessary strength and courage to guide her safely in her course, she dismisses that salient feature from her mind, and cogitates on the fact that she may "freely eat" of all the trees but a certain one; and upon that part of the proposition she reflects thusly:

"We may eat of the fruit of the trees of the garden: But of the fruit of the tree which is in the midst of the garden, God hath said, Ye shall not eat of it, neither shall ye touch it, LEST YE DIE."—Gen. 3:2,3.

In the reflection, the woman modifies the penalty by the thought, "lest ye die." Here is the primary step each one takes in preparing to violate the law. He first deceives himself by false thoughts, then he attempts to circumvent the law.

After the first step is taken, the next is easier to take. The imagination becomes active again, and more fancies take possession of the mind. Man knows that

a just law cannot be reproached unless it first be misrepresented. So he continues the misrepresentation; he questions how a thing can be right or wrong; he denies to himself that there is danger in the contemplated act; he suggests advantages by doing the thing; and he can perceive no immediate harm in it.

Having changed "Thou shalt surely die" to "lest ye die," then came the next step:

Ye shall not surely die.—Gen. 3:4.

It is one of the fatal characteristics of man, to continue the misrepresentation of a thing, until the Will is constrained to coerce the Understanding to confirm it; and thus, to such a mind, a falsity becomes a truth.

In this manner, the penalty here is set aside, so that the law may be violated with impunity. To one standing apart, unbiased and thoughtful, it is clearly seen that this is a deliberate falsehood, fabricated for the purpose of putting into effect, the unlawful design forming in the woman's brain. Regardless of how preposterous a thought may be, if man can make himself believe it, he has reached his goal.

Since the way is now clear, so the deed may be done, the woman sees just what she wants to see:

For God doth know, that in the day ye eat thereof, then your eyes shall be opened; and ye shall be as gods, knowing good and evil.—Gen. 3:5.

That is the last straw. The thirst-crazed traveller thinks only of water, until he sees water in everything upon which he looks. He sees the mirage in the desert, which could not appear more real if he were gazing at the ocean.

Not only has the penalty been set aside, so that the law may be violated with impunity, but man sees great advantages that shall be his by virtue of the violation. His eyes shall be opened; he shall have more of the power and pleasure of contemplation than he now has; he shall have a larger compass in his intellectual views, and see farther into things than he now sees. In a word, "YE SHALL BE AS GODS."

Having in her own mind set aside the penalty, and dreaming of the many imaginary advantages to come as a result of the act about to be committed; the woman is drawn by an irresistible impulse towards the spot, which she could have shunned with all her strength.

Human nature never changes. It is the same now as then, and was the same then as now. Man seems never to be satisfied. He is restless and covetous. He is drawn towards things, well known to be detrimental and dangerous; but he sees imaginary advantages resulting from this course, and this weakens his Will-power to resist.

After making an inspection of the premises, the woman sees only that which she most desires to see. For all else has been shut out of her range of vision by her thoughts. As a man thinketh in his heart, so is he. Consequently, what the woman sees confirms what she has thought:

And when the woman saw that the tree was good for food, and that it was pleasant to the eyes, and a tree to be desired to make one wise; she took of the fruit thereof, and did eat; and she gave also unto her husband with her, and he did eat.—Gen. 3:6.

It is said of all the rest of the trees of the garden, that they were pleasant to the sight, and good for food. In the eyes of the woman, this tree was as all the rest;

it was as pleasant to the sight as any of them; it seemed as good for food as any of them; and she saw nothing in the color or the taste of its fruit, that was dangerous. What harm could the eating of the fruit do her? Why should this tree, more than any of the rest, be forbidden to her?

Neglecting the Tree of Life, of which he was allowed to eat, and eating of the Tree of the Knowledge of Good and Evil, which was forbidden to him, man deliberately exhibited his contempt for law. He would be both his own master and his own chooser; he would have what he pleased, and would do as he pleased. His act was that of contemptible disobedience (Rom. 5:19).

It requires much of the silent, urgent contemplation and persuasion to move man to commit the first doubtful act, or an act which he knows is wrong: The impelling power generated by silent contemplation and concentration, gathers force by the thought that the act is really not so serious as it at first seems.

But ere the act is hardly done, and often before it is fairly begun, the crime becomes apparent in all its horrible enormity, and man shrinks back into the protecting shadows of darkness, with a feeling of fear and shame gripping his heart.

The first impulse of the criminal is to flee and conceal himself from the world; for every one appears to know of his crime, and to point the condemning finger at him, saying: There is the guilty man!

We observe that the immediate consequences of the commission of the first crime is fear and shame:

And the eyes of both were opened, and they knew that they were naked: and they sewed fig-leaves together, and made themselves aprons. And they heard the voice of the Lord God walking in the garden in the cool of the day: and Adam and his wife hid themselves from the presence of the Lord God amongst the trees of the garden.—Gen. 3:7, 8.

With the crime committed, and with hearts filled with fear and shame, our first parents attempted to escape from the consequences of their crime. But the criminals are apprehended, are brought before the Supreme Court, and the trial takes place:

Has thou eaten of the tree whereof I commanded thee, that thou shouldst not eat? And the man said, The woman, whom Thou gavest to be with me, she gave me of the tree, and I did eat. And the Lord God said unto the woman, What is this that thou hast done? And the woman said, The serpent beguiled me, and I did eat.—Gen. 3:11-13.

Here is the first account of the first attempt of man to evade the responsibility of his transgressions. Who has the courage and the frankness to admit, that his sad condition is the result of his sinful deeds? Not one, not even from the beginning.

Wrongs are things that none is willing to own. To suffer from a wrong of one's own commission is a scandalous thing. Those who are willing enough to take the pleasure and profit of wrong, are reluctant to take the blame and shame of it.

Satan now enters upon the stage: To save himself from blame, man has endeavored to excuse and extenuate the effect of his misdeeds. He has conjured up an imaginary entity, in the form of Satan, whom he blames for all his woes. On Satan he attempts to cast the burden of his wrongs, that he may thereby avoid a part of the punishment.

By shifting the burden to the woman, the man hoped to escape; and by shifting the burden to Satan, the woman hoped at least to lessen the severity of the sentence that she was told would be imposed. Since she herself was not entirely to blame, she should not receive the full weight of the penalty.

This course man has followed so long, and with such profound effect, that all his works and writings are filled with the thought. He has God and Satan, Good and Bad, Health and Disease, all set in his mind, one against the other, each striving for prestige and power.

Man claims that Satan is tempting him, and he implores God, through the priest, to save him. He beseeches the physician to save him from Disease, which he thinks is hiding in some dark corner, waiting for a favorable chance to pounce upon him and destroy his body.

In line with the thought here expressed, it has ever been the teaching of the therapeutic world, that "disease" results from some cause over which man has no control.

This teaching may be due to the ignorance of doctors. Or it may have for its purpose the keeping of people in ignorance. Or it may arise from the fact that people are not pleased to be held accountable for their wrongs, and would naturally be offended, should the physician lecture the patient as being the victim of his own harmful habits.

A patient so criticised would summarily dismiss the "unfeeling" physician, and summon another, who knew more about "disease," and who had more sympathy for the sick.

In the foregoing parable, the Philosophy of the Ages has described the course of human conduct, and related the summation of human experience.

To this day, man believes in the fossilized doctrine of antithetical dieties or entities. God is given credit for that which is good, while Satan is charged with the responsibility of all that is bad. Man himself stands blameless; yet he alone is the actor, whether his conduct be good or bad.

To this day, people believe that man may gain what he does not lawfully deserve, and may escape the penalty of his sins," by having faith in a certain brand of religious teaching. They believe that all righteousness is as filthy rags (Isa. 64:6), and that criminals will be saved by faith in the doctrine of the Atonement.

The Philosophy of the Ages does not so teach. On the contrary, it teaches that, as ye sow, so shall ye reap; as ye give, so shall ye receive; as ye deserve, so shall ye be rewarded.

Chapter No. 46 THE GREAT SIN

There are many who think that man should not die and leave the world as he does. Some hold that man should not see death, nor be ill, nor feel physical pain. They hold that he should not experience the sorrow and suffering with which his home has been filled from the earliest recorded times. He is told of a day that will come, when these distressing conditions shall pass away (Rev. 21:4).

The Bible narrative asserts that by one man sin entered into the world, and death by sin; and that the wages of sin is death (Rom. 5:12). According to this statement, if sin were removed, death would disappear, since death depends on sin, and it being law, that if the

cause is removed, the effect can not exist.

The term death, as used here, can mean nothing more than the decay and dissolution of the body. Life cannot die. It is an eternal principle of existence. Matter is immortal and infinite. Life and Matter can neither decay nor die. Both are Eternalities.

"The wages of sin is death," declared Paul. Did he know exactly of the profound principle that lay back of that declaration? If the wages of sin is death, and if by "death" is meant the dissolution of the body, there must be back of the proposition much more than appears on its face.

In order for "sin" to destroy the body, "sin" must affect the body in some specific way. It must generate a destructive process within the body. For if a man curse his neighbor, fail to pay his debts, or even commit blasphemy against the so-called Holy Ghost, that of itself can have no degenerative effect on his physical frame, since its integrity and stability depend upon more weighty things than curses, payment of debts, and blasphemy.

It is true that the body may be destroyed by adverse mental conditions, arising from fear, fright, worry, jealousy, anger, etc. These conditions may so influence the body's function as to cause it to become abnormal, thus resulting in decay and degeneration.

The mental state may become so acute adversely, as to result in sudden death — as in the case of Richard Barrett, 60 years old, of Aberdeen, Wash., who on May 21, 1927, dropped dead on the street from intense excitement, it is said, at the news of Charles Lindbergh's safe arrival in Paris, France, in his flight from New York.

The press of June 18, 1927, states that Robert Moser, age 18, ill with appendicitis, died on the operating table from "sudden dilation of the heart, caused by extreme mental suffering and the fear that he would die," according to the statement of his physicians.

However, the statements of physicians cannot always be accepted as truth. Every one who has had any business associations with physicians, has discovered this fact.

The Great Sin that is described in the third chapter of Genesis, to which consistent reference is subsequently directed by the men of the Bible, and to which Paul referred, but the nature of which he did not appear to understand, is not that which primarily affects the mind.

The "sin" that entered into the world by one man, and death by "sin," is not that "sin" which ministers of the gospel find pleasure in expounding to a credulous world, kept in darkness by education that is calculated to mislead and deceive.

The "sin" here involved, and the "sin" which we shall notice in due time, is a "sin" that primarily affects the integrity and stability of the body, and subsequently affects the mind by degenerating the organ through which the mind is produced.

The Great Sin, the "sin" committed against the Temple of the Living God, is a "sin" that is committed daily, and many times each day, not only by doctors of divinity, and doctors of drugs, and doctors of all description, but by every man that ever lived, from the first to the present day.

The sin that Adam is said to have committed, is daily committed by the most devout Christian; and yet it is never noticed nor condemned by the most zealous evangelist. It is here that all religions fail.

A religion that does not teach the Law of Life, that does not direct humanity how to preserve and protect the Temple of the Living God, is one that does not meet the most elementary requirements of the race.

Chapter No. 47

THE GREAT SENTENCE

The trial is finished, the first criminals are found guilty, the great sentence is pronounced:

Cursed is the ground for thy sake; in sorrow shalt thou eat of it all the days of thy life; thorns also and thistles shall it bring forth to thee; and thou shalt eat the herb of the field; in the sweat of thy face shalt thou eat bread, till thou return unto the ground; for out of it wast thou taken: for dust thou art, and unto dust shalt thou return. . . .

And now, lest he put forth his hand, and take also of the tree of life, and eat, and live forever: . . . God sent him forth from the garden of Eden, to till the ground from whence he was taken. So he drove out the man; and he placed at the east of the garden of Eden Cherubims, and a flaming sword which turned every way, to keep the way of the tree of life.—Gen. 3:17, 18, 19, 22-24.

In passing sentence upon man, three salient features are involved: (1) A change of food, (2) a state of toil, and (3) a state of sorrow. Each one of these affects the stability and integrity of the body.

The existence of the body depends upon food that is complete and perfect in itself. It must be absolutely capable of sustaining the body and of supplying its needs. Nothing less will serve the purpose. Anything less leads to degeneration, decay, and death.

The green herb (Gen. 9:3) is not matured and complete. It is not capable of perfectly sustaining the living body. For its name, "green," from a Hebrew word, meaning unfinished, incomplete, imperfect, indicates that fact. The complete and perfect cannot come from the incomplete and imperfect. The law is, "Like begets like."

Also, there is a vast difference between the length of the life of trees, and of herbs. Some trees live and thrive for thousands of years. The "herb of the field" lives only a few short months, then withers and dies.

The duration and durability of a building depends upon the material used in its framework. The substance of trees and vines, which survive for centuries, being the most complete and perfect of foods, is certain to build more perfect, lasting, and resistant bodies, than foods composed of short-lived substances, some of which are so unsuitable for the body, that they actually degenerate it.

So it follows by logic, as well as by law, that the body of man, built and sustained of the substance of trees, must necessarily last much longer, under similar conditions, than if the material of construction should come from the short-lived "herb of the field."

There is also a change made in the manner of eating. In sorrow, and in the sweat of thy face, shalt thou eat.

Joy and sufficient exercise for health, are conducive to long life. Sorrow and toil endured until one is about ready to collapse from fatigue, shorten one's days by degenerating the body.

In discussing how the "curse" operates, Pastor Russel forgets about "holy angels" and the "Creator's pleas-

ure," and directs attention to the effect of the "curse" upon the living body. He observes:

"Viewing man as a whole (mentally, morally, and physically one) as the Scriptures do, we can see that the curse, the sentence of death, is in operation against every part and element of his being; and looking about us throughout the world, we find corroboration of this on every hand.

"As, in the decay of physical powers, the weakest point with some is the stomach, with others the muscles, with others the bones, so in viewing man as a whole, we find that in some the greatest loss, decay, depravity, has been mental, while others moral, with others physical, yet all are blemished in all respects; all were hopelessly 'lost' under this curse."—Atonement, etc., p. 408.

Instead of Russel's directing attention to a removal of the "curse" by discovering and obeying the law," he teaches the doctrine of Paul, that there can be no remission of "sin" without the shedding of blood.

That doctrine reached its zenith in the withering night of the Dark Ages, when it was a crime to teach man how to read and write, and when kings could not sign their own names. Its grip on humanity was prolonged by burning and murdering the thinkers, whose discoveries revealed the presence of Eternal Intelligence, and the operation of Eternal Formation.

The thinkers were killed, but their discoveries have lived; and they are now leading humanity from the darkness of theology into the light of a higher existence. Orthopathy is showing the way.

Russel continues:

"The very brief scrap of history furnished us in Genesis, together with the fact that the flood completely obliterated all evidence of the genius and handiwork of the father of our race, and his earliest progeny, give us no basis of calculation respecting his mental and physical abilities.

"For information we are thrown upon the fact that all God's work is 'perfect,' . . . that man 'sought out many inventions,' and defiled himself; and the fact that even under the curse, and under the unfavorable conditions in which man lived after being thrust out of the Garden of Eden—despite all these unfavorable conditions, so grandly perfect was this human organism, that the father of humanity was sustained for the long period of 930 year."—Ibid. p. 406.

Mrs. E. G. White, an able scholar and brilliant writer, states:

"As man came forth from the hand of his Creator, he was of lofty stature and perfect symmetry. His countenance bore the ruddy tinge of health, and glowed with the light of life and joy. Adam's height was much greater than that of men who now inhabit the earth."—Patriarchs and Prophets, p. 45.

That is a wonderful picture of primitive man. We do not believe that it is overdrawn. Experience has proved that man is the toughest and hardest of all animals. Were this not so, long ago the race had become extinct.

When Mrs. White discusses the Fall of man and the Plan of Redemption, she sees a vastly different creature. Her great Adam becomes a cringing, groveling criminal, whose salvation must come through the blood of a crucified Christ. She observes:

"None but Christ could redeem fallen man from the curse of the law, and bring him again into harmony with Heaven.

"Christ would take upon himself the guilt and shame of sin — sin so offensive to a holy God that it must separate the Father and his Son. Christ would reach to the

depths of misery to rescue the ruined race."—Ibid. p. 63.

Our theological students and Christian authors can not base their plan of redemption on universal law and order. And their plan contains no provision for teaching man knowledge and truth. It does not even regard man as an independent, intelligent being, who is capable of saving himself. He is left to wallow in his "sin," while his salvation must be accomplished by a Saviour, who comes between man and sin, and saves man from the penalty of his transgressions by assuming the burden of man's sin.

This doctrine has been highly profitable to theology, and highly acceptable to those pious ones, who are slaves of their habits, and are too weak to reform and live virtuous lives.

Theology teaches these, that they may escape the duty of living a righteous life, by believing in the doctrine of a crucified Christ. Today shalt thou be with me in paradise, is the comforting assurance of theology, to the guilty and the condemned, to the criminal and the murderer.

Truth teaches no such doctrine. It teaches that things are known by their fruits; that reward depends upon service, not upon sacrifice. It teaches that criminals must suffer; that nothing is gained by man's lulling himself into blissful ignorance, by believing that his crime will be borne by a crucified Christ.

Truth teaches these cold facts. They are not changed because they are not believed. Man's thoughts change him, but they do not change the things about which he thinks.

Theology makes no systematic effort to learn the law of life and teach humanity the truth. If it should do so, the church would disintegrate within a year. Even now it is rapidly declining, because the spread of knowledge reveals the absurdity of its doctrine.

QUESTIONS FOR LESSONS NOS. 13, 14, 15, 16

1. (a) What is Time? (b) Does Time really exist, or is it an invention of Man? (c) How does man determine or calculate Time?
2. (a) What is Space? (b) Does Space really exist? (c) How does man determine or calculate Space?
3. (a) Give the Law of Existence? (b) How is the Law of Existence violated? (c) What follows the violation of this Law? (d) Why does man shun investigation of the Law of Existence?
4. (a) What sets constructive and destructive processes into action in the human body? (b) How may the destructive process be transformed into the constructive process? (c) Why does a body go down in death?
5. (a) Is physical science able to offer man aid in his quest of health and longer life? (b) What is the attitude of science towards individuals who have valuable information to offer? (c) Name some functions of the body about which medical science knows little or nothing.
6. (a) State some of the reasons why it is erroneous to compare the living body with a man-made machine. (b) If a man-made engine possessed the powers of the living body, could it wear out or come to an end?
7. (a) State the law of use as to the living body and a machine. (b) Does the body decay or wear out from use? (c) When or where does degeneration begin in the human body?

8. (a) Why does the body decay? (b) Who or what is responsible for the body's decay? (c) How would you stop the process of decay?

9. (a) Does disease kill people? (b) What is disease? (c) What is the purpose of disease? (d) What takes place in the body during sickness? (e) What great difference is there between acute and chronic disease?

10. (a) State the Law of Death. (b) Does the Principle of Death inhere in the living human body? (c) Why does the body die?

11. (a) Do you believe man ever lived 900 years of our years in length? (b) Generally speaking, when the early Bible men lived 900 years, at what ages did they beget their first offspring? (c) Generally speaking, when these lived less than 500 years, at what ages did they beget their first offspring? (d) What conclusions do you draw from these Bible statements?

12. (a) Give the names and ages of as many persons as you can, not mentioned in Chapter 42, Lesson 15, who have lived more than 100 years. (b) How long do you expect to live? (c) Do you believe the knowledge contained in these lessons will aid you in increasing your life-span?

13. (a) Give the Law of Diet for man and animals as stated in the Bible. (b) Will you observe this law the rest of your life?

14. (a) Has the church recognized the Great Commandment? (b) Why has the church ignored utterly the Law of Life? (c) Is the church interested in man or money?

15. (a) Chapter 45 summarizes the Philosophy of the Ages; what is the substance of it? (b) Why does man believe in antithetical dieties or entities?

16. (a) What is the great sin? (b) Why does the church disregard this sin?

17. (a) In violating the Law of Life, three changes occurred; name them and state whether they affect the physical man or the spiritual man. (b) What does the church teach respecting this? (c) Why does the church make no effort to learn and teach the Law of Life?



Prof. Hilton Hotema taken in 1930 when he was 52



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Lessons Nos. 17, 18, 19, 20

Lesson No. 17, Chapter No. 48

THE GREAT CHANGE

The Golden Age of peace, and plenty, of contented animals and men, feeding on fruits and nuts, is now passing into history.

The Philosophy of the Ages speaks again, saying:

God looked upon the earth, and, behold, it was corrupt; for all flesh had corrupted his way upon the earth . . . And God saw that the wickedness of man was great in the earth, and that every imagination of the thoughts of his heart was only evil continually. . . . And the Lord said, My spirit shall not always strive with man, for that he also is flesh; yet his days shall be an hundred and twenty years.—Gen. 6:3, 5, 12.

Before the Flood man had an average life-span of 912 years. In eight generations after the flood, the life-span declined to 148 years. Now the Philosophy of the Ages says that it shall be 120 years.

After the earth had become corrupted and filled with violence, it was to be purged of its iniquity. Everything was to be destroyed, and a new start made. For forty days and forty nights the waters prevailed, and "all in whose nostrils was the breath of life, of all that was in the dry land, died."

The waters prevailed upon the earth 150 days, and from the ruins arose a new world. With it came a change in human affairs. This included a change in man's food, as follows:

"Every moving thing that liveth, shall be meat for you; even as the green herb have I given you all things. But flesh with the life thereof, which is the blood thereof, shall ye not eat."—Gen. 9: 3, 4.

Many authors assert that fruits, berries, nuts, melons, and herbs are the only true food provided for man. They hold that he ate no other until after the Flood. The evidence afforded by a study of comparative anatomy, confirms this view. It indicates that man was, and still is, a frugivorous creature.

This view is further confirmed by the fact, that various fruits receive early and prominent reference by the Philosophy

of the Ages. Among the first fruits mentioned are figs; so figs must have been known at a very early period. Apples and dates are also spoken of; and mention is made of the pomegranate, a fruit like the orange. Nuts and almonds were also known to early man.

But after the Flood, the eating of flesh appears to have become, for a time at least, a necessary condition of human existence. There was no other substance available for food. The flood of waters had destroyed the groves of trees and gardens of herbs from the face of the earth (Gen. 8:23.)

Some writers think that the grant to eat flesh was a further punishment; for we observe from this time on, that the duration of human life rapidly diminishes, leading to the logical conclusion that "disease" and degeneration must have vastly increased with the advent of flesh eating.

There is no good nor apparent reason to believe that until now, man had ever so much as thought of slaying animals and feasting on their gory and quivering flesh; nor that he had any more desire to do so, than a sheep has to suck blood like a wolf. Because of this plain fact of inference, man and all other animals had been fast friends.

Man had been deeply impressed with the condition, that he had dominion over the fish of the sea, the fowl of the air, and over every living thing that moveth upon the earth (Gen. 1:28). To that Divine Trust he had lived staunch and true; with the result, that no fowl and no animal had ever had the least occasion to fear that man was, or would ever be, its enemy and its slayer.

Hence, it is amazing to observe the change in the hitherto friendly relationship existing between man and other living creatures, that was now to occur by reason of the permission granted man to slay and destroy—

"And the fear of you and the dread of you shall be upon every beast of the earth, and upon every fowl of the air, upon all that moveth upon the earth, and upon all the fishes of the sea."—Gen. 9:2.

The account as related may be a parable or an allegory. It may be the product of human imagination. But the theory has worked out in practice. The conditions predicted came to

pass, although the prediction may have been made many centuries after the events occurred.

The great religions of the world, with the peculiar exception of the Christian religion, contain this point of likeness to one another, which is their teaching regarding the relationship of living creatures.

The religion of Ancient Egypt taught:

"The God who is immanent in all things, is the Creator of every animal: under His name of Ram of the Sheep, Bull of the Cows. He loves the scorpion in his hole: He is the God of the crocodile who plunges in the water . . . He is the God of those who rest in their graves. He alone maketh himself in millions of ways."

Confucius, one of the Chinese saviours, taught:

"The mind of man and the mind of trees, birds and beasts is just the one mind of heaven and earth, only brighter or duller by reflection. As light looks brighter when it falls on a dark surface, so divine reason is less bright in cow or in sheep than in man."

In the Koran, the Mohammedan Bible, we read:

"There is no beast on earth, nor any bird that flieth with its wings, but the same is a people like unto you. . . . All God's creatures are His family, and he is the most beloved of God who trieth to do the most good to God's creatures."

In one of the apocryphal gospels, Christ Jesus is represented as showing kindness to a homeless cat. Some of those who stood by remarked:

"This man careth for all creatures, are they his brethren and sisters that he should love them?"

And Jesus answered, saying:

Verily these are your fellow creatures of the great household of God; yea, they are your brethren and sisters, having the same Breath of Life in the Eternal.

This statement was sufficient to constrain the early Christian Fathers, Irenaeus (200 A. D.), Clement of Alexandria (210 A. D.), and Tertullian (220 A. D.), to exclude this book from the list that composes the New Testament.

Buddhism has always insisted on the Unity of Life, and it has been related that when the climbers of Mount Everest came upon a Buddhist Monastery, they were surprised to find that the wild birds and animals of that region showed no fear of man, but moved in and out among the humans as though members of one great family.

The account of the great change in the attitude of man towards beast, and of beast towards man, as related in the Philosophy of the Ages, is the product of human experience, summarized and recorded.

Time proves all things. These statements have stood the test of Time. This is evidence of their correctness. On them we base our case, let the decision of the World be what it may.

Chapter No. 49

LAW OF HABIT

After man's disobedience, several sentences were passed upon him. But none of these seem to have had the effect of shortening the life-span, until we come to the time of Shem, the son of Noah.

Shem was the first victim of the great change. He was the first victim of the Fatal Food. His case furnishes the first evidence of the vast and abrupt decrease in the life-span, which occurred immediately after the flood.

Habits, both good and bad, are formed and fixed, we know, while men are young. It is not the old man, nor the middle aged man, but the young man who first forms the habit of using tobacco, intoxicants, etc. After habits have become fixed with time and age, whether good or bad, they seldom if ever change.

When the necessity for flesh-eating came to pass, Noah was an old man, over whose head the Sun had soared for 600 long years. His habits, acquired many years before, were now fixed and unchangeable. He had never been one of those riotous eaters of flesh that we read about afterwards (Prov. 23:20).

To Noah, the thought of dipping his tongue in gore must have been extremely repulsive. He had never knocked a lowing oxen in the head with his stone-ax, nor stuck a long, keen stone knife into the throat of a squealing hog. He could not so much as think of it now, without a shudder running up and down his back-bone; and he was not going to commit these murderous deeds, even if such permission had been granted.

Noah had not been a raiser of live-stock. He knew nothing of such industry. Before the Flood he had labored peacefully in his groves and gardens, happy in his work and secure in his health. He had been a tiller of the soil, a producer of fruits, berries, nuts, melons, and vegetables, and a lover of the beasts and fowls.

From this assumption it is proper to conclude, that Noah did not take freely to flesh eating. It may as safely be assumed that he soon abandoned the use of flesh entirely, for himself at least. And it is extremely worthy of attention that we are particularly informed, that, as his first act, after the waters were abated from off the earth—

HE PLANTED A VINEYARD. Gen. 9:20.

Those four simple words give a most vivid, complete, and wonderful history of the occupation and food of primitive man, up to and before the Flood—covering a period of time of almost seventeen centuries.

Here is the vital knowledge, preserved for mankind, through the recorded act of this great and good personage, who comes to us from the other world, as it were. For Noah is the link that connects the Giants of yesterday with the physical and mental pygmies of today—the man before the Flood with the man after the Flood.

He planted a vineyard. The growing of fruit having been his occupation before the Flood, he would very logically engage in it again after the Flood, and would as naturally eat of the fruit, just as he had done so freely during the long centuries before. So the new "diet of degeneration and death" had no chance to deteriorate and destroy his body—as is shown by the fact that he lived 20 years longer than did Adam, and only 19 years less than Methuselah.

What has been said of Noah, cannot be said of his son Shem.

Shem, being a comparatively young man, his habits were untixed, and, like all young persons, he was ambitious, ready, and eager, in fact, to take up and try any new mode of living that might be presented.

He partook of the new diet. It had been roasted over the fire, it was salted and seasoned; it tasted much different than anything he had ever before eaten. He knew nothing of the danger lurking in its decaying cells. No experience had been recorded to guide him. So he made no effort to restrain his appetite, or to curtail the habit.

His daily indulgence soon produced an appetite that craved flesh, just as men of today, by habit, come to crave not only flesh, but coffee, tea, salt, pepper, vinegar, tobacco, intoxicants, opium, morphine and thousands of other injurious and deadly substances.

Thus the eating of flesh early became a fixed habit of Shem's—and the injurious results of it are duly and truly attested by the tremendous decrease of 348 years in his life-span from that of his father's.

A very severe penalty followed the permission to eat flesh.

A further punishment inflicted upon man for disobedience. Permission granted to violate a natural, a social, or a moral law, is accompanied with the condition that the permissionee accepts the penalty along with the permission.

We pass on, and notice that Arphaxad, son of Shem, lived only 438 years—a further decline of 164 years. The eating of flesh is doing its deadly work.

The next big decline comes in the age of Peleg, the great grandson of Arphaxad. He died at 239. The next, the case of Nahor, the great grandson of Peleg, who died at the early age of 148.

Thus, from the days of Noah to those of Nahor, a space of but eight generations, brings the astonishing decrease in the length of the life-span of 802 years.

This vast and sudden decline in the length of human life indicates the occurrence of some powerfully degenerating event, habit, or condition, that materially weakened and deteriorated the body.

What was it? The only thing found of record is the permission to eat flesh; for although several sentences were passed upon man before the Flood for violating the law of his being, yet none of them seem materially to have affected the length of life until the days of Shem.

Since it is in the days of Shem that appears the first account of flesh eating by man, we are forced to conclude that from the eating of flesh, and the other harmful habits that grew out of it, must have come the influence largely responsible for the serious degeneration of the physical body, and the precipitous decline in the length of its existence.

Chapter No. 50

GREAT DEGENERATIVE INFLUENCE

Shem, son of Noah, appears as the first victim to suffer from the Law of Degeneration. The facts inferred from the Bible narrative, connect the condition with (1) a change of food, (2) a condition of toil, and (3) a mental state of sorrow.

For the present we shall confine our discussion to the effect that flesh-eating has on the body. It is the belief of many that the curse of flesh-eating lies at the bottom of man's suffering and degeneration. We are unable to read anything else with equal force into the Bible record, to account for the vast and abrupt decline in the life-span, beginning with Shem.

From fruits, man went to herbs, and then to flesh. The changes may not have been made as a result of his own free will and accord. They have resulted from flood or famine, or both. In this instance, it seems that the Flood was the cause.

In the absence of other substances to eat, animals and men have been forced to turn to flesh, as a substitute. Today (March, 1930) in China, thousands of people are dying of starvation. The carcasses of the dead are greedily devoured by the survivors, who fight for the bodies like a pack of hungry wolves.

Ship-wrecked sailors often kill the weaker members of their crew, and feast on the flesh, in order to prevent starvation.

It thus appears that flesh-eating is an acquired habit. It has resulted from adverse circumstances that made the practice a condition of existence.

A thing once done, a habit once formed, are conditions that survive long after the necessity therefor has passed on and been forgotten. After a practice has been followed for ages, and the condition has been forgotten that made the practice a measure of self-preservation, the race comes to regard the practice as a natural one. Those who are firmly held in its grip, like the smoker, drinker, and glutton, regard the practice as beneficial. They regard what they do, as the right thing for others to do. Those not fully informed, are prone to fall in line without making proper investigation. The beliefs and opinions of the world are formed in this way.

During past decades, much reliable evidence has been accumulated, to prove that the eating of flesh is injurious and dangerous.

World renowned authorities are agreed that man has degenerated, and that his degeneration is due largely to his diet. Charles W. De Lacy Evans, M.D., M.R.C.S.E. says:

"Man has degenerated—this degeneration is due solely to his diet."—How To Prolong Life.

Robert McCarrison, M. D., Lieutenant-colonel, British Army Medical Corps, Honorary Surgeon to the Viceroy of India, states:

"I must confess that, with these examples before me, I find myself in accord with Hindhede, who affirms, and on unequivocal evidence, that the two chief causes of disease and death are food and drink."—Deficiency Diseases.

According to eminent medical authorities, flesh is that portion of man's diet which is chiefly responsible for his degeneration.

Josiah Oldfield, M. D., a prominent English physician, observes:

"My opinion, based on a quarter of a century's study of diet, is that the future lies with the fruitarian, and that the practice of flesh-eating will become more and more relegated to the lower classes and to the unimaginative minds."

John Harvey Kellogg, M. D., Battle Creek Sanitarium, remarks:

"Meats of all sorts, flesh, fish, and fowl, are highly toxic (poisonous) foods.

"1. Because meats as eaten are practically always in a state of decay or putrefaction, generally well advanced. All fresh, salted and smoked meats are swarming with colon germs, with

which they became infected in the process of killing. Some meats, such as liver and hamburger steak, contain more colon germs than the fresh droppings (dung) of animals. Oyster juice examined by Roderick was found to contain one thousand times as many colon germs as water dipped from the mouth of a city sewer.

"2. Meat is readily soluble in the digestive juices, and so leaves little residue and encourages constipation. The portion left forms a putrefactive residue in the colon which produces ammonia and other alkaline substances that paralyze the colon.

"3. Newburgh has recently shown that all meats contain a 'non-protein' fraction that is so highly toxic (poisonous) that when fed to rats, the animals within a few days suffer from acute nephritis and are soon dead. This highly toxic material renders change of flora almost impossible so long as meat is eaten. This poisonous material constitutes one-fourth of the weight of lean meat. This is the stuff that beef tea and meat extract and bouillon are made of."—Good Health.

The animal body, during life, is in a state of constant change. It is constantly decaying and as constantly renewed. The material for the renewal is supplied by air, food and drink. The worn-out and decayed parts pass from the body in various ways, principally in the form of gases and liquids.

When the processes of decay and renewal are balanced, the animal body enjoys health. In a state of health, we may correctly say that one-half of the body is in a process of decay, and the other half in a process of renewal.

Where is there a man so stupid as to advocate the use of decaying timbers from one building, for the repair of defects in another building, due to its timbers decaying?

Where is there a man whose common-sense is so deficient, that he believes in the theory and practice of using decaying tissues and cells from an animal body that is dead, to repair defects due to decaying tissues and cells in another that is alive? Yet, this is done daily by all who eat flesh; for, while the animal body is alive and in the best of health, one-half of the flesh thereof is in a process of decay.

But man does not eat animals while they are alive. He first murders them, then feasts on their decaying carcass, often after the animal has been dead for some days. So, instead of his eating flesh while only one-half of it is in the process of decay, he makes matters immeasurably worse by not eating of it until it is *all* in the process of decay. For the entire animal body commences putrefying the moment it is deprived of life; although the decomposition cannot be detected by the sense of smell, until it has progressed to a considerable degree.

Man, the most intelligent of all creation, is so heedless of his health, that he endeavors to renew his own decaying cells by subsisting on the decaying cells of a dead animal body!

Could anything be more contrary to reason? Could anything be more destructive to the organism? Could health and strength be expected to abide in such a body?

What are the results of this degrading habit? We have noticed some of them in the preceding pages, and shall notice more of them here. But after we have said all that we can say, the half will not have been told.

Professor Metchnikoff, the renowned scientist, spent his life in the study of longevity. His chief discovery was of the fact, that human life terminates principally because of putrefaction, with resultant auto-intoxication in the alimentary tract. He said that by excising the colon (large bowel), he could lengthen life ten years. He did this in certain instances; and his researches led him even to state, that if the human body had

no large intestine, or if putrefaction and poisoning in this organ could be prevented, he knew of no reason why life should not be prolonged to double its present average length.

The same "classical" medical reasoning that we hear from this "scientist," is the same senseless babble that fills the pages of medical books. When man forsakes "the straight gate and the narrow way" in matters of food, and endeavors to subvert the Law of Life by attempting to subsist on decaying flesh, it is logical to expect this abominable substance to continue to putrefy in the body, and, as discovered by Metchnikoff, cause its destruction.

An unlettered person of common intelligence, under these circumstances, would urge a change of diet, to substances more suitable for health, as the proper procedure. But "advanced and learned scientists," who find it expedient and profitable to teach patients that the body becomes deranged because of certain inherent defects, could stoop to no such simple, understandable methods.

Super-education and "science" are for a far different purpose. "Scientists" remain silent as to the cause of putrefaction and poisoning in the colon, largely because of their general ignorance concerning it, as is duly attested by their own manner of living, harmful habits, general poor health, and premature death. Then, instead of trying to discover and remove the cause, about which they know nothing, they advocate the correction of God's faulty workmanship, by a removal of the organ wherein putrefaction is most marked.

So Metchnikoff, believing in the infallibility of "science," and the fallibility of Eternal Formation, sought to improve the condition, not by a change of diet—not by a removal of the *cause*—but by a removal of the alimentary canal; and he did in fact cut away parts of it in some instances. For he said that he could see no other use of the large intestine, than as a "receptacle for putrefying poisons"; and he opined that the body is better off without it.

This theory led Metchnikoff, Lane, and a multitude of their followers, to reach the conclusion, that an organ which could become a source of so great mischief to the body, might well be eliminated. But hundreds of unfortunate victims, who submitted to the operation, bear eloquent testimony of the fact that this "scientific" methods of improving on the handiwork of God by cutting and mutilating the body was not a complete success.

However, Metchnikoff, of the orthodox scientists, was the nearest to being right of any of them, when he stated that the great problem of health and longevity, is to keep the alimentary canal free from putrefaction. And the fact that alimentary putrefaction is responsible for premature death and the beginning of disease should be shouted from the housetops to the farthest corners of the earth. Accompanying this intelligence should also be the simple directions that tell how to keep the alimentary canal free from putrefaction. For there is a way, a very simple one, and that way is not by cutting and carving the body.

While Metchnikoff was right in his theory, he was wrong in his method of putting it into practice. But medical teaching, and not Metchnikoff, is responsible for that. For when he urged the excision of the colon as a means of remedying the defect, he was merely endorsing and advocating the theory taught in medical schools, that God's faulty workmanship in the construction of the human body, and not man's harmful habits, is the primary cause of practically all disorders.

In searching for the cause that creates an internal bodily condition so disastrous to health, as to lead "science" to demand, as a remedy, the removal of the large intestine, we find the trail leading back to flesh food.

"Human life terminates principally thru putrefaction, with resultant auto-intoxication in the alimentary tract," opined Metchnikoff.

The nutritive part of lean flesh is practically all protein. Of all kinds of protein, flesh is the least resistant to putrefaction. This is easily proven by placing a piece of fresh beef by the side of some peanuts in a warm place. The peanuts contain as great a proportion of protein as the beef; but within a relatively short space of time, the beef will be unwholesome and putrid, while the peanuts will remain sweet and wholesome almost indefinitely.

The decomposition of food goes on within the body, the same as without, only much faster, due to the relatively higher temperature within the body. The remnants of flesh food, passing on into the large bowel, undigested and unabsorbed, are certain to putrify quickly, which they do, forming some of the most deadly poisons that chemists have any knowledge of. Therefore we are not surprised by Metchnikoff's declaration, that alimentary putrefaction is responsible for premature death and the beginning of disease, when we know these things, and also know how universal and extensive is the use of festering flesh for food.

According to an announcement of the Department of Commerce, the American per capita consumption of flesh in 1922 was more than 150 pounds. This means 150 pounds a year for every man, woman, and child in this country. Thus, in order to poison their bodies and the quicker to end their days, the American people spent approximately \$2,500,000,000.00 for this quantity of dead flesh in one year.

The average individual would be appalled if he had the slightest suspicion of the great danger lurking in flesh food. In order the better to realize this, we quote from Chester Levere:

"There are no poisons known to bacteriology that are more deadly, than the natural poisonous waste of the (animal) body. If a healthy person were compelled to breathe the poisonous carbonic acid given off from his own lungs, death would result almost immediately. Urea, eliminated by the kidneys, if retained, would cause death in a short time. (p. 37.) , "The human system produces enough poison in 30 or 40 hours to destroy life if it were retained in the body. The poison is the natural waste and worn-out matter which, in health is eliminated by the bowels, kidneys, lungs, tonsils, and skin." (p. 74).

As long as life lasts, poisons are continually formed in the animal body, due to its decay. At the time of slaughter, the body contains an average amount of poisonous waste in its cells, tissues, and blood. As function ceases with death, the poisons that are in the body when an animal is killed, remain there. To this, more poisons are added immediately; for, as we have said, the entire body at once commences putrefying the moment it is deprived of life

These poisons we take into our body, when we eat flesh. Out of this poisonous substance we expect the body to renew and repair its worn-out and decaying parts, and remain healthy and vigorous. If it fails so to remain, we never think of changing our habits, but instead we set out in search of "cures."

The various poisonous compounds formed in the body are

called ptomaines, leukomains, xanthins, sepsin, urea, lactic acid, uric acid, acetic acid, acetates, and numerous others. Experiments conducted on animals with some of these poisons have produced decidedly destructive tendencies.

For example, marked arterio-sclerosis (hardening of arteries) and enlargement and fatty degeneration of the heart, and a form of Bright's disease, in which the degenerated kidney resembled the large white kidney in man, have been produced by administering by mouth to animals over prolonged periods, small quantities of two especially powerful poisons produced in the large intestine by putrefaction.

Uric acid and urea, as we have said, are two poisonous compounds produced in the animal body by waste and decay. The amount varies with a change of diet. For example, a test of the urine of a man subsisting for some time on an exclusively vegetable diet, showed only 1.3 grains of uric acid, and 181.29 grains of urea excreted in 24 hours. A similar test in the case of an individual living for some days on a strictly flesh diet, showed 22.64 grains of uric acid, and 819.2 gains of urea.

From this it is clearly evident that the eating of flesh imposes upon the kidneys many times the amount of labor that they should perform. Such wholesale misuse and abuse of these sensitive organs is certain to have and leave serious results.

The kidneys do their best to filter these irritating, poisonous compounds from the blood, but become weak under the strain, grow sluggish, the eliminative tissues clog, and the kidneys collapse, allowing the compounds to remain in the blood and poison and pollute the entire organism. Then some chronic disorder manifests itself in the form of rheumatism, asthma, cancer, Bright's disease, diabetes, tuberculosis, etc., and medical science (?) says that the cause of "disease" is unknown, or is due to germs.

Lesson No. 18, Chapter No. 51

Food of Degeneration

Since the eating of flesh fills the body with excessive quantities of powerful poisons, and since we observe the harm that comes to man from this habit, it is well to notice the marvelous work of Eternal Formation, as demonstrated in the anatomy of the carnivora, whose body is provided with more efficient digestive machinery for destroying poisons that enter the body with food, than is the body of man.

One of the principal differences in this respect is found in the liver.

The liver is the largest gland in the body. Its chief function is to neutralize and destroy poisonous compounds entering the blood from digested food. This was proven by the ingenious experiment conducted by Eck, when a ligature was applied tightly to the portal vein close up to the liver of a live dog. With the portal circulation thus prevented from passing thru the substance of the liver, it was found that a dog died in three days on flesh food; whereas, if fed bread and milk, the dog would live for an almost indefinite length of time, even though the principal function of the liver be thus obstructed.

Pavlov proved that the liver performed thrice as much labor on a flesh diet as on a non-flesh diet.

The larger an organ, the more labor can it perform. In this respect, a vast difference is observed in comparing the human liver with the liver of the Carnivora. The liver of the

latter is much larger, in proportion to the size of the body, than is the human liver. The liver of a turkey buzzard, in proportion to the size of its body, is approximately four times as large as the human liver. It is also a marvel of poison-destroying efficiency.

Since festering flesh is not the natural food of man, he has not been provided with the same wonderful poison-destroying machinery as has the Carnivora.

In man, the liver and the kidneys receive approximately equal quantities of blood. Therefore, whether the compound is derived from external sources, such as a diet of flesh, or generated within the body by ordinary tissue changes, the human liver destroys only about one-half of the uric acid circulating in the blood, and the other half must be eliminated by the kidneys.

However, the liver of the Carnivora, being larger than the human liver, is also more powerful, receiving a much larger supply of blood in proportion to that received by the kidneys. Consequently, the liver of the Carnivora, due to its greater size, and the further fact that it receives a larger quantity of blood, is able to destroy, proportionally, ten to fifteen times as much uric acid as is the human liver.

Due to the remarkable difference in this part of the anatomy and its function, the Carnivora will remain in health while subsisting on decaying flesh containing such a quantity of poison as would soon kill a man. This is so because all but a very small portion of the poisonous compounds entering the blood from the digestion of flesh food, is quickly and effectively neutralized and destroyed by the liver, and very little extra labor is required of the kidneys to eliminate the poisons which escape thru the liver of the Carnivora.

The case is vastly different as to man. By eating a pound of beef, which contains about 14 grains of uric acid, a man would impose an enormous amount of extra labor upon the kidneys; for fully half the entire amount of uric acid absorbed, must be eliminated by the delicate organs.

This is intensely important to consider, for the kidneys are least prepared to deal with this poisonous compound; and uric acid, due to its insolubility, is eliminated by the kidneys with great difficulty. So a diet that unduly augments the amount of uric acid in the blood of man, soon leads to serious injury. When present in the blood in considerable quantities, it often happens that uric acid crystals form in groups in the kidneys, and kidney gravel is one of the evil effects.

The medical method is to remove the gravel by an operation, and teach the sufferer that the cause of the disorder is unknown, or due to germs.

More of such medical absurdity is exhibited in the feeding of patients.

The liver is a regular septic tank, a poison destroyer. Due to this fact, a pound of liver contains several times more poison than is found in a pound of flesh from the same body. Consequently, when man eats liver, he eats an excrementary gland that is thoroughly saturated with poisons. Yet liver is considered such choice food by the medical profession, that it is served to patients in the best hospitals.

As to the dangers of eating liver, J. H. Kellogg, M. D., observes:

"Experiments on animals have shown that the liver contains highly toxic proteins. Rats fed on liver show evidences of nephritis within a few days. An eminent medical authority

predicted that persons who eat liver freely, are practically certain to die of Bright's disease."—Good Health.

Dr. Newburgh, University of Michigan, states that experiments show the liver is a highly poisonous substance, and that so small a percentage as 20 per cent of the total food intake, was found to produce nephritis within a few months. When liver constituted two-thirds of the animal's diet, acute nephritis developed within ten days.

Sepsin, a poison so virulent that a minute dose given to a large dog caused death in a few hours, is always present in the bowels of persons who eat flesh, and is always found in putrid flesh.

As further evidence of the perfection of the work of Eternal Formation a study of comparative anatomy shows that man's alimentary tract is not designed to handle flesh food. The colon of the carnivora, as the cat, dog, tiger, etc., is small, short, and smooth, while the colon of man is long, large, and pouched, as in the anthropoid ape and all other frugivorous animals.

Under Comparative Anatomy, p. 335, in his book "How Nature Cures," Emmet Densmore, M.D., gives the length of the intestinal canal of flesh-eating animals as *three* times the length of the body, and that of man as *twelve* times the length of the body.

All dead bodies are on their way to decomposition and disintegration. The carnivora, with their short intestines, are fitted to expedite the decaying process. In equipping the carnivora with short digestive tubes, we behold another illustration of the profound wisdom of Eternal Formation, and of the perilous risk of man, with his long digestive canal, in attempting to alter his natural dietetic habits by adopting flesh for food.

Not having far to travel in the intestines of the carnivora, the flesh food residue passes thru the body so quickly, that putrefaction has little time to cause serious damage. But man, with his long intestines, delays the journey of the decaying carcass to its sepulcher in Mother earth, and pays the penalty of his error by suffering from a host of depressing ailments, which follow in the wake of the animal carcass continuing its putrifying process in the human intestines. This is the chief reason why pronounced toxic effects, and the extremes of intestinal toxemia, are commonly found in persons who subsist on flesh and suffer from constipation.

So much truth has been disseminated in recent years regarding the detrimental effect of flesh food on human health, that a noticeable decline in flesh consumption has occurred in this country. The largest packers in the world state that if there is not an increase in the demand for flesh, they will be forced out of business in the not distant future. The decline in the demand for flesh is a source of much worry among the leaders of this industry, and in a recent article, appealing to the public to use more flesh, appeared this statement:-

"But after all, what better argument for meat (flesh) is there than a thick steak, done to that perfect turn which brings out little plashes of rich juice; or mayhap smothered in onions or garnished with creole sauce?"

As we have said, dead flesh is thoroughly saturated with all sorts of decaying waste, in the form of gases and liquids, which was on its way thru the circulatory system to the eliminative organs, to be cast off as dangerous and unfit for further use, but hindered by death.

The "little plashes of rich juice," over which the lovers of flesh smack their lips, is nothing more nor less than this poison-

ous waste, in liquid form, arrested by death on its way to the eliminative organs, a considerable part of which would have been filtered from the blood by the kidneys, and passed off thru the bladder as urine.

Of course, when this effete, morbid, poisonous compound is heated, seared, salted, peppered, "smothered in onions, or garnished with creole sauce," the actual taste and odor of the urine, for instance, has lost its identification—but it is there just the same. By our sins we deceive no one but ourselves.

In view of what has been said, it is enlightening to observe the medical stupidity, and the woeful want of knowledge, regarding proper food for man, that is exhibited by eminent "scientists," who "protect the public health," who claim that certain "diseases" are "contagious," who force the sick into quarantine to "prevent the spread of disease," and who assert that their super-education, and the importance of their profession, elevates them above the law of the land.

To this end we shall quote Myer Solis-Cohen, A. B., M. D., instructor in Physical Diagnosis, University of Pennsylvania; Visiting Physician to the Hospital for Diseases of the Lungs, Chestnut Hill; Assistant Physician to the Philadelphia General Hospital; Physician to the Children's Dispensary of the Jewish Hospital, Philadelphia, taken from his work entitled "Woman—in Girlhood, Wifehood, Motherhood." Under the subhead, "The Diet for a Nursing Mother," he states:-

"The diet during the first three days should be very light, consisting chiefly of milk, with the addition of toast or crackers, gruel mush, grits or boiled rice and a little stewed fruit or baked apples. Gradually soft-boiled eggs, custard, junket, light puddings, broths, soups, jelly, sponge cake, ice cream, a charlotte russe, fresh fruit and vegetables are added to the dietary during the first week. The white meat of fowls, sweetbread, lamb chops, fish and oysters may be given during the second week, and beef, bacon, and potatoes during the third week . . ." (p. 211)

Under the subhead, "The Feeding of Older Babies," for those of 18 months to two years, he advises the following:-

"(1) Boiled rice or a baked potato mashed and moistened with dish-gravy or beef juice made as stated later, a glass of milk; or (2) Mutton or chicken broth with barley or rice in it, some bread and butter and some sago or rice pudding made with milk; or (3) A small portion of minced white meat of chicken or turkey, or minced rare roast beef, beefsteak, lamb, mutton or fish, bread and butter, a glass of milk." (p. 259.)

The "beef juice made as stated later," he says is made in the following manner:-

"Cut into rather thin pieces and very slightly boil one pound of round or tenderloin steak free from fat. Then cut into smaller pieces and express the juice with a lemon-squeezer or, much better, with one of the meat-presses to be bought at the shops. Season with salt. The pound of meat will give from 3 to 6 ounces of beef-juice or thereabouts. After it is obtained, the juice can be warmed only slightly, or it will coagulate. It may be given cold if desired. Occasionally infants prefer it sweetened." (p. 260.)

While one "scientist" carefully gives directions as to what to eat during the various stages and phases of life, it is enlightening to compare what others say on the same subject. As to beef-juice and beef-tea, Milner Fothergill, M. D., remarks:-

"All the bloodshed caused by the war-like disposition of Napoleon is as nothing compared to the myriads of persons who have sunk into their graves through a misplaced confidence in the value of beef tea."

Think of the babies and children given "beef-juice and beef-tea" under the orders of some of the eminent physicians.

We now know why 400,000 children under ten years of age die every year in the United States, as reported by the Census Director at Washington.

Let us go on and observe what still others have to say regarding the matter of eating festering flesh. Alexander Haig, M. D., F. R. C. R., writes:

"As animal flesh of all kinds contains either uric acid or substances equivalent to it, such as xanthins, these sources of albumen must be ruled out, for the blood cannot be kept properly free from this substance, while it is being continually introduced with every mouthful swallowed

"A pound of beefsteak contains 14 grains of uric acid. The amount produced daily and eliminated by a person living on a non-flesh diet is a little more than 3 grains, or less than one-fourth the amount that a person swallows with a pound of beefsteak. A pound of liver contains 19 grains of uric acid. A pound of sweetbreads contains 70 grains of uric acid.

"Chicken, fish, oysters and other flesh foods contain uric acid in about the same proportion as beef steak. The man who suffers from gout or rheumatism (or, cancer, etc.) is sick because he swallows these maladies at the dinner table."

Prof. Baron Cuvier observes:-

"Comparative anatomy teaches us that man resembles the frugivorous animals in everything, and the carnivorous in nothing. It is only by softening and disguising dead flesh by culinary preparation, that it is rendered susceptible of mastication or digestion, and that the sight of its bloody juices and raw horrors does not excite loathing and disgust."

Josiah Oldfield, M. D., states:-

"Flesh is an unnatural food, and therefore tends to create functional disturbance. As it is taken in modern civilization, it is affected with such terrible diseases, readily communicable to man, as cancer, consumption, fever, intestinal worms, etc., to an enormous extent.

"There is little need for wonder that flesh-eating is one of the most serious causes of the diseases that carry off 99 out of every 100 people that are born."

Robert Bell, M. D., F. R. F. P. S., of London, relates:-

"It is a remarkable fact that the flesh of dead animals, when entering into the dietary, not only undergoes the most offensive form of decomposition, and gives rise to the most noxious toxins, but also promotes the retention of these within the colon, and so favors their absorption

"It is apparent, therefore, that a flesh diet, which rapidly undergoes decomposition, is not in any way suitable to man. Nay, more; it is not only unsuitable, but it is dangerous, and is, to a large extent, accountable for the more serious diseases to which the human race is subject.

"How can it be otherwise, when we know for a positive fact that uric acid is increased as much as three times above the normal in flesh eaters, and the amount of urea, secreted by the kidneys, is doubled by the use of a flesh diet?

"Moreover, so far as my experience goes, and I have been in daily contact with this disease (cancer) for over 30 years, it is only those who indulge in the carnivorous habit who are attacked (with cancer), while I am unable to recall a single instance where it has occurred in those who are content to subsist upon food which Nature has so amply provided, and which, moreover, is strictly in accord with our physiological requirements."

We shall here digress sufficiently to expose more of the ignorance of the "scientific" protectors of the public health. There is a certain gland in the neck termed the thyroid. Tests have been made which indicate that the thyroid is made and put in the body for a purpose.

Metchnikoff believed that, to aid the body in its effort of self-protection against poisonous products, Nature has pro-

vided poison-destroying organs, among which is the thyroid. Breisacher proved that the poisonous products of flesh digestion will quickly kill a dog if the thyroid is removed; although after such removal, the animal's life can be indefinitely prolonged on a diet of bread and milk. This experiment established the fact that one vital function of the thyroid is that of a poison-destroyer.

The thyroid gland does not begin to develop in a child until the third or fourth year of life; and is not fully developed until some years later. Consequently, children are without the protection of the gland to neutralize and destroy the poisons of flesh-food digestion. Multitudes of children are injured and killed by parents, who in ignorance feed them flesh and beef extracts. Dr. Solis-Cohen recommends "beef-juice" for babies, and says that "occasionally infants prefer it sweetened." To one who knows what "beef-juice" is, the thought is nauseating and repulsive.

Flesh foods and beef extracts should *never* be given to children or invalids. People in ill-health, when given a beef tea diet, are made worse because of the imperfect functioning of the thyroid and other glands. The alkaloids of beef extracts irritate and produce a state of functional excitement, wherein the body strives to protect itself against the deadly poisoning. Such functional excitement is mistaken by medical doctors for invigoration.

Many of our Christian friends hold against us on the question of flesh eating. They point to the Scriptures as their authority for this, where it is written:-

Every moving thing that liveth, shall be meat for you; even as the green herb have I given you all things: But flesh with the life thereof, which is the blood thereof, shall ye not eat (Gen. 9:3, 4).

But this was after the Flood. Let us consider the question of diet as originally ordained:

And God said, Behold, I have given you every herb bearing seed, which is upon the face of all the earth, and every tree, in the which is the fruit of a tree yielding seed; to you it shall be for meat. And to every beast of the earth, and to every fowl of the air, and to every thing that creepeth upon the earth, wherein there is life (a living soul), I have given every green herb for meat: and it was so (Gen. 1:29,30).

What could be more clear and explicit than this law? The vegetable kingdom (herbs and trees) is the ordained source of sustenance, not only for man, but for "every thing that creepeth upon the earth, wherein there is life (a living soul)."

The destruction of animal life, as a means of procuring food, was not a part of the original plan. Since this law was not revoked by any subsequent command, there is no reason for assuming that it does not apply now, with the same force and effect, as at the time it was decreed.

Observe another feature:

Let us make man in our image, after our likeness; and let them have dominion over the fish of the sea, and over the fowl of the air, and over the cattle, and over all the earth, and over every creeping thing that creepeth upon the earth And God blessed them, and God said unto them, . . . have dominion over the fish of the sea, and over the fowl of the air, and over every living thing that moveth upon the earth (Gen. 1:26,28).

It seems that we have here a trust, the greatest on earth, placed within the power of man by a Father of Infinite Love and Wisdom, to be discharged with that fidelity which every faithful servant owes to the most ordinary master.

What is the common purpose of a trust? It is to invest a man with dominion over a thing, not to destroy and devour it, but to protect and improve it; and to be held strictly accountable for the slightest negligence or violation of his duty.

To have and hold dominion over, is not a license to ravage and prey upon. Or, if man were ordained to destroy and exterminate the animal kingdom, even then it would not follow, as a part of his duty, *that he should devour and digest it.*

An order to kill does not demand that the carcasses of the dead shall be eaten and passed thru the human digestive tract.

After God had given man dominion "over every living thing that moveth upon the earth," man was given a further command, "Thou shalt not kill."

This command was given for a specific purpose. That purpose, many think, was that the previous trust might be clearly understood, and the terms of it faithfully obeyed and performed. Yet, man has wilfully, wantonly, and corruptly, without the least justification for his act, except to satisfy and surfeit a debauched appetite, violated every letter and every spirit of the trust. For civilized man, the Christian, is the greatest murderer on earth. There is no corner of the world where dumb and defenseless beasts and fowls can hide in safety from his ruthless hand.

In this depraved manner has man, the lord of the Visible World, betrayed the sacred trust bestowed upon him by his Creator, violated the command given to enforce the terms of the trust and ravaged and destroyed the creatures of the animal kingdom, placed by his loving Father under his protecting care.

With a clear command before us as to our food, it seems strange that we should supplant this with a subsequent "permission" to do that which we have previously been commanded not to do.

"Those who prefer to make a permission instead of a command their rule of action," says Trall, "will find, on examination of the Scriptures, that wars, murders, polygamy, pestilence, famines, and many other vices and evils, have also been permitted, 'for the hardness of men's hearts.'"

Trall continues:

"To my understanding, this permission only more strongly enforces the prior commandment. If we may suppose that man, after the earth had been peopled for several centuries, by reason of some set of circumstances we cannot now ascertain, resorted to flesh-eating, in consequence of which he became so brutal, and ferocious, and depraved, and wicked, and filled the land with so much violence, that it was found necessary to wash the whole surface of the earth clear of his polluting presence, saving only a single family to preserve the race from utter extinction; and if then Jehovah had seen fit to reaffirm His original law in the appointment of man's food, the language employed, it seems to me, is admirably adapted to the purpose." (Hydropathic Enc. Vol. 1, p. 400)

Those who delight to "dip their tongues in gore," and feast upon the quivering flesh of slain beasts; those whose predaceous appetites demand the killing of more than 10,000 hogs for food every hour in Europe alone, and are so punctilious as to refer to certain passages of the Scriptures in justification of their actions, would do well to remember that it is also written:-

The swine . . . is unclean to you. Of their flesh shall ye not eat, and their carcass shall ye not touch; they are unclean to you (Lev. 11:7, 8).

Despite this clear command, the flesh of swine adorns the dining table of multitudes of homes, wherein abide many of the leaders of the Christian Religion.

Let us observe in particular the body of this beast. J. H. Kellogg, M. D., in his book, "Monitor of Health," says:-

Straighten out the foreleg of a hog, observe it closely, and on the inner-side, a few inches above the foot, will be found an open sore or issue. This is a wise provision of Nature. Grasp the leg high up, and press downward, and a mass of corruption pours out. This open sore is the outlet of a sewer—a scrofulous sewer, and the discharge from it is scrofulous matter. Fill a syringe with mercury, or some colored injecting-fluid, and drive the contents into this same opening, and we can trace all thru the body of the animal, little pipes or tubes, communicating with this opening.

What must be the condition of the body of an animal, so foul as to require a regular system of drainage to convey away its teeming filth? Sometimes the outlets get closed by the accumulation of external filth. Then the scrofulous, ichorous stream ceases to flow, and the animal soon sickens and dies, unless the owner speedily cleanses the parts, and so opens anew the feculent fountain, and thus allows the festering poison to escape.

What a dainty morsel those same feet and legs make. What a delicate flavor they have, as every epicure asserts. Do you suppose that the corruption, with which they are saturated, has any influence upon their taste and healthfulness?

The process of fattening hogs is one of disease. The hog in his native state is healthy (and lives to the age of 300 years says Dr. Densmore). A fat hog is one which is grossly diseased. No domesticated animal is so sickly as the hog. It is the excessive feeding to fatten it that ruins its health. That this is the condition is shown by the condition of the liver. The liver of all fat hogs are masses of disease. But these livers are all eaten by human beings. Experienced butchers assert that the livers of fat hogs are extremely apt to be affected with abscesses. Yet the livers of butchered hogs are used for food.

In the last analysis, the evidence of whether a substance used for food is either beneficial or detrimental, is the ultimate effect that it has on the body. When the claim that flesh is fit for food is forced to stand on this foundation, we perceive how false is the claim.

When certain disorders of the body will not disappear, until after flesh is omitted from the diet; and when they do disappear if this be done, it is not only evidence that flesh food is injurious, but it is also evidence that flesh food is the underlying cause of the disorder; for when and if the underlying cause is removed, all disorders will and must disappear.

Many disorders of the body soon disappear when flesh is omitted from the diet. In the Edinburgh Medical and Surgical Journal, No. 166, is found this statement:-

"We have known various persons who have been delivered from painful and obstinate disorders by giving up the use of animal food entirely; and others in whom disorders of the nervous system and the chest have been very much relieved by the same procedure."

Dr. N. J. Knight records the following case:-

"Mrs. A., infected with scrofula of the left breast, and in a state of ulceration, applied to me two years ago. The ulcer was then the size of a half-dollar, and discharged a considerable quantity of imperfect pus. The axillary glands were much enlarged; and, doubting the practicability of operating with the knife in such cases, I told her the danger of her disease, and ordered her to subsist upon bread and milk and some fruit, drink water, and keep the body of as uniform

temperature as possible. I ordered the sore to be kept clean by ablutions of tepid water. In less than three months the ulcer was healed, and her general health much improved. The axillary glands are still enlarged, though less so than formerly. She still lives simply, and enjoys good health; but she tells me, if she tastes flesh-meat, it produces a twinging in the breast."

Trall gives the following information relative to the effects of eating flesh:-

" . . . Medical authorities generally agree that flesh diet makes the blood prone, and the whole body disposed to, the inflammatory and putrid diatheses . . . Digestion with the vegetarian is unattended with that disturbance, heat, irritation, oppression of the stomach, and dullness or drowsiness of the head, which flesh-eaters generally experience . . .

"That vegetable-eaters are not only less liable to epidemical and infectious diseases of all kinds, but much more easily cured of them, . . . is a fact pretty well established by the observation of medical men. Wounds, burns, and scalds are also more easily and more perfectly cured . . .

"The Bible Christians, of Philadelphia, who have adopted vegetable diet on religious convictions, have always, as a society, been remarkably exempt from epidemics, which have frequently prevailed around them. During the cholera seasons in New York (1832, 1834, and 1849), no persons whose habits of living approximated very nearly to the 'Graham system' died of the disease; and no one who lived strictly according to his teachings had an attack. Missionaries and teachers have, within a few years, gone from the United States to the sickly parts of Africa, and, by adopting an exclusively vegetable diet, escaped all the attacks of diseases which others have experienced, and which are usually considered as incidental to the climate. The same is true of Northern men who in removing to or traveling through the Southern states, have adopted the vegetable system of diet.

"But more striking and, to many minds, more convincing evidence, is furnished in the numerous examples of chronic diseases and malignant ulcers, which have resisted all remedial agencies under a mixed diet, and yet have been readily healed under a vegetable regimen. Dr. Lambe succeeded, in cases of cancer, scrofula, consumption, and other maladies which had progressed to the incurable stage, in arresting the ravages of the diseases, and protracting the period of life for many years, by a strict vegetable regimen . . . The celebrated Dr. Twitchell, of New England, has recently cured himself of a malignant tumor of the eye, which has troubled him for ten years, and which had been once excised and once cauterized, with but temporary benefit, by adopting a diet of bread and cream. I have now a patient under treatment for a tubercular affection of the lungs, who, two years ago, was afflicted with a foul and malignant ulcer of the cheek, deeply involving the upper maxillary bone. After trying the ordinary medication in vain, and submitting to the operations of cutting and cauterization without avail, the patient, against the remonstrances of friends and physicians, abandoned flesh-eating, after which the ulcer rapidly healed."—(Hydropathic Enc. Vol. 1)

Heart, liver, kidney, stomach, and bowel disorders, cancer, appendicitis, rheumatism, and many other grave derangements of the body, so common in countries where flesh is an important part of the dietary, are rare among those who subsist on fruits and vegetables.

Cancer has greatly increased in the last three decades, and is sending more Americans to premature graves than any other nationality. Diabetes and Bright's disease are reaping a heavy toll. Few American adults are free from liver disorders; and every twelfth death results from kidney disease. Disease of the heart and blood vessels are more prevalent in this country than anywhere on earth. The American people are the greatest flesh consumers in the world.

Two species of tape-worm, commonly found in man, are due to flesh eating.

Trichinae, a worm so small that several hundred thousand of them may occupy a single cubic inch of flesh, are

communicated by the eating of swine flesh. When taken into man's body, a single worm may produce a thousand young, which at once commence boring into the body in every direction, lodging at last in the muscles. The pain and general disturbance of the system is so severe, that few constitutions can withstand and survive the terrible ordeal. If the body is not destroyed at once, the individual lingers along, a constant sufferer, his system filled with disgusting worms, for which there is no relief.

Some of the most successful sanatoriums have relied wholly on a rigid abstention from flesh food for the relief and recovery of patients. People enter these institutions, apparently in the last stages of some so-called incurable malady, with no encouragement from their home physician. After a few weeks or months on a diet of uncooked fruits and vegetables, they are "cured", and return home, healthy and happy. The same results, almost magical, may be had in one's own home, if patients only knew, and then possessed the will-power to govern their debauching appetites.

People who subsist on flesh would soon go mad or die, but for the protection from poisoning by eating flesh that is afforded by the use of fruits and vegetables. These latter foods serve to neutralize, to some extent, the pernicious effects of the poisoning produced in the body by putrid flesh.

Lesson No. 19, Chapter No. 52

CLIMATIC CHANGES

Some students have asserted that changed climatic conditions following the Flood were directly responsible for the radical shortening of human longevity.

Prof. Vail has accumulated information, which he presents to show that a time was when the earth was enshrouded in heavy vapor which, like modern cloudy weather, hid the sun from human view. He considered this condition as more favorable to longer life. He refers to the Bible for evidence to show the decline in longevity immediately after the Deluge, which he says cleared away the heavy vapor, and allowed the sun's rays, for the first time, to shine directly on the earth.

Vail Observes:

"So far as I have been able to experiment with aqueous vapors, in the sifting out of the death-dealing powers of the sunbeam in connection with plant and animal life, I have been led to conclude that in all canopy times the vapor heavens were most competent averters of physical dissolution. They put a decisive check upon the actinism of the sun's rays, thus giving the life-imparting beam complete ascendancy.

"When, then, I learn from Genesis, and from the ancient annals of China and other Oriental and classic lands, that man lived nearly a thousand years, I am forced to use the fact as canopy testimony, and we shall see later how man's great longevity declined immediately after the flood, and learn the reason why.

"As I see it, the great longevity of antediluvian man is a monumental assurance that in the night-time of history, the sun was concealed from the eyes of the world. As surely as the solar beam is a vitalizing, seed-perfecting, fruit-producing, and fruit-maturing power, it is a death-dealing power. Seed-making or fruit-giving is death, whether it is operative in the flower, the beast, or the man.

Lifetime of all nature today is decreed at the very fountain-head of light, and the slightest change in the active chemism of the sun-beam would eventually be recorded in the longevity of man.

"As surely as sun-power has given the plant the power and tendency to reproduce itself and die, so surely has it given

humanity and all nature the power and the inclination to progenerate and degenerate.

"So far as antediluvian records show, man's generative power was not nearly so active before the flood as it is today.

"We may talk of the natural life of man as ending at three score and ten, but physical and exotic causes have decreed the limit, and 500 or 1,000 years were once as surely a natural limit as 70 is now. In fact, I see no physical reason why a vapor canopy could not have been so perfect a sun controller and world-master, as to make an Eden of immortality. . . .

It is written, "I do bring a flood of waters upon the earth."—Gen. 6:17

Regarding this, Vail remarks:

"This is another celestial declaration. Deity proclaimed it, as Deity proclaims the coming tempest today. But the portentous announcement was the visible approach of the dread calamity.

"Such an announcement would never have been made, if a heaven had not been made 'in the midst of the waters.'

"It was made in harmony with the fact that the sun and moon were yet unnamed. It was made in harmony with the fact that there were 'waters above the firmament,' which had the form of a sun-concealing canopy, forever floating down to the poles, and nearer and nearer to the earth.

"I do not see how the philosopher can look back over this canopy of testimony and not see the coming flood as an inevitable result of 'a heaven of waters close to the earth.'

"There is not a passage to be found anywhere in the earliest Hebrew that can lead us to suppose that antediluvian man ever saw a rain or tempest, the sun or the blue sky.

"If the firmament sent its blast on fiery wings with echoing thunder, the penman has not told us; but he has told us again and again that the sun and true skies were hidden, and he tells us that he had heard there was a day WHEN IT DID NOT RAIN.

"I think it was Max Muller who said he had never found in the pages of the Rig Veda, nor in Homer's writings, nor in the Old Testament, a distinct reference to the BLUE sky. He might have said with no fear of contradiction, "NOR A FREE OR IMMORTAL SUN." It was always a subaltern sun."—Deluge and its Cause, pp. 52-55.

On page 79 Vail continues:

"We are told that man, whose longevity was nearly a thousand years during the time of a concealed sun, began to die at an earlier age immediately after the flood, and in a few centuries after the sun came into power, man put off this mortal coil at the age of three score and ten.

"The change coming as it did in the path of a mighty world-change impelled by the implacable advance of the sun's energy, seems to force the conclusion that great human longevity was an essential feature of an old human environment, while the length of human life reduced to an amazingly low limit, was made a necessary feature of the new order, and this brings in the active chemism of the sun beam as responsible for the low mortality of the race."

Vail's observations are more evidence to show the proneness of man to cast the burden responsible for his degeneration upon anything but himself. Modern experience demonstrates effects contrary to the conclusions of Vail. Proper growth and development, of both plants and animals, are dependent upon sunlight. Many human ailments appear as a result of insufficient sunlight. They disappear when the patients expose their nude bodies to the sun's rays.

If Vail's theory were correct, we should find evidence of the effect of the sun's rays upon Noah. But the testimony is that Noah lived after the flood 350 years, finally dying at 950, an age only 19 years shorter than that of Methuselah, and 20 years longer than that of Adam.

Shem lived to the age of 602 years. Arphaxed, son of Shem, died at the age of 438. For the next two generations in the lineage of Shem there was little change in the life-span; but

the next generation makes a radical drop to 239 years of life-span. Four generations later in the chronological records brings us down to Terah, father of Abraham, who died at the age of 205. He was the latest one given in this line of descent to reach the two-century mark.

The life-span phases of this chronological record present an interesting study. For the slow and gradual decrease that occurred, is strong evidence against the theory that climatic changes following the Flood were responsible for it.

Furthermore, the Process of Evolution is always upward and onward. There was a time when no living thing could exist on earth, as we have seen. Then by a slow, gradual process of change, or evolution, these conditions improved and came to be harmonious to the existence of living creatures.

At first, only the lowest living forms could exist. Then as conditions improved, more higher forms appeared, until at last the ideal condition was reached, when the earth became a harmonious environment for the appearance and existence of Man—the highest of all living forms.

This is in accordance with the Law of Evolution.

Now, if the theory advanced by Vail were correct, it means that the Law of Evolution, after the appearance of Man, reversed its course, from an upward to a downward transit. It means that after the appearance of Man, the Law of Evolution, which produced conditions favorable for Man's existence, set about to produce conditions unfavorable for Man's existence.

Vail thinks that after Man appeared, the Law which produced him then changed its course of operation, and set about to destroy him.

Orthopathy holds that after Man appeared, the Law which produced him did not change its course of operation, but continued upward and onward, and is doing the same today, and will continue forever doing the same, in its unchanging course, producing in each age conditions growing more favorable for the existence of Man.

But the inventions of Man are destroying him, and he attempts to shift the burden of his crime to the Operations of Eternal Production.

CHAPTER NO. 53 LAW OF HYBRIDITY

The chief cause lying back of the precipitous decline in the length of the human life-span, after the days of Noah, must have been some internal influence. The decline must have been the result of constitutional, structural, and functional degeneration, that arose from an influence that induced gradual and certain changes in the cell structure of the glands of the body.

Any and all changes that occur in the composition of the cell, will produce a corresponding change in the function of the glands, and in the quality of the fluids elaborated and excreted by the glands.

It is a recognized fact that the living organism is a very sensitive medium to both external and internal influences. These influences will produce within the body, various (1) constitutional, (2) structural, and (3) functional changes, of a more or less permanent character. These influences, if unfavorable will produce degeneration of every cell of the body;

and the degeneration may be and is transmitted from parent to offspring.

Science has long engaged itself in the work of discovering and explaining some of the various effects, produced in the body, by external influences. It has gone so far as to declare, that the body is what it is because of the effect and influence of environment. To a less extent, science has described some of the minor effects that *internal* influences have and leave on the organism.

In the Chapter entitled Law of Development, we have briefly described some of the chief effects that food has on the body. For instance, by a change of food, young worker bees, while in the comb, may be changed into queen bees. By feeding flesh eating birds on grains, various changes have been produced in their muscles, and in their digestive organs and glands.

It is a demonstrable fact that if carnivorous animals, as the dog and cat, are fed exclusively on fruits and vegetables from the time they are weaned, they will exhibit much different temperaments from dogs and cats fed on flesh, and they will live longer. This condition arises from the fact that the cells, glands, fluids, and function of the body do not undergo the same change when the animal subsists on a diet of fruits and vegetables, as when fed on flesh.

1. We cannot alter the composition of the cells of a gland, without altering the structure of the gland.

2. We cannot alter the structure of a gland, without altering the function of the gland.

3. We cannot alter the function of a gland, without altering the quality of the fluids elaborated and excreted by the gland.

4. We cannot alter the quality of the fluids elaborated and excreted by a gland, without altering the body of which the gland is an integral part.

5. We cannot alter a body in the smallest degree, without lowering the normal standard of the body.

6. We cannot lower the normal standard of a body in the smallest degree, without degenerating the body.

7. We cannot prevent the degeneration of a body, without locating and correcting every cause and condition responsible for the degeneration.

Dr. W. H. Manwaring, professor of bacteriology and experimental pathology of Stanford University, California, finds that the human organism is so sensitive to the influence of diet, that he declares, "*Man is what he eats!*"

The general conception has always been, that food proteins eaten by man are converted into strictly human proteins, before they are assimilated into the cells and allowed to remain in the human body.

But biochemists have now discovered that this is not so. They have found that when man eats beef, pork, mutton, eggs, milk, the cells of these animal substances form a sort of intermarriage with the cells of the human body.

In technical language, Manwaring calls the new conception as "protein symbiosis." When the proposition is understood by the layman, he might translate symbiosis into the phrase, "companionate marriage."

Hybridization is the more exact term to describe the condition.

According to Manwaring, these animal proteins that man eats, retain their individuality for days, and even for months, after they become part and parcel of the human body. He

found that serum, composed of horse protein, when injected into the human body, remains "horsey" for months and even years afterwards. In the case of a dog, the horse protein still retained its individuality in the dog's blood at the end of three months.

Man is what he eats because his food affects his body just as surely and just as greatly as food affects the bodies of other animals. If the bodies of bees and birds will develop changes in structure and function, because of a change in food, so will the body of man develop changes in structure and function because of a change in food.

If two children of the same parents be separated, and the one fed all its days on fruits, while the other is fed all its days on flesh, all other things being equal, and barring death from accidents, the fruit fed child will develop into a large, robust, healthy man, and live a long life; whereas, the flesh fed child will not live long enough to reach maturity. In fact, it will die in infancy or early youth.

The Law is, Like begets like. Due to the operation of this law, the body of the fruit fed child will tend to approximate, in structure and function, the strong healthy bodies of the beautiful trees that bore its food.

The body of the flesh fed child, due to the operation of this law, will tend to approximate, in structure and function, the diseased and distorted bodies of the animals upon whose flesh it fed.

We should remember that domesticated animals, raised and used for human food, are diseased by the processes of feeding and fattening.

Dr. Jacob Lipman, Rutgers University, in an address made before the Institute of Chemistry, observed:

"Man is a creature modified by the soil (food) upon which he lives, as surely as plants conform themselves to the soil in which they are rooted."

By the internal influence of diet and drink, even the normal disposition and general temperament of man are affected. The failure to recognize this principle, plays no small part in making our medical institutions the greatest schools of stupidity and ignorance on the face of our green globe.

One serious form of physical degeneration comes from drugs, vaccines, and serums, administered to the sick by medical doctors. The effect is often more marked in the posterity of those who have been medicated, vaccinated, and inoculated. The rapid increase in cases of mental deficiency; brain disorders, and insanity, may be traced to the pernicious practice of medication, vaccination, and inoculation, as taught in medical institutions and practiced by medical doctors.

All substances taken into the stomach, enter the blood and lymph circulation with the molecules and atoms of the substance more or less intact. Some substances, as water, wine, and alcohol, enter the circulation without undergoing any change whatsoever.

Any substance that induces unnatural stimulation, owes its stimulative influence to its injurious properties. There is nerve reaction, or a spurring-up of nerve force, to repel the hostile invasion. A substance too powerful and poisonous to be neutralized or repelled by the body, has the exact opposite effect, and, instead of stimulating nerve force, its influence is towards deadening it—paralysis.

Coming to food, many conscientious investigators advance the theory, that the radical shortening of the human life-

span, after the days of Noah, is traceable directly to the adverse and permanent effects of flesh eating.

This theory seems to be supported by strong evidence. But as science has stubbornly refused to recognize the apparent fact, that man has suffered a vast decline of the life-span, and dogmatically denied that he ever lived 900 years as long as modern years, the theory has been rejected by our schools as visionary.

Man has discovered that by crossing certain species, which bear to each other a certain relationship, different varieties may be produced. This process has been carried on with respect to both animals and plants, but more extensively with respect to plants.

Without going into the various phases of what is called plant-grafting and cross-breeding, we should know that these processes have certain definite limits within each kingdom, and that an animal cannot be crossed with a tree, or a tree with an animal. Neither can part of a tree be ingrafted into an animal, or vice versa.

For instance, it is possible to ingraft a piece of dog-skin, or cat-skin, or cow-skin, onto the human body, and there it will live and thrive. But it is impossible to ingraft a piece of tree-skin (bark) onto the animal body. The relation between plant and animal is so remote, that the bodies will not yield to any attempt at mixing or crossing.

The cells of fruits and vegetables that man eats may encroach upon the cells of his body. But the cells of these substances are so remotely related to the cells of the human body, that there is no possibility of any ingraftment occurring. In cell formation, fruit and vegetable cells do not bear a relation to animal cells that is close enough to admit of any ingraftment.

But a different situation arises when we come to the cells of animals. The cell-formation of so-called warm-blooded animals, including man, is practically the same, the slight difference in the composition of the cell appearing in its super-structure.

This fact being true, as investigation has shown, then cell-hybridization, to a certain degree and within certain limits, would be possible not only, but would be the inevitable result of man's eating, over long periods of time, the flesh of animals which are closely related to him in cell-structure.

Consequently, as man eats the flesh of cows and sheep, there is instituted in his organism (1) a process tending towards cell-hybridization, (2) with a corresponding change resulting in the structure of the glands and organs, (3) with a corresponding change in the quality of the fluids elaborated and excreted by the glands, (4) with a gradual tendency of man's body to approximate, more or less, in its general function, the function of the animal on whose flesh he subsists—in accordance with the Law of Hybridization.

What do these statements mean? They mean that the several variations existing between the human body, and the body of an animal habitually eaten as food, would be lessened within certain limits, as (1) the period of time required for growth and development, (2) the rate of function, and (3) the length of life.

To be more specific, if the life-span of man is 900 years, while that of the cow upon which he feeds is 30 or 40 years, there is a gradual tendency on the part of the body of man, because of cell-hybridization, to approximate in the period of

growth and development, the rate of function, and the length of life, that of the cow upon whose organs and tissues he feeds.

The truth of this theory appears to have the greatest support in the testimony furnished by the Christian Bible. From the days of Adam down to the time when Shem was 100 years old, there is no record whatever to show that flesh of any kind was eaten by man. His diet consisted exclusively of fruits, berries, and nuts, eaten in their natural state, (1) uncooked, (2) unmixed, and (3) unseasoned.

The Bible record shows that in those days it required 100 years for man to reach maturity, and he lived 950 years. It further shows that there is no variation in this respect of man's development and life-span, until after the Flood and the eating of flesh began.

The marvellous consistency of the Bible records on this point, appears as the greatest evidence of its truth.

Shem grew up on a diet of fruits, berries, and nuts. He ate these in their natural state, (1) uncooked, (2) unmixed, and (3) unseasoned. He did not reach maturity until he was 100 years old. In this respect, the record shows his case to be the same as that of Adam, Methuselah, Noah, and all the other patriarchs who lived before the Flood.

But what a startling change occurs when we reach Arphaxad, the son of Shem, and the grandson of Noah.

Arphaxad, according to the Bible, was the first of all the generations of man, from the days of Adam down, to eat flesh from the time of his infancy.

The astonishing result tells a terrible story. It shows that he reached maturity at the very early age of 35, and died at the very early age of 438; whereas, Noah, his grandfather, lived to be 950 years old.

Surely, this is unimpeachable proof of the great degenerative effect of flesh-eating. This is unmistakable evidence of a process of cell-hybridization. This is a clear case to show that the body of man will vary, according to the diet on which it subsists, and will attempt to approximate, in its conduct, the body of the animal upon whose flesh it is constantly fed.

The cow grows to maturity in from four to five years, and declines and dies at the age of 30 to 40 years, in its native state. Under the abuse of domestication, the unfortunate creature declines and dies much earlier.

Man eats the flesh of the cow. The ultimate effect is a persistent process of cell-hybridization within certain limits, causing the body of man to degenerate and approximate in its function and conduct, the function and conduct of the animal upon whose flesh it feeds. The result is, (1) faster growth, (2) quicker development, (3) quicker function, (4) quicker decline, (5) shorter life-span.

This theory scientifically accounts for the fact, that the first generation of Shem's line of descent, evinced a vast hastening of maturity, with a corresponding hastening of decay, and shortening of the life-span.

From the beginning of the practice, the influence of flesh food on the sensitive organism of man, was a slow and gradual cell-graft, or hybridization of the whole body. This process continued until it was halted by the Law of Limitation, where the atomic call reached a point of hybridization beyond which the process could not go.

The cell-graft, due to flesh eating, has produced a certain hybridization of the cells of the human body, including the

delicate cells of the brain. The lawful result is, an altered and fixed cell-change towards the lower animal plane.

The truth of this last statement appears in the fact, that man commits the most atrocious crimes without the least compunction. Like the wild beasts of prey, he seems to delight in killing and slaying. He has no regard for any living creature, and even murders his fellowmen by the most fiendish methods he can devise.

The fixed alteration of cell composition is transmitted directly from parent to offspring. It is nothing more nor less than an absolute alteration of the species, through a direct process of devolution, from a pure-bred human being, to a mongrelized creature, that resembles in form and figure the pure-bred fathers of the race, but possessed of disposition and conduct that resemble a demon.

The limit of the devolution of man, by the process of cell-hybridization, seems to have been reached centuries ago. But still man continues in his attempt to sink lower in the scale. He is trying to finish the degenerative work and end his existence.

By various processes of self-poisoning, and by the dangerous methods of medication, vaccination, and inoculation, the work of devolution is carried on. It has reached a stage where it is on rare occasions that modern mothers are able to nurse their offsprings, while other females of the race have reached a stage of degeneration where even child-bearing for them is impossible.

Instead of modern man being a pure-bred human, he is a hybrid. Instead of his being a master, he is a slave. Instead of his living 900 years, as did the first pure-bred fathers of the race, his average life-span approximates that of the cow, whose blood he drinks and whose flesh he eats.

Man reaps just what he sows. That is the Law.

Chapter No. 54

LAW OF EXISTENCE

Living Existence depends upon the Law of Change.

Matter, as such, is not subject to Time or Change. It never grows old; it remains always the same. It is indestructible. It cannot be annihilated. Not a grain of dust in the universe can vanish from it, and not a grain can enter it.

The constant changes and transformations of phenomena, which daily pass before our eyes, the construction and destruction of organic forms, do not consist in the formation of matter previously non-existent, nor in the destruction of matter then present, as was once generally believed.

The eternal cycle through which Matter is continually passing, conserves the size of the mass. The constant change consists in a continuous rotation of the same substance, of which the mass and the quality remain unaltered and identical for all ages.

In the Law of Change, as here described, we not only discover the Law of Existence, but we learn why physical forms come and go, why they appear and disappear, why they integrate and disintegrate.

Like all phases of Universal Law, the Law of Change manifests polarity. It has its positive and negative sides; its constructive and destructive aspects. It is eternally working. Its operation cannot be stopped. It builds good or bad, depending upon the conditions supplied.

The Force of Gravity holds man on the mountain-top, or dashes him over the precipice, depending upon the conditions supplied.

The Force of Life brings man into being, and its operation either regenerates his body, or degenerates it—depending upon the conditions supplied.

The causes of things are dependent upon occasions or conditions, as these bring into play the Law of Production.

The living body is not subject to Time; but it is subject to the Law of Change. Under the Law of Change it will regenerate and remain young, or degenerate and grow feeble, depending upon the conditions supplied.

Perpetual Youth is a primitive attribute of Matter. Its attainment is possibly in every living thing. It becomes a reality when the conditions are supplied that set in operation its law of production.

Old Age is a symptom of degeneration. Disease is a sign of degeneration. Death is a sequel of degeneration.

Degeneration is not a primitive attribute of living matter. It is of secondary origin, and results from conditions supplied that have set in operation its law of production.

Death is not a primitive attribute of living matter. It is the end or culmination of the process of physical degeneration, resulting from conditions supplied that have set in operation its law of production.

The Life Principle is not subject to the Law of Chance. It neither integrates nor disintegrates. It is always and forever the same, being changeless and deathless.

It is the incessant operation of the Life Principle that produces the forms and processes observed in the physical world. It builds, quickens, and maintains physical bodies. The existence of these bodies is subject to the Law of Change.

The Life Principle is not a part of the physical body. It is not the function of the body. It is the cause of the function. Its existence does not depend upon the body.

The Life Principle is an Unconditioned Reality. Its existence is not subject to Time, Space or Change. It is neither young nor old. It is not born, neither does it die. It is constant and permanent; it is without beginning and without end; it is eternal and everlasting. But its existence and presence are apprehensible to man's senses only by its manifestations in and through the physical body.

In order to discover the causes and reasons of degeneration, old age, and death, we must consider the body, its function, the material of which it is made, and the manner in which it is built and maintained. For it is the animate existence of the physical body that comes to an end, and not the existence of the Life Principle, nor of the Matter of which the body is made.

Lesson No. 20, Chapter No. 55

TREE OF LIFE

Degeneration is not a primitive attribute of living matter. It is of secondary origin, and results from conditions supplied that set in operation its law of production.

What are the conditions that set in operation the Law of Degeneration? What prevents the Law of Regeneration from always controlling the living body?

The physical body is composed of billions of infinitely small particles. These are constructed into cells. A collection of cells make an organ or gland. A definite collection of organs and glands, arranged into a certain manner around a bony framework, constitute the physical body called man.

Every part of the body, down to the smallest cell, is incessantly undergoing certain and definite changes. It is the working of the eternal cycle of integration and disintegration.

At no time are the body's cells and tissues completely composed of the same material, of which they were composed a moment before. But it is and must be the same material in *kind*.

As soon as the material becomes in the slightest degree changed in KIND, in that moment the Law of Change brings into operation the Law of Degeneration, and in that moment that particular body begins a process of disintegration which runs in excess of integration.

The animate existence of such body will come to an end, just as soon as the process of degeneration reduces the body to a state where the Life Principle can no longer function through the same.

It is not the purpose here to discuss the reasons why the material becomes changed in KIND. It is sufficient for the present to know what defeats the attainment of Perpetual Youth. Such knowledge shows us how to remove the cause of Degeneration.

We have seen that a river depends for its existence upon a certain kind of material. When the material becomes changed in KIND, in that moment the Law of Degeneration begins to operate, and in that moment that particular river begins a process of disintegration which runs in excess of integration. The end of the river will come just as quickly as all of its water is replaced by some other KIND of material.

The human body is no exception to the Law of Change. The change that goes on in streams of water, goes on just as constantly in animal bodies.

Through the process of disintegration and reintegration, the animal body is torn down and rebuilt, particle by particle, cell by cell, tissue by tissue.

In fact, the sole and final purpose of all body function, is to maintain the integrity of the organism. This is accomplished by the processes described.

All physical forms are subject to the Law of Change. They must be constantly torn down and as constantly built up, or they lose their stability and integrity, and dissolve into invisible vapors and gases.

It is through the process of destruction and construction—the Law of Change—that physical forms, plants, animals, and men, are maintained in organized states.

Animal bodies cannot defy this law. To exist as such, all bodies must meet and obey the requirements of the law, by incessantly undergoing the process of change.

Physically, no part of a man's body is the same now as it was an hour ago. Some physiologists and biologists have estimated, that within a few weeks the human body is completely destroyed, and as completely rebuilt of new material, down to the largest and hardest bony structure.

The body we have today is not the same body, as to its

materials, that we had a year ago. It is the same in appearance and pattern, but not the same in material. It is and must be of the same KIND of material, but not of the same material.

As soon as the material becomes changed in KIND, as we have said, the body at once begins to decay more rapidly than it is renewed. This in time means the end of the body.

The reason why physical bodies degenerate and return to dust, is because the KIND of building material that their owners furnish them, is not the exact KIND that is perfectly suitable to repair their disintegrating parts, and sustain them in health.

Animal bodies exist just as long as they are able to survive on the KIND of material that they must use to re-integrate their disintegrating parts.

This brings us back to the *Life-giving Trees*.

The ripe fruit of the Tree is the only perfect building material on earth for the body of man. It is the highest type of all food, and is designed and produced for the highest type of all animal forms.

If the human frame were always furnished with perfect building material, in the right quantity, and the care-taker of the body obeyed the other Laws of Life, there could be no end to man's physical existence. He would enjoy the Immortality of all Matter, and yet, he would be Mortal, and be "*liable to death if disobedient*," says Russel.

The Tree of Life, mentioned in Gen. 3:22, 24, could be no other kind of a Tree, than that which supplies perfect building material to renew man's constantly wearing and wasting frame.

It is impossible to think that so great a factor in Living Existence as perfect building material, would be omitted from the scheme of Eternal Formation, Organization, and Production. It is impossible to think that the human body as such, could come into being in the absence of so great a factor as Perfect Building Material. It is impossible for us to think that Living Matter could degenerate and disintegrate, if it were furnished with Perfect Building Material, and never misused and abused.

Man might indeed call such a tree, the Tree of Life, if he ate thereof and never died. He would have good reason to think of it as really a Tree of Life. To all appearances, it would truly be a Tree of Life. But as a matter of fact it would be only a Tree that supplies the body with Perfect Building Material.

Chapter No. 56

LAW OF ADJUSTMENT

Spencer formulated the famous Law of Perpetual Youth in these words:

"Were there no changes in the environment but such as the organism had adapted changes to meet, and were it never to fail in the efficiency with which it met them, there would be eternal existence and eternal knowledge."

In formulating the law, Spencer perhaps believed that he was defining a condition that could not be supplied. He said nothing to indicate that he thought the living organism had adapted changes to meet the various and regular changes in its environment.

If the living organism were not so equipped, then Perpetual Youth would be a myth, and its consideration

would be an absurdity. If the living organism were not so equipped, it could never have come into being. The condition of existence depends upon the capability of a living organism to meet the various and regular changes of its environment.

The power of adaptability of living organisms to the various and regular changes of their environment, is one of the ever-present facts of existence. Speaking of this, Robert Walker, M. D., a keen student of Universal Law and a brilliant writer, observes:-

"Men live in every climate, are subject to all kinds of influences, and indulge in every sort of habit. They are omnivorous, bibulous, heedless, indulging daily in mineral, vegetable, and animal poisons on the supposition that they are food. It has, indeed, become proverbial that 'habit is second nature,' and 'What's one man's meat is another man's poison.' Indeed, the proof is hourly before us that one may become accustomed to almost anything short of hanging. . . .

"Only sudden and violent changes become immediately destructive to life, even sometimes when it is a change from evil to good habits. But because a habit does not seem to be immediately destructive, is no proof that it is either beneficial or uninjurious. It is the secondary effects that are the real effects."—Vital Science, p. 251.

The Law of Adjustment operates in response to the Law of Self-Preservation. It enables the body to adjust itself to meet the conditions forced upon it, and to tolerate, for a time, such harmful habits as using tobacco, intoxicants, drugs, serums, vaccines, fired foods, flesh, etc., for the express purpose of prolonging the existence of the organism as long as may be.

Observe the boy in his teens, striving to use tobacco. He persists in his efforts to conquer the living organism's stubborn resistance to the poisonous weed. Death sometimes results from the effects of the poison, before the practice is able to overcome the body's resistance sufficiently to form the habit. Notice how the body struggles to save itself.

Yet, the body in time will adjust itself to the poison. A body so adjusted to the toleration of a certain poison, grows uneasy and nervous without it, and craves it until the victim is constrained to satisfy the demand. Death sometimes results from a total and abrupt abstinence from tobacco, after years of use.

Here is presented the paradoxical situation of the body's craving and dying for a poison that is daily degenerating it.

The marvelous ability of the living organism thus to meet and adjust itself to unfavorable environments, is so vast in extent and so perfect in operation that the finite mind can in nowise grasp the scope of it.

This ability flows from the operation of a law, that so moulds and adjusts an organism that it may tolerate, for a limited time, a specific use to which it may be subjected, even though the use, as we have seen, be decidedly detrimental. This law is termed by Darwin, the Law of Adaption.

It should be evident to the student, that if a law did not exist, whereby the organism may adjust itself to various changes and inimical conditions of its environment, which it cannot control nor destroy, then the slightest transgression of man from the "*straight and narrow path*" would result in almost instantaneous death.

But the Law of Adjustment does not serve to *immunize* one against the penalty of his errors. It merely defers for a time the execution of the penalty. In due course the penalty

falls on each according to his deeds (Rom. 2:6). Man reaps what he sows.

Man, however, has mistaken the purpose of the law. He declines to believe that a substance harms him, if his system craves it, or if it fails to kill him instantly. Man seems to think that the law grants him impunity from the penalty of his errors; for he will bare his body and receive into his blood-stream the vile vaccine virus from diseased animals, under the urging of "medical science" that such superstitious practice will protect him from "the wrath to come." (Matt. 3:7).

The Law of Compensation is operative on all planes. It makes the slightest toleration by the body of an unnatural condition, practice, or habit, a direct, certain and positive tax on its vitality; such tax always corresponding in amount to the degree of destructiveness of the condition, practice, or habit.

The tax may be so small in its daily, weekly, or even yearly effect on the body, due to the slight degree of harm involved in the condition, practice, or habit, as not to draw any particular attention to it for some time. But the cumulative effect grows, with the passing years, until at last it becomes surprisingly apparent through the sudden collapse of some vital organ, as the liver, kidneys, or heart, which may be so serious as to cause sudden death.

When some vital organ breaks down, as the result of years of harmful living habits, then the super-educated specialist, following the beaten path of his training, and having no original thought of his own, examines this particular organ, by the aid of all the instruments of diagnosis known to medical science, and expects to find, IN THE AFFECTED ORGAN ITSELF, the CAUSE of its degeneration and collapse. He might as well examine the dead, to find the CAUSE of the avalanche crashing down upon them from the mountain-side.

In attempting to correct an abnormal condition of the body, caused by a deviation from the natural to the artificial, there are several things to be remembered; and we must also remember that it requires *time* for the body to adjust itself to every new use, whether that use be detrimental or beneficial to its welfare.

It is not a question of whether the habit be good or bad. It is a question of the *duration* of the habit—how long the habit has been followed.

We may bend the tender twig, keep it bent for ten days, and on its being released, it will resume its original shape. But it will not be able to do this, if kept bent for ten or twenty years. So the bent twig which at one time would readily have righted itself, had it been released from pressure, in time become a bent tree, which can never be straightened.

The Law of Adjustment operates continuously throughout all Existence. It is the subtle influence that moulds and fits the body, just as sure as it does the twig, into that condition which it will be best able to tolerate its environment.

The Law of Adjustment, which makes a failure to fulfill life's higher purposes forever bear the effect of such failure, likewise makes the nobler life more worthy of our greatest efforts to achieve the better things in life, forever bear the effect thereof.

This knowledge reveals how momentous our vices eventually become, and how stable and lasting shall be the effect of our virtues.

Chapter No. 57

LAW OF STIMULATION

The vital problem of Living Existence is involved in a study of how Environment affects Living Matter.

Spencer's Law of Eternal Existence is based upon the relation of the living organism to its environment. He says that Perfect Harmony as between the Living Organism and its Environment would be eternal existence and eternal knowledge.

The very existence of the living organism depends upon (1) its relation to its environment, and (2) its ability to adjust itself to the various and regular changes in its environment. The organism could not have come into being in a hostile environment, nor could it long endure in a hostile environment.

In considering the Law of Stimulation, the student will be surprised by the marvellous operation of the Law of Adjustment. He will observe how perfectly constructed the body is, and how it strives to meet and adapt itself to the changes in its environment.

The reason why the living organism fails in the efficiency with which it meets these changes, is not due to faulty construction or faulty function. To hold otherwise would mean to place the responsibility for the body's failure upon Eternal Intelligence.

The reason why the living organism fails in the efficiency with which it meets these changes, is due to the errors of man. Consequently, the reason why the living organism degenerates, decays, and finally dies, is due to the errors of man. To hold otherwise would mean to place the responsibility upon Eternal Intelligence.

The Law of Stimulation is the Law of Degeneration. To keep the body free from stimulation, means to remove the cause of degeneration. To remove the cause of degeneration, means to remove the cause of disease. To remove the cause of disease, means to remove the cause of Old Age and Death.

The cause of physical degeneration does not arise from faulty structure or faulty function. The causes of things are dependent upon occasions or conditions, as these bring into play the law of their production.

The cause of physical degeneration is dependent upon occasions or conditions, as these bring into play the law of its production. A remedy for an evil is always suggested by a knowledge of its cause.

Some of the things that men do, which set into operation the law of degeneration, have been discussed. The practice of flesh eating is one of these. We shall now go more into detail, to show how the degenerative progress is set into operation, and how it works.

Flesh food is stimulating. That is not a theory, but a demonstrable fact. It is the stimulating effect of tobacco, alcohol, opium, morphine, and other poisons, that give them their great grip on the body. It is the stimulating effect of a substance, that makes the victim almost helpless in its grasp.

It was the stimulating effect of the flesh which Shem ate, that made him its slave. It is the stimulating effect of the flesh men eat, that makes millions its slaves.

To stimulate means to quicken. The first effect of stimulation is to accelerate the body's function.

That is the beginning of the effect of stimulation—a

speeding up of function. But it is not the end. For "intensive action cannot be extensive action." The final effect is degeneration of such degree that death results. That is the Law of Sequence.

The Law of Sequence is the basis of the Law of Retaliation. It manifests itself throughout the Universe, despite the frantic efforts of humanity to evade its effect.

Nothing occurs by chance. There must be a precedent for every consequent. There must be a sowing for every reaping. The kind of reaping depends upon the kind of sowing. That is the Law of Compensation, which none can escape.

The modus operandi of stimulants on the body, is by exciting nerve force. This precipitates the function, and produces rapid circulation of fluids and rapid transformation of cells.

Anything or condition that stimulates, will quicken the body's function. It may be the effect of flesh food, fermented liquors, anger, fear, fever, or exercise; and for the time being, the muscular efficiency is increased. But decrease always follows the increase, and is always in proportion to the degree and duration of the increase.

The effect of bodily exercise, carried beyond a certain point, is destructive. Proof of this lies in the fact that the average life-span of athletes is short.

But within certain limits, exercise is the only safe and legitimate stimulant. It produces a natural demand for the renewal of cells, by promoting the requisite decomposition of structure. When carried so far that it becomes destructive stimulation, it disturbs the Law of Balance as between disintegration and reintegration, and induces degeneration

R. H. Trall, M. D., explains the matter as follows:

"Those effects that are called stimulant, tonic, etc., are in reality the evidences of the RESISTANCE that the Vital Powers make to the injurious or impure substance, and not, as is commonly supposed, the action of the article on the system.

"The feeling of strength is increased, for the reason that the energies of the system are aroused in unnatural intensity of action to defend the vital machinery; and the reason that a depression of power is always experienced afterwards, is because the vital energy has been expended, uselessly wasted, in the struggle."

We shall later notice a widely taught error. Conditions of fatigue and depression of power do not result from "uselessly wasted" vital energy. Man does not grow weary and sleepy because of consumed Vital Force.

Vital Force can not be consumed by the Matter upon which it acts, any more than Gravitational Force can be consumed by the Matter upon which it operates.

Under the Law of Recuperation, we shall show that conditions of fatigue and depression of power force man to seek rest and sleep, in order that (1) the disintegrated cells and tissues may be repaired and renewed, (2) the acids may be neutralized and excreted from the body, (3) the normal alkalinity of the blood and body may be restored.

In its true sense, stimulation is irritation. Tobacco, intoxicants, flesh, poisons, stimulate the body because they irritate it. They irritate because they are injurious; they are injurious to the body because they are poisonous.

The quickened function that arises from stimulation, is a defensive action, employed by the body to protect itself from dangers thrust upon it.

The more stimulating a substance is, the more irritating it is, the more irritating it is, the more poisonous it is; the more poisonous it is, the more dangerous it is.

The primary effect of stimulants, if not given in too large a quantity, is to quicken body function. The secondary effect is to lessen, depress, and weaken body function. The tertiary effect is—paralysis and death.

The whole matter may be briefly summarized as follows: (1) Stimulation, (2) quickened (abnormal) function, (3) destruction of cells and tissues, (4) weakening of the body, (5) weakening of the mind, (6) decline in health, (7) premature death.

Flesh food possesses greater stimulating qualities, in proportion to its nutrient quantity, than any other substances used for food, with the exception of condiments and things used purely for purposes of seasoning.

The use of flesh as food (1) hastens body function, (2) hastens body growth, (3) hastens the body's maturity, (4) hastens the body's decline, (5) hastens the body's decay, (6) hastens the body's dissolution.

Every stimulating substance taken into the body, produces all of these six effects. These effects cannot be separated. A man cannot have one of them without having all of them. Anything that hastens function, hastens dissolution, which is death.

We have seen that (1) Shem was the first man of the Bible to suffer a vast decrease in the length of the life-span; that (2) he was the first man of the Bible to form the flesh-eating habit, so far as the record shows; that (3) flesh food possesses greater stimulating qualities, in proportion to its nutrient quantity, than any other substance used for food.

Some of the dangers of flesh-eating have been related. We shall now observe how the effect of flesh on the body has produced the six hastening processes noticed.

Physical science, in the person of Metchnikoff, only scratched the surface in showing that death is the ultimate effect of putrefaction in the alimentary tract, with resultant auto-intoxication of the whole body. This is so, because physical and medical science searched for the cause of disease within the body, where the cause is never found.

Had Metchnikoff gone beyond alimentary putrefaction, to remedy which he removed the colon, he would have found a condition many times more serious, to remedy which, no doubt, he would have wanted to remove the whole circulatory system. Had he gone still farther, he would have found a degenerative condition of the entire organism, to remedy which would require a removal of the cells, tissues, glands, and even the bones of the body.

A discussion of these secondary and tertiary conditions is both interesting and startling. When flesh food is digested, absorbed, and elaborated into blood, this blood, as experiments have shown, putrefies much sooner, as we have said than blood made from fruits and vegetables.

The body must make blood from the food one eats, and the quality of the blood must correspond to the quality of the nutrition from which it is made.

As to this Trall remarks:

"Physiologists have noticed that the blood of flesh-eating animals undergoes putrefaction much sooner than that of vegetable-eating animals.

"The chyle of flesh-eating men, when taken out of the body, decomposes and becomes putrescent in less than a

quarter of the time required for that of the vegetarian to undergo the same process."—Proper Food of Man.

This information will disappoint our flesh-eating friends, and their flesh-eating teachers and advocates, but we are reciting the facts as revealed by scientific experiments, and are not merely searching for arguments to prove a theory.

Chyle is a nutritive fluid, of a whitish appearance, extracted by intestinal absorption from food that has been subjected to the action of the digestive organs. It is absorbed by the chyloferous glands, which arise at the mucous surface of the small intestine, and is conveyed into the blood by the thoracic duct, at a point just above where the blood enters the right atrium of the heart.

Marcet, Oliver, L'Heritier, and other eminent physiologists, unite in affirming that chyle, elaborated from flesh food, putrefies in three or four days at longest; while chyle made from food composed of fruits and vegetables, due to its greater purity and more perfect vitality, may be kept for many days, without becoming putrid.

Sylvester Graham declares it to be—

"Well known, also, that human blood formed from flesh food will putrify, when taken from the living blood vessels, in a much shorter time than blood formed from pure vegetable (and fruit—Clements) aliment; and that there is always, other things being equal, a much greater febrile and putrescent tendency in the living bodies of those who subsist mostly on animal food, than in those who subsist wholly on pure vegetable (and fruit—Clements) aliment.

"Hence, if two healthy, robust men of the same age, the one subsisting principally on flesh-meat, and the other exclusively on a diet of vegetable food and water, be suddenly shot down and killed, in warm weather, and both bodies be laid out in the ordinary manner, and left to the action of the elements and affinities of the inorganic kingdom, the body of the vegetable-eater will remain two or three times as long as the body of the flesh-eater will, without becoming intolerably offensive from the process of putrefaction."—Vol. 2, p. 115.

Undertakers, who have investigated the matter, find that the dead bodies of flesh-eating men become putrid in less than one-fourth of the time required for that of the dead bodies of strictly vegetarians to undergo the same process.

Here lies the secret of why flesh-eating is responsible for the six hastening processes above-mentioned.

The body is built, nourished, and renewed by the blood. As blood made of flesh putrifies quicker than blood made of fruits and vegetables, the cells and tissues, being built and renewed of the quicker-putrifying blood, must change with greater rapidity, or the entire body would soon decay and go down to dust.

To compensate for the changed condition, forced upon the body by the practice of flesh-eating, its function is correspondingly quickened, causing cell, tissue, organic and other changes to occur with greater rapidity.

It is the ability of the body to adjust itself to various changes and conditions, that enables the flesh-eater, the glutton, the drunkard, and the dope-fiend to survive for a few short years.

In order to prolong man's days, and prevent his body from sinking down within a few short years, as a mass of rotten clay, the function of the body has been quickened in speed above the rate that obtained in the organisms of the frugivorous giants, who survived through so many centuries before the Flood, that even Father Time grew weary in numbering their years.

The metamorphosis of the cells and tissues of the Carnivora occurs with greater rapidity than in the case of the Herbivora and the Frugivora.

The more rapid mutation of the cells and tissues of the Carnivora, is a condition necessary to their existence. It is only as the result of the changes of the substances of the body, that these substances can be formed which are destined to enter into combination with the oxygen of the air.

In this sense, the slower-decomposing food forming the diet of the Herbivora and the Frugivora, renders unnecessary so rapid a change in the cells, as that occurring in the Carnivora. Consequently, less oxygen is required, and this reduces not only respiration and heart action, but reduces in like degree the speed of all the functions of the body.

The leading physiologists are agreed that flesh-eating has quickened the function of the body. Moore, at the Harvard Laboratories of Physiology, demonstrated that the eating of flesh produces acceleration of the heart-rate that is surprising in its magnitude and startling in its duration.

After partaking of a meal of flesh, the increase in the heart-rate of a man regularly amounted to a 25 to a 50 per cent rise above the fasting level, and persisted, in experimental subjects, for from 15 to 20 hours, to reach a total of many thousands of extra heart beats. In equal degree, and for the same length of time, all the functions of the body were increased.

Moore thus demonstrated that a meal of meat puts excessive labor on the vital organs, very damaging in effect, and comparable in extent to the total performance of the vital organs during three or four hours.

After discussing the effect of stimulating substances upon the body, John Smith summarized the matter as follows:

"From the whole of these facts, we may conclude that the more stimulating and heating the diet, the more rapidly the changes in the relative proportion and condition of the solids and fluids take place, the more rapidly ossification, the greater the process of decay, occur; the solids becoming dry, inelastic, and unyielding.

"Hence, a diet of flesh is less favorable to longevity than what we have seen to be the original and natural diet of man; namely fruits, roots, nuts, . . . which form chyle, blood, and tissues less subject to chemical decomposition, and requiring less rapid changes for the production of animal heat.

"The quicker the motion of any complicated piece of machinery, the sooner it is worn out; and the observation is equally true when applied to the animal structure. Each process of decay and renewal brings it nearer to its final destination; and the more these changes are accelerated by stimulating food (drink and air—Clements), or any other means that increase the rapidity of the circulation and respiration, the sooner will the period of old age and decrepitude overtake us."—Natural Food of Man.

Prof. Hufeland investigated the matter, and from him we quote as follows:—

"The more slowly man grows, the later he attains to maturity, and the longer all his powers are in expanding, the longer will be the duration of his life—as the existence of a creature is prolonged in proportion to the time required for expansion.

"Everything, therefore, that hastens vital consumption, shortens life; and, consequently, the more intensive the vital action, and the shorter the life. If you would live long, live moderately, and avoid a stimulating, heating diet."

Quoting Smith again:

"Flesh food, and all other stimulating foods and drinks, particularly in youth, do incalculable mischief; though by such

slow degree that, in general, the evil is neither perceived nor suspected.

"The stream of life is precipitately hurried on; the passions are prematurely developed; and, like a plant that has been forced too rapidly, by artificial heat and stimulating composts, the organism is exhausted; and it becomes diseased and decrepit when it would, under a more appropriate diet have been in its perfection."

Trall observes:

"A stimulating regimen may produce rapid development of the body; it may produce extraordinary precocity in mind or body, or both; but it is a KIND of development unfortunate for its possessor. . . . It is a process that makes the child a GIANT, and the man a DWARF. It may produce manifestations of maturity at twelve, and symptoms of decay at twenty."

The quickened function was a change made necessary to adjust the organism to a degenerative condition, resulting from new habits of living. The quickened function of the body hastens its development, growth, maturity, decline—and death.

As paradoxical as it may seem, the quickened function has resulted in prolonging the body's existence, under the circumstances. For, while the time is shortened to which the body would survive on the slower-acting diet of fruits and vegetables, its days are actually prolonged by the quickened function, when forced to subsist of flesh and other stimulating substances.

Were it not for the quicker action of the body of the flesh-eater, then the quicker putrifying blood, and all parts of the body built thereof, would decompose before the cell, tissue, and other changes of repair and renewal could occur, and the dissolution of the body would result in short order.

Briefly summarizing the foregoing, we find:-

1. Hastened body function is a measure of self-preservation, designed to maintain health and lengthen the life-span. Quickly putrifying blood must be quickly built into new cells. The new cells can be no better than the blood of which they are made.
2. Hastened body development results from the action of the law of self-preservation. Quickly putrifying blood makes quickly decaying cells. The tissues, glands, organs, and bones can last no longer than the cells of which they are made.
3. Hastened body maturity results from the action of the law of self-preservation. As the body's function and development are quickened, so is its maturity quickened.
4. Hastened body decline results from rapid function, rapid development, and rapid maturity.
5. Hastened body decay results from low grade material entering into its structure
6. Hastened body dissolution (death) is the sequel of rapid function, rapid development, rapid maturity, rapid decline, defective structure.

Questions for Lessons Nos. 17, 18, 19, 20.

1. (a) What great change occurred in man's life-span right after the Flood? (b) What great change occurred in man's food right after the Flood?

2. (a) In what respect does the Christian religion differ from other great religions? (b) Why is this difference? (c) Name the three earliest Christian Fathers whose work was largely responsible for putting Christianity over on the people, and give the dates in which they lived.

3. (a) Why was Shem the first victim of the great change in diet? (b) Give Noah's first recorded act after the Flood. (c) What does this teach?

4. (a) Name the food that has the greatest degenerative effect on the body. (b) Give some of the ailments that are due to eating this food. (c) Is liver good food?

5. (a) Is it reasonable to assume that climatic changes grow unfavorable to human existence? (b) In what direction does the Law of Evolution operate?

6. (a) State the Law of Hybridization. (b) What effect does flesh-eating have on the human body? (c) Does the use of milk and eggs have the same effect?

7. (a) State the Law of Change. (b) What effect does this law have on the body? (c) How does this law set into operation the Law of Degeneration? (d) How can this law be made to set into operation the Law of Regeneration?

8. (a). What is the "Tree of Life"? (b) Where do we find the perfect food for man? (c) Why does man work so hard to grow grains, a destructive food, when he could so easily grow fruits, a constructive food?

9. (a). What is the purpose of the Law of Adjustment? (b) Does this law grant immunity, or simply defer the day of judgment?

10. (a). Tell how and why the Law of Stimulation is the Law of Degeneration. (b) Why does the body become fatigued?

11. (a) Give the seven steps in the transit from Stimulation to Death. (b) What food possesses the greater stimulating properties?

12. (a) How does flesh eating affect the blood, cells, and tissues of man? (b) How does flesh eating affect the heart-rate and respiration? (c) Give the six conditions that result from flesh-eating and stimulation.

**NEW WAY
★ ★ TO ★ ★
HEALTH**

I have a health food store here and also in Victorville, and want to tell you the most sensible writings that have presented more clearly the philosophy I can use in my life here on earth are the works of Prof. Hilton Hotema.— Dr. Lois Henderson, Barstow, Calif.

COSMIC RADIATION

STARTLING — A report in the press of Nov. 26, 1961, said Science declares, "Hibernation could give man a life-span of 1400 years." Chief benefits gained by the body in that case is freedom from eating, drinking and procreating. Hotema did some deep thinking, then formulated the Law of Longevity:

"If man consumed only Radiation thru his respiratory organs as he did in the Golden Age when he lived 1000 years according to tradition, if that Radiation were never polluted, and if the procreative function remained dormant, illness would be unknown, decrepitude would be unthinkable, and longevity would be unlimited. Read the amazing story in *Cosmic Radiation Health Research*).

Pursuing the trail of Science, we come to a line which, we are told, cannot be passed—"the-ring-pass-not." Beyond that point lies the Unknown. Further advance is impossible — for Science says so, and that's final. Something wrong. All questions have answers, and they can be found if they want to be. With an adequate system of research, it is possible to ascend to higher levels of Consciousness, where these answers lie hidden in the Crypt, and to advance literally without limit. — *Prof. Hilton Hotema.*

Awaken The World Within was formerly published under the pseudonym, Kenyon, Klamonti. The revised edition by the same author (Prof. Hilton Hotema) — from Health Research.

Large printed pages on fine quality paper (the same style as *Man's Higher Consciousness* —

THE MYSTERIOUS SPHINX

The oldest and greatest of Ancient Symbols is the Sphinx. The encyclopedia says that in ancient Egyptian mythology it represented the Solar Deity, Ra, and adds: "All nations of antiquity seem to have held these monstrous beings... as objects of awe, compelling adoration and worship."

When the first Egyptians settled in the Nile Valley, they found the Sphinx and the Great Pyramid almost buried in the windblown sand of the desert. To them the meaning of these two ancient objects was utterly incomprehensible. As the Sphinx looked toward the East, they called it Harmakuti, or the "Sun of the Horizon."

The work of excavation took years, and the Sphinx was found to be carved from solid stone and 189 feet long. There was a tradition that the Sphinx is a complex hieroglyph, or book in stone, containing the essence of the Ancient Wisdom, revealing its secret to him who can read the strange cipher embodied in its form, and fathom the correlations and measurements of the different part of the image. The clever scribe of the John Gospel of the Bible knew the secret of the Sphinx, and showed it in the first verse. Who was he? The chief disciple of the great Pythagorean philosopher of the first century. And who was he? Hotema tells the story in his two works, **The Mysterious Sphinx** and **The Mystery Man of the Bible**



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Lessons Nos. 21, 22, 23, 24

Lesson No. 21—Chapter No. 58

DEGENERATION BEGETS DEGENERATION

It would be incorrect to hold that flesh eating is the sole cause of the decline of the life-span from 950 years, in the time of Noah, to 148 years in the time of Nahor. For as men became more abnormal in their living habits, they did other things that had a degenerating effect. One bad-habit is a breeding-place for more.

Many authors hold, that in the change of food lies the chief cause of the vast decadence in the body's structure, and the consequent decline in the length of its days. They hold that flesh, the last food granted to man, is his worse; for after this time, his degeneration is swift and sure, and 120 years mark the limit of his days.

The eating and drinking of stimulating substances, and the indulgence of other passions, not only affect one's health, but also affect the brain, and blunt the finer sensibilities.

The influence of this degenerated condition is such, that man sinks from the exalted plane of humanity, whereon he was to exercise and enjoy dominion over all created things, even over himself, down to a slave of lustfulness, allowing the appetite to control not only his reason, but all his activities.

Man has long since forgotten that LIFE IS MORE THAN MEAT. He lives to eat, and becomes a beast; whereas, if he ate to live, he would become a blessing, not to himself alone, but to all living things, which were delivered into his hand, for care and protection, and which, instead, he slays and devours to satiate a depraved appetite.

As the undefiled body resents the deadly nicotine, while the depraved body craves it, so in the body of the flesh-eater there exists a craving for flesh; whereas, the man who has never dipped his tongue in gore, recoils from it in disgust, being nauseated by its very odor.

Lacking strength to turn back, when once he has fallen, man allows his depraved appetite to control his reason, and, like the Israelites of old, grows to loathe the "light food" furnished by the benevolent hand of Eternal Intelligence. He longs for the polluting flesh-pots of Egypt—preferring to live in the miseries of disease than practice the nobler virtues of a higher life.

It was thus that the Children of Israel, electing to live

under the galling yoke of Egyptian bondage, rather than restrain the craving of a depraved appetite, "fell a lusting" for flesh:

"The children of Israel also wept again, and said, Who shall give us flesh to eat?"—Num. 11:4.

They got flesh to eat:

"There went forth a wind from the Lord, and brought quails from the sea, and let them fall by the camp."—Ibid. 31.

And then this happened:

"And while the flesh was yet between their teeth, ere it was chewed, the wrath of the Lord was kindled against the people, and the Lord smote the people with a very great plague."—Ibid. 33.

Some bodily disorder that was the effect of their surfeit of flesh, ravaged their bodies, destroying so many that it was considered "a very great plague."

A substance that thus destroys the body, must also degenerate it. The body of everyone who eats flesh, is in a degenerated state. The body of everyone who subsists on cooked food, or drinks water as it comes from the ground, or breathes impure air, or violates any other law of his being, is in a degenerated state.

Chapter No. 59

VALLEY OF GRAPES

There were giants in the earth in those days.—Gen. 6:4.

Just as oak trees, on fertile soil, grow to be giants in size and length of life, compared with the same kind of trees on rocky-hillside soil; so men, subsisting on foods that stimulate their bodies and shorten their days, are pygmies and dwarfs, in stature, in intellect, in length of life, when compared with the old patriarchs who lived before the Flood.

There were also giants after the Flood. They lived in countries where the original custom of subsisting on fruits continued and prevailed.

An interesting phase of ancient history, relating to the physical proportions of the early Bible men, appears in the Book of Numbers. The account seems to be free from imagi-

nation, from all ulterior motives, from all intent to deceive. It is a report, made to a superior, by men sent to perform a certain duty.

The Israelites had arrived near the border of Canaan. Moses sends men "to spy out the land." He orders them to determine whether the people that dwelleth therein be strong or weak, few or many; and he directs them to bring of the products of the land, that a decision may be reached as to whether the land be good or bad, fat or lean. *The time was the time of the first ripe grapes* (Num. 13:17-20).

The men went as ordered. They came unto the brook (valley) of Eschol (a cluster of grapes), and there they cut down a branch with one cluster of grapes, and bore it between two upon a staff. Here also they found pomegranates and figs (Num. 13:23).

When the "spies" returned from their tour of investigation, what did they mention in their report to their chief? Did they say anything about hogs, horses, sheep, and cattle? Did they make any reference to wheat, corn, oats, barley, and rye? Did they speak of beans, peas, potatoes, turnips, beets, carrots, and parsnips?

No! Not one word regarding these. Yet they had been admonished to be of good courage, and bring back of the fruit of the land, in order to show and prove "unto all the congregation," whether or not the land they went to inspect, was a suitable place for men to live.

No man can live long on a barren desert. He must have something to eat and drink. So it is a rule that we judge a country by its capacity to produce the necessities of physical existence.

Not one word was said regarding any of the things we have mentioned. Yet if modern man were stripped of these, he would declare that he could not exist—that he would starve.

When the sick come to Dr. Clements for help, he allows them to eat none of the things mentioned above—no flesh, no milk, no eggs, no cereals, no tubers. At first they think he wants to starve them. The sicker they are, the surer it is that he will permit them to eat none of the foregoing substances.

With no flesh, no eggs, no cereals, no tubers mentioned in their report, yet the "spies" were so elated with the Promised Land, and it was so admirably fitted for their needs, that they declared:

"We came to the land whither thou sentest us, and surely it floweth with milk and honey, and this (grapes, pomegranates, and figs—Clements) is the fruit of it."—Num. 13:27.

Here is another complete and wonderful history, in a very few words, which describes somewhat in detail, the original and ideal food of the ancient giants.

Although the report is written nearly nine hundred years after the permission to eat flesh was granted to Noah, still the practice of flesh-eating appears to have made no progress in the land of Canaan. Man is still living true to the original plan of human subsistence. Fruit is still the leading food on his menu. And he is a giant, as tall as the cedars and as strong as the oak.

It is exceedingly difficult to subvert the habits and desires of the body, fixed in every cell, fiber and tissue, and followed by man for untold centuries. J. H. Kellogg, M.D., observes:

"The extreme dislike that some adults and most infants exhibit toward flesh food of any sort, is attributed by Fitch to an 'atavistic tendency', that is, the survival of the primitive instinct of our prehistoric non-flesh-eating ancestors."—Good Health.

To this day, these habits and desires crop out among children, who crave fruits and unfired food, and show a strong

dislike for flesh. But the firm hand of mis-educated parents soon effaces these natural instincts, and implants the degenerating customs of "civilization."

We believe that the gist of the report of the "spies" of Moses is true. For it appears not to have been written with any intention to deceive. These men were not engaged in commercializing a money-making scheme. Nor were they writing a treatise on diet, on mineral salts, vitamins, calories, and fuel value—on dietetic nonsense and medical bunk.

They were searching for food, and for a land that would produce it. They found it; and have left us their simple, honest report of what that food principally consisted. It was the food that man had subsisted on since the days of Adam.

In these few words, the old Patriarchs have bequeathed to mankind, purely incidentally it is true, the vital secret of the original, natural, and ideal food of man, to discover which medical science, and all its wealthy institutions, are now spending much labor and money.

In this land of plenty, grapes grew so profusely that the land was named the Valley of Grapes. So large did the grapes grow, that one cluster was borne between two men upon a staff.

Chapter No. 60

LAND OF GIANTS

We have reviewed the report of the "spies" of Moses relative to the food products of Canaan. Now let us review the report as to the people of this land. For the "spies" were also directed to investigate and report whether the people that dwelleth therein be strong or weak, few or many.

We learn that the joy, aroused in the hearts of the people by the good report regarding the "fruit of the land," was more than equaled by the sorrow created by the report of the "spies" regarding the people of that land. The report runs thus:

"All the people that we saw in it are men of a great stature, and there we saw the giants, the sons of Anak, which come of the giants: and we were in our own sight as grasshoppers (compared to them), and so we were in their sight."—Num. 13:32, 33.

This was surely the land of giants; for ALL THE PEOPLE THAT WE SAW IN IT ARE MEN OF A GREAT STATURE.

When the Israelites heard this part of the report,—

"All the congregation lifted up their voices, and cried; and the people wept that night."—Num. 14:1.

Well should they weep, for to make this land theirs, necessitated the extermination or subjugation of these giants, and the weapons of war were swords and spears.

Considering these giants further, we observe that the "sons of Anak, which come of the giants," were so large, that their size served as a standard of measurement with which to compare other large people. It is said:

"The Emims dwelt therein in times past, a people great, and many, and tall, as the Anakims, which also were accounted giants, as the Anakims."—Deut. 2:10, 11.

The Amorites dwelt in the hill country of Canaan; and of them it is said, His height was like the height of the cedars, and he was strong as the oaks (Amos. 2:9). He was a gorilla, comparatively speaking, in size and strength.

In Joshua 15:8, and again in 18:16, a people so large are mentioned, that their land is called "the valley of the giants."

In Deut. 3:11, it is said that only Og, king of Bashan, remained of the remnant of giants. His bedstead was of iron, and was nine cubits in length and four cubits in width.

A cubit is about 18.25 inches. This would make the size of Og's bedstead approximately 6 feet wide by 14 feet long. To require a bed of this great size would mean that Og himself was about 12 feet tall, with a thorax (chest) girth of six or seven feet.

We can only conjecture as to the size of these giants of the past, whose height was like the height of cedars, and who was strong as the oak.

The height of Goliath, of Gath, is given as six cubits and a span (about eleven feet and a half). The staff of his spear was like a weaver's beam in size; and the head of his spear weighed 600 shekels of iron (1 Sam. 17:4-7).

Ishbibenob was the son of the giants. The head of his spear weighed 300 shekels of brass in weight (about nine pounds and a half avoirdupois). (2 Sam. 21:16).

Goliath, the Gittite, had a brother, named Lahmi, who was a giant, and the staff of his spear was like a weaver's beam (2 Sam. 21:19).

There was yet a battle in Gath, says the Bible, where a man of great stature appeared, that had on each hand six fingers, and on each foot six toes, four and twenty in number; and he also was the son of the giant (Ibid.).

The children of the Anakims are described as "a people great and tall" (Deut. 9:2).

On December 12, 1930, an expedition of scientists, seeking traces of a prehistoric race, reported from Soyopa, Mexico, the finding of 13 skeletons, five of which were of adult males, and the others of women and children. The skeletons of the adult males ranged in height from six feet to six feet eight inches.

The press of October 5, 1930, carried an account of a family of Giants living in the Green Mountains of Vermont. The father, Hiram Bogue, is seven feet tall in his socks, and says that he has shrunk at least two inches in his 67 years on earth. His seven living sons range in height from six feet six inches to seven feet two inches.

In this age, when a man six feet high is regarded as a tall man, it is difficult for us to conceive of men who were 10 and 12 feet in height. But occasionally we are able to find men in modern times, whose figure reaches more than 9 feet up into the air. The distance between 6 feet and 9 feet is the same as the distance between 9 feet and 12 feet.

Why should a man 9 feet tall be more surprised to meet a man 12 feet tall, than a man 6 feet tall is in meeting a man 9 feet tall?

There are not many these days who reach such heights as 8 and 9 feet. The fact that some men do attain to that height, is strong evidence to warrant the assumption that there must have been a time when men of such great height were a common occurrence.

J. G. Taver, of Alba, Texas, a member of the Scottish Rite class of 1925, was 8 feet 5 inches tall, and weighed 460 pounds.

The press of January 15, 1925, stated that John Aasen, of California, was believed to be the largest Mason in the world. His height was given as 8 feet 9½ inches, and his weight as 516 pounds.

In the press of June 21, 1926, an account was given of the tallest couple to wed. The bride, a Scotch girl of 20, was 8 feet 3 inches tall, and weighed 352 pounds, and the groom, a man of Amsterdam, was 8 feet 7 inches tall, and weighed 426 pounds.

Mochnow, the Russian giant, was 9 feet 3 inches tall, and Johan Arndt, the giant Norwegian, who was living in 1929,

was 9 feet 7 inches tall. A United States silver dollar would pass thru the ring that he wore on his third finger, without touching the inside of it anywhere.

The Saracene giant Angoulaffre was 12 feet tall, and his forefinger was 9 inches long. He was killed by Roland in single combat at Fronsac in the 18th century. Roland, the famous hero and nephew of Charlemagne, was 8 feet tall.

There is a human skull in the Wiltlen Museum at Amsterdam that is 12 inches wide across the temples and 20 inches from chin to crown, indicating that the man was over 13 feet tall.

Captain C. N. Olsen, in the summer of 1929, sailed from Sydney, Australia, with five adventurers aboard. He traveled far from the charted highways of the ocean, to take these adventurers to an island in the South Seas, about which seafaring men had long heard amazing tales.

The strange island was not even dignified on maps by so much as a dot. It is located in the Gilbert group, and has been christened Tarawa. To reach the island, Olsen was compelled to thread his way through many treacherous reefs. By careful watching from the bridge of the vessel, he could spot the deep water by the way the light struck it, and thus avoid grounding. Olsen adds:

"Half a mile from shore we were forced to drop anchor and proceed in small boats. We had to wade the last 200 yards."

Olsen and his passengers at last reached the land, and they saw with their own eyes the giants that have long been one of the many intriguing legends of the South Pacific. Olsen observes:

"To our amazement, we found the island densely populated with a race of as handsome a people as I ever saw. They appeared to be a mixture of Malaysian and Polynesian. The men were giants in stature. They were modeled like Greek gods, standing well over six feet, and well proportioned and developed.

"The women were tall, too, and as graceful as nymphs are said to be. Their half-clothed bodies are bronzed and unblemished, and every one of these strange people seem filled with immense vitality, even though the temperature of their island home seldom drops below 90 degrees."

The island is only four feet above sea level, and is partly submerged at high tide. There is nothing growing on the island in the line of fruits and vegetables except cocoanut trees. The more than 4,000 inhabitants of this little island subsist chiefly on a mush made of fish and cocoanut meat. Olsen states:

"At meal time, each family gathers around a huge sea shell filled with about 10 gallons of this thick concoction made of fish and cocoanut meats, which does not taste nearly so bad as might be supposed. On the contrary, the island's sole dish is very pleasant to the palate and rich in nourishment."

He concludes:

"What impressed us most, was the great stature of the people, their rugged health and great vitality."

These people lived on cocoanut meats and fish. That was all they had to eat. No telling how many ages and centuries these people have been living on that simple fare. And they were giants in stature, with rugged health and great vitality.

But a laboring man in America would declare that he could not live on cocoanut meats and fish. The medical profession would declare it is dangerous for man to attempt to live long on such a diet.

The medical world seeks to ascribe the remarkable heights of persons of this day, to the abnormal function of some particular gland or set of glands. We are inclined to view the matter in a different light. We interpret it as an exhibition to us of some of the things of the past, that men have had, but lost because they knew not how to keep them.

These physical giants of yesterday were no doubt mental giants as well. Modern men may be somewhat loathed to admit that they are not intellectually the equal of the Ancients; but the discoveries, formulas and works of the intellectual giants of the past, are the foundation of modern education.

Only by the aid of modern inventions, such as the microscope and telescope, have we been able to acquire new information. Much of this merely proves what the intellectual giants of the past surmised.

Physical science contends that as man developed by the process of evolution, his brain capacity increased in a corresponding degree. Recent discoveries disprove part of this contention.

The press recently reported that two employees of the Southern Pacific Co., upon widening a small hole that they found in the side of a hill in Arizona, let themselves down into a chamber 400 feet by 200 feet in size.

At the bottom of the cave they found skulls, twice the size of those of a normal sized man of this age, and human rib formations the size of those of a steer. The ear-hole in the skull were said to be of immense size.

A sample of the work of these ancient giants was found in the form of a well-shaped granite bowl, five inches deep and fourteen inches in diameter. Part of the bowl, and parts of a huge jaw-bone, a thigh-bone, and a skull, were brought to the surface.

The physical measurements of the skeleton of the Cro-Magnon Cave Man, indicate the existence of an early race that was superior to modern man both physically and mentally. This primitive man had a much larger and stronger body, and a brain bigger and apparently better than the best of today.

Evidence of man's continued degeneration comes before us in the press of December 17, 1930. The men of Great Britain are found to be steadily decreasing in height. The Grenadier and Coldstream Guards, lacking six-foot candidates, have been forced to lower the long-standing height standard from six feet, to five feet eleven inches for the Grenadiers, and five feet eight and one-half inches for the Coldstream Guards.

Chapter No. 61

LAW OF PURPOSE

The Life Principle exists for a Purpose. The purpose has three aspects or phases:

1. To produce organized forms.
2. To complete these forms.
3. To perpetuate these forms.

Gravity and Chemical Affinity (Polarity) exist for a purpose. They produce the mineral world, with its physical and chemical energies, and control its operation.

Life Force transforms these inorganic minerals, along with their inseparable properties, into animate entities, such as plants and trees.

A condition is thus supplied that makes possible the production, completion, and perpetuation of birds, beasts, and men. So these in due season and order come into existence.

In this work, Life Force achieves its purpose, and fulfills its destiny.

When we examine the workings and changes occurring about us, we are impressed with the orderly trend of the Law of Production. We observe universal order from the groupings of atoms in the formation of minute organisms, to the arrangement of the planetary bodies in the constitution of the gigantic Solar Systems. We behold with amazement the operation of the Law of Purpose.

The tiny seed of a plant is an insensate bit of physical matter, to which no one will attribute intelligence. It falls on the ground, becomes covered with moist earth, and begins to perform its allotted function. It sprouts, sending roots down in search of such nutrition as it must have from the soil, and a shoot up thru the ground to gather from the air, light, and sunshine, such nutritious elements as it appears to know can not be had from the soil.

The plant knows nothing of biology, physiology, chemistry, trophology. It knows nothing of vitamins and mineral salts, of proteins and carbohydrates, of acidity and alkalinity. Yet, to grow, live, and thrive, it must have these substances. It must maintain a normal balance, as between its alkaline and acid properties, and it must have vitamins and mineral salts.

The plant seed is apparently an insensible bit of physical matter, vibrating in unison with Eternal Intelligence, which, as we are forced to infer from this action, is back, over, and above all manifestations of the Life Element.

The seed and the plant are physical channels. Through these the Life Element operates, as it labors to fulfill the Law of Purpose. That is the regular order of all existence, both visible and invisible. The plant will fall short of the intended purpose, only insofar as its conduct is hampered in its regular course by conditions beyond its control.

As the plant is not endowed with power and intelligence to enable it to control its environment, it is unable to regulate the conditions of the soil, air, light, sunshine, and moisture. Consequently, if the surrounding air is polluted, if light and sunshine are deficient or excluded, if the moisture is insufficient, the plant will suffer in direct ratio as its needs are not supplied. It will suffer degeneration from the normal standard. This is disease. How shall we "cure" it?

When Life Force has complete freedom to develop each physical form, these forms approach a degree of matchless beauty, symmetry, and uniformity that strikes us with amazement. In that state only do we behold these forms adorned in all their indescribable perfection.

No man can cogitate on these things, without becoming conscious of the fact that the Universe is governed by infallible law. It demonstrates the working of the Law of Purpose. It illustrates the action of Eternal Intelligence, which directs and guides the living world.

If the living form, which we shall call a plant, withers and dies before the expiration of its allotted time, we know that conditions favorable for its growth and existence are lacking.

But if the living form is that of a young man, it is the habit, due to ignorance, tradition, and teaching, to console ourselves with the thought, It is the work of the "mysterious and benevolent hand of Providence."

Scientific investigation has shown that Eternal Intelligence has provided far better for the existence of Man, than for that of the beasts of the field and the fowls of the air.

It has shown that man is the most perfectly made, the hardest and the toughest of all the animal world. It has shown that his range of adaptation is far greater than that of any other living thing. It has shown that no creature is so well equipped with powers to meet and resist changes in environment, as is man.

Man can live in the tropical, the temperate, and the arctic zones. No other animal is hardy enough to do this. The lion soon perishes in the arctic, and the polar bear soon dies in the tropics.

By virtue of these superior qualities and capacities, man should have a higher degree of health, and a longer life-span, in proportion to the length of time required for development and maturity, than any other living creature.

What are the facts? Just the reverse of that which investigation shows they should be. In spite of its hardiness and toughness, at an early age the human body begins to suffer from innumerable disorders, which the animals of the wild never have. This state reduces man's degree of usefulness and pleasure, and shortens his existence so materially, that the average human life-span, relatively speaking, is vastly below that of all other animals.

The highest, noblest, and completest of all living creatures, the only being capable of reason and judgment, and possessed with powers of individual intelligence for carrying into execution such arts and designs as science and philosophy may discover and dictate—with all these marvellous endowments, yet man comes not so near, by far, to fulfilling his purpose on earth, with respect to health and longevity, as the baboon and the ape.

The seasons are so beautifully balanced; the fowls of the air and the fishes of the sea fit so securely into the scheme of things; even the spider and the snake, except for human interference, are perfectly related to their environment. But man seems to be an outcast and a renegade.

Made to have dominion over all the living world, man is completely controlled by his habits and dominated by his environment. From master of the living world, he has become the slave of fear and superstition, of the lustfulness and wickedness of all the earth. He permits desire, pleasure, fear, and superstition to supply the motive for his every action. He attempts to divorce his existence from all law and order, and feels that he is a creature of accident and chance.

From beginning to end, man lives and leads a degenerative existence. He is constantly doing things that war against himself and his environment, thus placing both in a hostile position, as to each other.

This conduct deranges the body, disturbs its normal function, and destroys that quiet equipoise so necessary for a long, healthy, happy life.

Man's mind, instead of being clean, calm, and serene, is clouded and perverted by traditional lustfulness, fear, and superstition. His body, which he should respect, reverence, and well-treat, is misused and abused beyond description.

Coming from the hand of Eternal Formation, perfect in organization and beautiful in form, his decline from that ideal state has resulted directly from his own misconduct, from habits that destroy. The fact that he has, for countless centuries, withstood the ever-increasing wear and tear of bodily disorders, resulting from his own harmful habits, is proof of the wonderful power of endurance with which he was first endowed.

Lesson No. 22—Chapter No. 62

LAW OF DEVELOPMENT

The Law of Development is well exhibited in the vegetal kingdom.

Using the corn plant as an example: Every practical farmer knows that when corn is planted early in the spring, and season and soil are favorable, the corn grows larger, is longer in maturing, slower in ripening, and slower in decaying

and dying, than the same kind of corn planted later in the season.

This law operates uniformly throughout the vegetal world. Eternal intelligence appears to warn late plants that they must hurry, in order to complete their work before death from the first killing frost prevents the consummation of the purpose of the Life Principle.

The lowly cockle-bur comes into existence late in July, and matures its seeds almost at the same time as do its fellows, which have been growing for several weeks longer.

But the Law of Compensation has collected its penalty. The physical structure of the quicker-growing and quicker-maturing cockle-bur, when compared to its longer-lived brothers, is a weakling and a dwarf. Its cells and tissues are frail, its stalk is stunted in size, its leaves and stem are poorly developed, and its seeds lack substance, firmness, and integrity.

The hasty development is gained at the expense of a large firm, solid, compact growth. The Law of Compensation collects a price and bestows a reward, as the case may be, in every department of Existence, without exception.

Poor soil retards and stunts growth and development. Plants on poor soil do not attain the same favorable growth and development as do similar plants on fertile soil.

Corn grown on infertile soil will not develop sufficiently to produce an ear of grain. Some soils are so unsuitable and unfavorable for its growth, that it will fade and die long before its allotted time has been fulfilled.

So it is with all plants and trees. Oaks on fertile bottom land grow to be veritable giants of the forests, surviving for many centuries. The same trees on rocky, infertile hillsides, are dwarfed, knotted, snarly, and short-lived.

Animal bodies, no less than plants and trees, are similarly affected. They depend for growth, development, and lasting qualities, upon food from the air, water, and soil.

Unless supplied with suitable food and care, animal bodies, like plants and trees, will develop prematurely, be stunted and dwarfed, and will decay and die long before their allotted time has run.

If all the trees that we knew of, were those stunted, snarly, short-lived ones found growing on rocky, infertile hillsides, we should have no experience to teach us that these trees were dwarfed and decadent.

In the absence of such experience, how difficult it would be to persuade us to believe that the same trees, on ideal soil, would grow several times as large, and live several times as long, as when grown on poor, rocky soil.

Where shall we look to find a man that has grown, developed, and matured under ideal conditions? There are none; no, not one. For this reason, man, in strict propriety, must be regarded as an extinct species.

Although he is undoubtedly and actually a living species of man as originally made, yet the species, as a whole, have become so dwarfed and degenerated in size, so decadent in intellect, and so brief in the duration of life, that it would be worse than folly to compare the man we know, with the giants of Antiquity. It were just as sensible and logical to compare the scrubby oak on the rocky hillside, with its giant brother in the rich river valley.

Halle is of the opinion that man has vastly degenerated. He says:

"Moses, in his history of the world, describes the different substances that man successively included in the range of alimentary matter.

"He represents him as at first faithful to reason; then as transgressing the rule which it prescribes; obedient to the laws of necessity, but yielding to the charm of pleasure with

too faint a resistance, satisfying his hunger with the fruits with which the trees in a happy climate abundantly supplied him; then with the herbs and corn which he obtained from a more avaricious earth, as the reward of his labors; with the milk of his flocks; and, finally, with their flesh; subjecting, also, the juices of the vegetables to the process of fermentation; and extracting from them liquors that . . . intoxicate and deprive him of reason.

"He exhibits to us the duration of life diminishing in proportion as man created to himself new wants."—Hygiene.

As an illustration of the effect of food on the body, there are many authentic accounts of remarkable changes produced on animals, as well as on humans, by a change of diet. For in proportion as food is more or less suitable for the body's needs, in the same proportion will every cell, tissue, and organ be influenced and vary.

By a change of food, young worker bees in the comb may be changed into queen bees. The digastric muscle of birds of prey is so small as not to be easily detected. If a bird of this kind be fed only grain, the muscle develops to a degree that it cannot be recognized as belonging to a bird of prey.

The South American ostrich is a native of a more productive region than is the African ostrich. The result is, that the gastric glands of the former are less complex and numerous than are those of the latter, and the triturating organ is less developed.

The prediction that "his days shall be an hundred and twenty years" was not made when man was living 900 years. It was made after the age of man had declined to 148 years. The Prophet beheld the degenerative effect of man's habits, and believed that 120 years was as long as the body could endure such misuse and abuse.

The age of 120 years was predicted in the beginning of the days of flesh-eating and fermented juices. These habits and the age of 120 years are closely connected in the matter of time.

There are many things and conditions entering into living existence, which influence the development of the body and its period of duration, either promoting or preventing its approximation to an ideal state of perfection. So it is quite impracticable to attempt here to enumerate them.

Suffice it to say, that as the body is constructed and maintained of building material furnished by air, water, and substances from the soil, then these must exert a profound influence upon the body in three ways:

1. In its growth and development.
2. In the formation of its appetites, desires, disposition, habits.
3. In its duration, decline, and decay.

The living body is in a state of constant mutation. Its billions of cells are daily separated from the corporeal frame, and their places are as rapidly filled with newly organized matter, derived and received only from nutritious substances contained in the "river of life."

Climate, light, sunshine, air, food, exercise, thoughts, all of themselves, will materially influence and affect the constantly occurring changes. But all other things being equal, the more natural and suitable the air, water, and food from the soil, the more complete and perfect is the body's development, the most resisting power it has, and the longer will it last.

Chapter No. 63

LAW OF ANALOGY

A true Philosophy of Existence must include the great phenomena of Analogy.

Analogy, as it exists among various objects and appearances,

is not, as often thought, mere casual and superficial resemblance.

Analogy is a part of the method, order, and constitution of Existence. The evidence of the Unity of Existence, resides in its analogies.

Hitherto, this branch of Science has not been studied as it deserves. In writings emanating from the profounder class of wits, we may find examples thinly and sparsely inserted, for the use and illustration of the argument. But a complete body of these axioms no one has prepared. Yet, they have a primitive effect and efficacy in all science, and are of such consequence as materially to conduce to the understanding of the Unity of Existence, "*which latter we conceive to be the office and use of Philosophia Prima,*" says Lord Bacon.

All philosophy serves to establish this high claim. No portion of Existence becomes truly intelligible, till its analogies with the other portions have been investigated and applied. The student or scholar who disregards them, can never hope to be more than a narrow sectarian. He who uses them as a philosopher, for their efficacy as a means, proves that it is they alone which can render the mentality cosmopolitan, and truly instruct men in the arcana of Existence.

A man may be a good chemist, as to acquaintances with salts and acids; he may be a good botanist, as concerns the names and uses of plants; but this is only to be a savant. Such a one is no philosopher until he can gather new insight into his chemistry or his botany, by virtue of its Analogies with other shapes of truth, and feel the centrality, as to essentials, of every science.

The true Analogist, wherever he may be, however he may alter his standing-ground, always finds himself in the *middle* of Existence, and his particular object for the time being, the clue and text-book to the whole.

Analogy is not to be confounded with Correspondence. Analogy rests on the relations as between Organized Bodies. Correspondence rests on the relations of Organized Bodies to their Animating Force.

The value of the study of Analogy, even in its simplest applications, is impossible to exaggerate. There is not a single branch of Science from which difficulties have not been removed by the certainties of a kindred branch, when analogically compared with it, or which, on similar comparison, does not furnish new hints and illustrations.

True, inductive, poetic Analogy, constitutes the highest exercise of philosophy—"the science of the connecting principles of Existence," as Adam Smith so well defines it.

Chapter No. 64

LAW OF PREFIGURATION

That Existence is a magnificent Unity has long been perceived. Also, that its parts form a vast chain or series, beginning with the Atom of Dust, and extending thru Minerals, Plants, and Animals, up to Man.

Associated with these great principles, and springing out of them, is a third, the wonderful Principle of Prefiguration.

Everything in Existence is a sign of something higher and more expressive of Life than itself, to follow in due course, and in turn announce a yet higher one: The mineral foretells the plant, the plant foretells the animal, all things in their degree foretell man.

Says Henry Sutton:

"Nature, before she develops the human being, prophesies

of that her grand and ultimate performance, and gives pictures and shows of her unborn man-child, hinting at him, and longing and trying to realize him, before the time has come for his actual appearance."

Ordinarily, the resemblances appearing between the three Kingdoms of Existence are deemed mimicries. The higher manifestation is said to be imitated by the lower one, the phenomena of the vegetal being called a degradation or humble copy of those of the animal, and those of the mineral world a degradation of those of the plant.

This is wrong. It is viewing the column as commencing with the capital, and ending with the pedestal.

Properly understood, there is no such thing as mimicry in Existence. It is an inverted mode of observation that makes it seem as though there were.

The likenesses are not those of the living, smiling child and the inert, wooden doll, but of the artist's penciled outline and finished picture in colored oils.

In the inferior orders of Existence, it is not that the Lamp of Life is going out, but that we catch the first kindlings of that mysterious spark, which glows with such noble flame in the Aristotles, Shakespeares, Newtons, and Darwins of the race.

The Mineral Kingdom, as the common basis of Visible Existence, is also the first seat of prefiguration, which begins in the beautiful objects known as Crystals.

Plants are higher in the scale of being than Minerals, and animals than plants. In each kingdom there are series of forms, successively more and more complex; but there is none of that complete and absolute progression from the lowest mineral to the highest animals, which is ordinarily supposed.

Chapter No. 65

LAW OF DEGREES

Gazing forth upon the Visible World, man observes everywhere two primal modes of special arrangement, to-wit: (1) Latitude or extension, and (2) Altitude or elevation.

Exactly accordant with this universal duality are the relations and properties of all organisms and forms of Existence, including all the Powers and Principles of Life.

Those modes of special arrangement represented in Latitude or extension are relations of Continuity. Those represented in Altitude or elevation are relations of Discretion.

These two Grand Classes of Arrangement are divided into Degrees, to-wit: (1) Continuous degrees, and (2) Discrete degrees.

Without a basic knowledge of Degrees, a clear and definite understanding of Existence is not possible.

Degrees are the means by which Existence is formed and produced. They hold the secret of the philosophy of Eternal Formation and Eternal Production. A knowledge of them enables the student to investigate and comprehend interior or prior causes. Without their acknowledgment, there must always be that very confusion which today characterizes the course of our modern educational institutions.

In all investigations, as long as we have seized only isolated, disconnected facts, as long as we have not referred these facts to a general law, we possess the material of science, but as yet there is no science.

The two general classes of degrees may be best understood in contrast with each other. Continuous degrees of anything exist on the same plane. They may be regarded as degrees of latitude. Swedenborg observes:

"Continuous degrees is a term applied to the gradual lessening or decreasing from grosser to finer, or from denser to

rarer; or rather, to growths and increasings from finer to grosser, or from rarer to denser; precisely like the gradations of light to shade, or of heat to cold."—Divine Love and Wisdom, p. 173.

Continuous degrees are those that intervene between the extreme phases or conditions, of which any given subject or object is logically susceptible, and which mark its development and historic progress up to the period of its consummation. Thus, the progress of the day is by continuous degrees. The night melts into the dawn, the dawn into the morning, the morning into noonday.

Discrete degrees are entirely different. They exist on different planes. They must be conceived of as degrees of altitude, related as cause and effect, and nonconvertible one into the other.

Will, Understanding and Activity are three discrete degrees. A certain amount of Activity will not make the Understanding. An increase in the Understanding will not necessarily make a like increase in the Will. They are three different things on three distinct planes. Yet the Will proceeds from the Understanding, and produces the Activity.

Swedenborg says:

"Discrete degrees are like things prior, subsequent, and final; or like end, cause, and effect. These degrees are called discrete, because the prior is by itself; the subsequent by itself; and the final by itself; and yet taken together they make one.

"There are atmospheres, from highest to lowest, that is, from the sun to the earth, called ethers and airs, that are separated into such degrees. They are like simples, collections of simples, and again collections of these, which taken together are called a composite. Such degrees are discrete, or separate, because each has a distinct existence. These degrees are what are meant by Degrees of height."—Ibid. 174-5.

In Degrees of Continuity the relations are of state, but not of kind. Every new appearance and condition is developed out of its immediate predecessor.

Where things are differentiated by a Discrete degree, the commencement of the new one is not, as with Continuity, where the inferior or prior one left off. It is on a distinct and higher level, and under the influence of new principles. Every ending is absolute, and every beginning *de novo*, initiating an altogether nobler mode of existence, which culminates after its own manner, and is then succeeded by another.

This is most strikingly displayed in the relations of the three great kingdoms of Existence—Minerals, Plants, and Animals.

So far from being true, as supposed by Continuity and the "Vestiges," that the ending of one joins the foundation of the succeeding, it is here that the affinity and resemblance are the very slightest.

The humblest forms of plants are those which are least like arborescent crystallizations. The humblest forms of animals are those which have least in common with the Mimosa.

Every kingdom of Existence, as it ascends towards its maximum, instead of approximating closer and closer to the next above, and eventually passing into it, in reality becomes more and more remote from it.

Every kingdom starts on a platform of its own, as Orthopathy shows by logical argument. It grows more distinct with every step. At last it enjoys a perfection no less peculiarly its own. That perfection does not inhere in the forms that seem to be connecting links with the kingdom next above. The perfection and termination of each realm, as of each tribe and class, is in the maximum realization of its archetype.

The common opinion advanced by some regarding the

animal and vegetal world is, that at their commencement they are united.

It is true that between the first animalcules and the first vegetals there appears a seeming identity. It is true that the Embryo Human Organism itself does not perceptibly differ from the earliest forms of plants. It is true that the two classes of beings retain a kind of parallelism for a considerable distance. Both begin with the simple vesicle, the globe in miniature, the cylinder, and the disc, appearing to measure with their fine geometry the space they are in time to fill so admirably.

But vegetables do not terminate with animals. Quadrupeds do not terminate with monkeys. And monkeys do not terminate with Man, as the stupid and the Enemies of Evolution teach.

The Law of Discrete Degrees precludes intermixture at any point—even at the foundation.

If we would correctly contemplate the Great Kingdoms of Existence, or any of their subdivisions, we should begin our study by comparing summit with summit. There we find the finished product. There we learn the Design of the Worker.

A stranger cannot say what Plan a carpenter has in mind, as he advances towards a pile of lumber, with saw, square, hammer and nails in hand. The finished product may be a house or a boat, a wagon or a sled. The same material enters into each; they are the product of the same Workman. But one did not terminate with the other. The carpenter does not build a boat in order that it might terminate in a house. Each Plan is a distinct production.

The Law of Discrete Degrees, clearly understood and intelligently applied, sweeps away difficulties that are insuperable before, and puts us on guard against merely apparent truths. It ratifies and shows the rationale of the genuine.

It has been the want of an enlarged and philosophical recognition of the Law of Discrete Degrees, that has largely led to many of the grossest errors of science—that Life, for example, is only Matter attenuated and etherialized, as Herbert Spencer and others have attempted to show.

The Law of Discrete Degrees, and the Law of Correspondence, which we shall observe, taken together and properly applied, form the most efficient of all possible aids in the discovery of that Grand Philosophic Ultimatum, *The Science of Existence*.

Chapter No. 66

LAW OF PROMOTION

In connection with the Law of Discrete Degrees, it is well to consider the great companion, the Law of Promotion.

Eternal Formation and Eternal Production, in their ascent, leave nothing behind. They subordinate, but never disuse. The past is always brought forward into the present. Every degree of ascent is marked by new powers and better forms, but with these are always essentially recapitulated all things that have been previously employed.

The properties that exist in the lower or anterior stages, are not only carried on to the superior, but are there applied to newer and higher purposes.

The physical laws in the Mineral World include cohesion and affinity, and there achieve their highest in the production of crystal flowers.

These do not cease with the crystal. Brought forward into the vegetal, they are as active as they were in the mineral. But now they are no longer the rulers. They are subordinated to the higher authority of Vital Force. These in turn move forward to the animal, where to chemistry and vitality

are superadded senses and locomotion. All finally move forward into man, where they lie under the new and crowning magistracy of Reason.

Man stands on a plane in himself, discretely separated from all below by his upright posture and special powers, as a physical organism, and by his intellect as the crowning function of living things.

Man is all that has gone before. He feeds and sleeps with the vegetal; he builds and procreates with the animal; *he talks and reasons in virtue of his own original and unique completeness.*

In man all the operations of Eternal Formation and Eternal Production are concentrated and perfected. He is the continent of the world, rather than contained in it; he is the aggregate of all properties, phenomena, and uses; the summary and mirror of the whole of Eternal Existence. He cannot be the lower degrees, for these are the basis and factors of his perfection.

Understanding the Law of Promotion, we begin to read correctly the great lessons inscribed on lower natures. Were there no quadrupeds, man would be a thousand times more incomprehensible than he is.

Animals, in turn, are similarly illustrated in the plant-world; in either case because the lower nature shows in detail, and prominently, what in the higher nature is obscured by subordination.

Seeing that all things are mute predictions and prefigurements of Man, it follows again, conversely, that in the laws and phenomena of his own being he has the keys to all phenomena beneath him.

The true Science of Existence we shall possess only when it is studied, in every part, by the light of Eternal Relation.

Lesson No. 23—Chapter No. 67

LAW OF GROWTH

Through the operation of the Law of Analogy, we may trace in all living forms a perfect agreement of various manifestations, in whatever direction the investigation is carried.

In the matter of growth and development, what is true of plants is true of animals; and what is true of animals, is true of man.

An ancient Arcane axiom, "By the discovery of one, learn thou of all," applies throughout the living world, disclosing its secrets, describing its processes, and declaring its relationship.

By comparing the physical development and the length of the life-span of the giants of the Bible with the men of today, there appears a perfect analogy, in a sense, to the corn and trees growing on fertile valley land, and the corn and trees growing on rocky hillside land. They are the corn and trees growing on fertile valley land. We are the corn and trees growing on rocky hillside land.

The hasty growth and development of the lowly cocklebur, that sprang up in July, is a measure of self-preservation. That is the way in which the Life Principle achieves its purpose and fulfills its destiny. The hasty growth and development are gained at the expense of faulty structure, faulty seed, and premature decay. The Law of Compensation cannot be denied.

The hasty and stunted growth and development of the corn on the rocky hillside, is a measure of self-preservation. The Life Principle hastens growth, dwarfs development, and shortens life, in an effort to aid the corn-plant to fulfill its allotted purpose.

The same law applies to all plants, whether they be grass,

weeds, or trees. The same law applies to all animals, whether they be birds, beasts, or men.

Substances that stimulate, and harmful living habits, hasten the body's function. The result is hasty development, hasty maturity, stunted growth, degenerated structure, early decay, and premature death.

The effect of stimulating substances is the same on plants as on man. If corn be planted on land that is too highly fertilized, the effect of the highly stimulating soil on the plant will be the same in the end, as the effect resulting where corn is grown on rocky hillside land. The plants will be dwarfed, degenerated, and will soon decay and die as a result of excessive stimulation.

The well-developed, long-lasting specimens of plants, trees, animals, and men, are those that grow and develop under suitable conditions. Then the growth and development are slow, steady, consonant, complete and perfect.

Here is the explanation why there were "giants in the earth in those days."

Graham states that there is no law of life, extending over the animal and vegetal kingdoms, that is more general and certain than is this law. He asserts that the slower the growth of physical bodies, consistent with the healthy and vigorous condition and action of the vital powers, the more complete are the vital processes, and the more perfect is the general development. He says:

"This law, or one very analogous to it, extends throughout the material world, and governs the formation of all material bodies. Even those crystals of the mineral kingdom, which are formed most slowly, and, as it were, in the undisturbed tranquility and serenity of Nature, are the most perfect and most beautiful.

"In the vital economy of the human body, all the changes concerned in the nourishment and development of the system are the most healthfully slow and complete, when the food is purely vegetable (and fruit—Clements); and it therefore must follow, from every known physiological principle in the human constitution, that, all other things being equal, a pure and well-chosen vegetable (and fruit—Clements) diet is most conducive to completeness of bodily development and perfectness of symmetry and beauty."

If proper diet be not supplied to the animal from birth to maturity, normal development is arrested; or, more properly speaking, the development is hastened. For the body comes to maturity too soon, and stops growing before its allotted time, resulting in faulty development and early decay and death.

Conditions are made worse by the fact that one stimulant calls for another. Flesh-eating, drinking intoxicants, using tobacco, sexual excess, and all other degenerative practices travel hand in hand. They can all be traced back to the one source—STIMULATION.

The stimulating effect of flesh induces a craving for intoxicants. Sir John Sinclair observes:

"Where animal food is used in great proportion, fermented liquors become in a great measure necessary to obviate, in some degree, the septic tendency of such a way of living."

It was not until permission was granted Noah and his generation to eat of flesh, and immediately thereafter, that we read—

"He drank of the wine and was drunken."—Gen. 9:21.

Also, when Jacob brought to his father Isaac the savory flesh that he liked, we notice that *"he brought him wine, and he drank."* (Gen. 27:25).

When Judah was called to weeping, and to mourning, it on the contrary encouraged—

"joy and gladness, slaying oxen, and killing sheep, eating flesh, and drinking wine."—Isa. 22:13.

Solomon knew of the indissoluble union existing between flesh-eating and the diffusible stimulus, hence his sage advice—

"Be not amongst wine-bibbers; amongst riotous eaters of flesh."—Prov. 23:20.

From the evidence adduced, we must infer that eating flesh and drinking fermented juices are degenerative appetites that were connascent; for no sooner did the eating of flesh come into man's life, than the drinking of intoxicants appears; and thus consorted, they continue and remain with man, to destroy his happiness, degrade his body, degenerate his intellect, and diminish his days, increasing in intensity with the passing of the years.

Chapter No. 68

LAW OF CORRESPONDENCE

The Law of Correspondence is the Science of that Relationship which runs thru Eternal Existence. It is the key to every species of human knowledge.

Most of the difficulties besetting the path of science originate in neglecting the light that the Law of Correspondence is fitted to cast upon them. With this Law as our guide, perhaps nothing is absolutely unintelligible. Without it, the commonest things are clouded.

The cause of the marvelous resemblance between the various Departments of Existence comes under this Law.

Darwin appears as one of the first investigators who collected data that demonstrate the universality of the Law of Correspondence. When he unfolded the evidence that proved the existence of this Law, Science saw in it a plan to account for the origin of Man.

The dissertations of science begin, "It appears," "We think," "We believe," "We assume." Not one begins, "We know." By the adoption of such propositions as its basis, science takes rank as speculative philosophy. This is true of any system that does not offer a rational means for demonstrating its dogmas.

The theory of science as to the origin of man is grossly speculative. It rests upon the close similarity of animal bodies in the ascending scale of forms. This, together with the suggestions offered by the universality of Form or Structure, is mistaken by science for evidence that the higher are descended from the lower, through modifications wrought by the operation of what is called "natural laws."

While neither Science nor Existence furnishes any proof of this assumption, its possibility is contradicted by every relevant law of Formation and every example of Production.

The similarity in the ascending scale is incidental and unavoidable. One common plan runs thru all animal forms, and through the human form. But that is not enough to prove that man is descended from any prior form.

This general resemblance is what should be expected, if Eternal Existence is the work of the Eternal Trinity. Similarity of structure and resemblance of form show a common origin in the Eternal Trinity, rather than derivation from the Monera thru "natural laws," which never vary.

That the lower forms came first, the higher successively, and man last, is taken and accepted by science as confirma-

tory evidence that the higher forms came from a primal form, through modification of functions.

It is important to observe that the Order in which forms are made, arose out of the method of making, which links all in mutual use, but not that the lower might beget the higher.

As the Earth passed thru its elementary stages, wherein it could sustain only the lowest living forms, to its more nearly finished state, suited to man and his uses, forms came forth that were adapted to the state of the Earth's progress, and suited to the promotion of use.

Similarity of structure and an ascending scale of forms, accord with the vast Law of Eternal Formation and Eternal Production. But in no way do these argue that a specific form is used as a progenitor of the next higher.

It is logical and inevitable that the ascending scale of animal forms should be crowned by those characteristics which in many respects closely resemble the human.

The lower nature of man is animal; hence his outward form must necessarily resemble that of the higher animals.

The nearer the living forms come to the expression of the functions of the higher degrees, the more will they approach that form and resemble each other.

Since the human form is that which expresses Life in the highest degree, the highest or later animal forms must approach and resemble it. Yet, as there is no animal that expresses Life in the Human Degree, there is none exactly of the Human Form in any part.

What man calls Life is the expression of a Grand Force in the constituents of the physical world, giving existence to whatever is.

Its operation thru the Organism causes it to express Vitality, Energy, Thought and Feeling, producing intellect and affections, and sustaining all that is contained in Existence.

Life is expressed in two modes, to-wit: as observable in the (1) inorganic half of Visible Existence, and in the (2) Organic half.

The lowest expression of Life of which we have knowledge, is in the inorganic or mineral department of Existence. The Vegetal Kingdom succeeds; then the Animal.

Wonderfully and truly miraculous it is that a single Element should be presented under such diverse aspects, the extremes as far apart as north and south. Though it is not without some striking illustrative imagery in objective existence, where the same substance is occasionally found under widely dissimilar forms, as happens with charcoal and the diamond, both of which consist essentially of carbon.

There is a grand law, in the light of which the whole matter becomes intelligible, viz., the Expression of Life is always in exact ratio to the Use and Destiny of the Expressive Object in the general economy of Existence.

In the Organic Realm appears that Expression of Life which, as the prime instrument of all man's temporal enjoyments, has in every age allured his keenest interest. Its mysteries have commended themselves to his intellect as the peerage of science and philosophy, the alpha and the omega of all knowledge.

Aristotle observes

"If the knowledge of things becoming and honorable be deservedly held in high estimation; and if there be any species of knowledge more exquisite than another, either on account of its accuracy, or of the objects to which it relates being more excellent or wonderful; we should not hesitate to pronounce the history of the Animating Principle as justly entitled to hold the first rank."

With all enthusiasm and assiduity, chemistry, anatomy,

and physiology have toiled at the splendid theme. Esteemed by some as the Cause of organization, by others as its Consequence; imagined at different periods to be fire, light, oxygen, electricity, and galvanism, still the exulting Eureka has not been uttered, either in the laboratory, the dissecting-room, or the schools of the savants. The enigma has continued to baffle all the propounders of solutions; the "heart of Eternal Formation's mystery has not been plucked out, even by the most vigorous of the wisest men."

In the Organic Realm there is presented a three-fold history that pertains to every species without exception; namely (1) Assimilation of food internally, (2) Procreation of the species in direct descent, and (3) Inanimation or Death.

In the lowest forms of plants, assimilation and procreation are performed, proving that the absolute, unexceptionable diagnosis of organized bodies consists not so much in the possession of distinct organs, as in the presence of Vital Tissue—that is to say, cells filled with fluid.

The Protococcus, or red-snow plant, has its whole function concentrated into the compass of a single microscopic cell. Assimilation and procreation are performed there nevertheless.

The body of man is a vast mountain of cells of precisely the same intrinsic character as those of the Protococcus, only built into special members, and expressive of a fuller degree of Life Force.

Whether members be developed or not, Vital Tissue is the basis of the entire Organic Realm, as markedly as it is absent from the Mineral, and forms the very seat of the whole of the Vital Processes.

That they are destitute of Vital Tissue is the reason why Minerals perform no Vital Function. They neither feed, nor breathe, nor procreate, to our knowledge.

In many points, Animals and Plants are most intimately allied. In the former, the organs, and therefore the functions, are more numerous and varied.

In the Animals appear the special sense organs, with the function of seeing, hearing, smelling, feeling, and tasting. These are distinguished by physiologists as the Animal Functions. The functions that are common to both animals and plants are called the Vegetative.

For example, in man the Vegetative functions are feeding, digestion, respiration, etc., all of which he has in common with the plant, their central organs being those that have to do with the circulations of fluid, and the inhalation of gases.

The purely Animal functions are those which depend upon the Brain and Nerve System as their central organs.

In Animals, the organs of the Vegetative functions are generally single, as the heart, stomach, liver, pancreas, spleen; those of the Animal Functions are for the most part arranged in pairs; that is, they are double and correspondent, as in the two eyes, two ears; or they have two symmetrical halves, parallel with the mesian line of the body, as in the nose and the tongue.

But everywhere, it is the same Kind of Life that is expressed. The higher and lower presentations come wholly of the peculiar offices, and thence of the capability of the Organism to use and express it.

The lowest degree of expression of Life is in the simplest forms of vegetables, such as the microscopic fungi, known as moulds and mildew. The highest is in the physical body of man. Between these are innumerable intermediate degrees, all referable either to vegetal or animal.

The analogy between man and tree suggests their Correspondence. The tree has wood, bark, and sap. Man has flesh, skin, and blood. In both the tree and the man the

same primary elements are found. But these facts do not indicate that man developed from the tree.

The Correspondence in man, animals, and plants originates in the fact, that the same Life Principle that forms man, and is called Human Life, descends to the plane of the lower animals and the vegetal kingdom, and there operates upon the same pattern, and forms animals and plants that bear a likeness to the Human Form.

Chapter No. 69

LAW OF USE

The Law of Use, like the Law of Correspondence, is as vast as Existence itself.

A knowledge of this Law instructs us as to the particular Ends for which the various objects of Existence have been designed, and the necessity there is for every one of them.

Physical uses comprise all those by which things reciprocally sustain one another, and preserve their respective races extant upon the Earth.

The Mineral supports the Vegetal, and the Vegetal supports the Animal. Both repay all that is rendered them, and with interest; and, preserved by what they have received, they succor their own respective species.

According to the needs of each superior form, is the adaptation of every inferior one that supports it, as regards structure, configuration, and vital economy.

Every plant and animal, every bird and tree, every mineral and rock, is so constituted as to enable it to minister to a nobler nature. Even the thorns and thistles have their forms of uses, in that their decaying bodies go to enrich, for a nobler use, the soil from which they spring.

Swedenborg observes:

"In the forms of uses of the animal kingdom, there is a similar image of creation (Eternal Formation—Clements), in that the animal body, which is the outmost thereof, is formed by a seed deposited in a womb or an ovum, and this body, when mature, brings forth new seed.

"This progression is similar to the progression of the forms of uses of the vegetable kingdom; seeds are the beginnings; the womb or the ovum is like the ground; the state before birth is like the state of the seed in the ground while it takes root; the state after birth until the animal becomes prolific is like the growth of a tree until it reaches its stage of fruit-bearing.

"From the parallelism it is plain that there is a likeness of creation (Eternal Formation—Clements) in the forms of animals as well as in the forms of plants, in that there is a progression from firsts to outmosts, and from outmosts to firsts."—Divine Love and Wisdom, p. 332-3.

The order of Eternal Formation and Eternal Production is that of Use. The Earth, at first, not being in a condition to respond immediately to Formative Force in its higher tendencies, the activities in the lower degrees finally found a basis suitable for the organization of Matter into bodies.

As the Earth passed into conditions that were suitable and serviceable to the higher tendencies of Formative Force, the superior forms were successively produced.

Consequently, the ascending scale of Living Organisms is due to the general design of Use. These Organisms were formed and produced as the earth ascended in its state of adaptability and preparation, which the Law of Use itself wrought.

Considering merely outward appearances, it has been suggested by some that as the lower material forms, plants and animals perish, as ages change, seas shift, and mountains

crumble, Visible Existence itself must come to an end, the Sun burn out, and the Universe be dissolved.

The very phenomena from which such deductions are drawn, if the sight penetrates to their uses show that the Earth is permanent, that the Sun cannot fail, that the Universe is eternal.

Since the uses to the Earth of lesser things, like plants in providing alluvium, do not perish, the uses of the Earth to the plant that are so much more vast and prior, must be equally permanent.

If the uses of the Earth to the plant are permanent, the uses of the Sun to the Earth, which is greater and prior, is equally lasting.

The use of providing the Formative Force with material to be constructed and reconstructed into bodies, cannot be less enduring than the Formative Force, which all concede is eternal.

As Uses rule over all, and are constant in Eternal Existence, what seems to suggest final dissolution in reality confirms the opposite. This appears with greater clearness when the relations of Man to the whole are observed.

Man's body draws for its structure and sustenance from all the degrees of Existence. It is an organization in correlation with Eternal Formation and Eternal Production. The things of Eternal Formation and Eternal Production man sees, smells, feels, hears, tastes, and breathes.

So fully is man served by all things, that Use to man appears as the chief purpose of Visible Existence. Each successive step in its formation was a preparation for him. So completely do all things center in him, and contribute to his existence and development, that he comes as the crowning purpose of all that passed before.

Man is as the fruit on the end of the branch, the final purpose of the tree, into which it pours its substance, and for which it surrenders itself.

Man being the end for which all things are, the first and highest use of Eternal Formation and Eternal Production, it is logical and conclusive that he is as enduring as the Universe itself, or as the highest Use.

In response to man's needs and demands, the Law of Existence provides him with knowledge, material, and conditions, that he may realize his aims and endeavors in his work. As he advances, new needs and demands arise. These are supplied by his ability to uncover new secrets of Existence.

Man's craving for Perpetual Youth will be supplied by the Law of Use, when he shall have developed the requisite knowledge to guide him in his search.

Chapter No. 70

LAW OF DURATION

The profound preparation that was made for the advent of man on earth, is evidence that he was intended to live for many years.

Eternal Formation made the Earth, and also made the man. Covering a period of time so vast that the mind reels in attempting to measure it, the earth, from a mist of infinite particles whirling in space, was born. At first a great molten mass, floating in the air, it gradually cooled and solidified, and was slowly formed for habitation.

Patient periods rounded themselves before the rock was formed. Other periods followed before the primitive lichen race disintegrated the thinnest external plate of stone into soil, and opened the door for the remote Flora, Fauna, Ceres, and Pomona, to come in.

How far off yet is the trilobite! how far the quadruped! how inconceivably remote is man! All duly arrive. It is a long way from rock to soil; further yet to Plato. Yet all come.

Living forms first appear in the water; then fowls that fly above the earth; then the animals that live on land—and lastly, man, the marvelous masterpiece of Eternal Formation.

Man is the only creature that has a prolonged infancy and childhood. The Law of Compensation declares that he should have a corresponding period of prolonged maturity and manhood.

Compare a baby of 12 months with a dog, a cow, or a parrot of that age. The human arrives at maturity at 28 or 30 years of age in modern times. The parrot reaches that stage in one short year. Man dies of old age at 50 to 100 years. The parrot lives 300 years.

If the condition under which men and animals live is such as hasten their growth, development, and maturity, then their bodies, like that of the quick-maturing plant, are frail and loosely knit. Such bodies soon crumble and decay.

By reviewing the lives of the Bible Patriarchs, a remarkable lesson is incidentally given us respecting development, growth, maturity, decline, and death. The lesson reveals the effect of the operation of the Law of Compensation.

We are not told of the age at which Adam begat Cain and Abel, but it is said that he lived 130 years and begat Seth, Seth, at the age of 105, begat Enos; Enos, at 90, begat Cainan; Cainan, at 70, begat Mahalaleel; the latter, at 65, begat Jared. Jared, at the age of 102, begat Enoch; Enoch, at 65, begat Methuselah; the latter, at 187, begat Lamech. Noah begat Shem at the age of 500.

So far as we know, it has always been the common custom of man not to engage in the marital relation generally, until he has practically reached the stage of physical maturity. Today that time ranges from 20 years upward to 30, and the human body is what may be considered as matured at about the 28th to the 30th year. That is about the age when the complete ossification of the bony structure occurs in this age.

From this evidence, we shall assume that the old Patriarchs did not arrive at maturity until sometime near the ages given as that at which they begat their first offspring, which range from 65 years upward.

Mahalaleel was 65 when he begat Jared, Enoch was the same age when he begat Methuselah. All the rest of the men recorded as having lived before the Deluge, were older than Mahalaleel and Enoch were, when they begat their first offsprings.

Noah was 500 when he begat Shem, Methuselah was 187 when he begat Lamech, Jared was 162 when he begat Enoch; and Shem was 102 when he begat Arphaxad. Similar variations occur in modern times, as men beget their first offsprings from 17 years of age and upward.

Our present knowledge of the length of time required for man to reach maturity is such, that Science cannot be persuaded to believe that the men of the early Bible days were from 65 to 100 years in attaining full growth.

The lower animals, speaking generally, live about ten times the length of time required for them to reach maturity. In many instances, among beasts, fowls, fishes, and insects, this limitation is often vastly exceeded.

The press of August 23, 1930, reports that Joseph Luscardy, of Rochester, N. Y., has a cat that is 19 years old. The cat is said to be active, and shows no signs of old age. The cat was fully matured by the time it was a year old.

The press of April 23, 1927, reports that John Sparks, of Ballymahon, has a skylark that has sung in his cafe for 21

years. The bird was fully matured before it was one year old.

The press of April 28, 1927, states that the Philadelphia Zoo has received a 100-year-old lizard. The lizard reached maturity by the time it was four or five years old.

D. F. Cooley, of Oklahoma City, is a raiser of a certain variety of Canadian geese. He says that six months after they are hatched, they are full-feathered and full-grown. He asserts that they lay eggs for 75 years, and live to be 100 years old and older. He has one Arctic Snow goose in his flock now (1927) that is 50 years old.

If these geese reach maturity in one year, and live 100 years, they live a hundred times the period required for complete development.

Few wild creatures live out their natural term of life. The chances of survival are too much against them. They are apt to meet with an untimely death from such adverse conditions as weather, scarcity of food, mechanical injuries, or the attacks of enemies. Hence data as to their longevity are comparatively lacking.

But according to accredited data, the following figures may be regarded as reliable:

1. Dove, owl, heron, woodpecker, 60 to 70 years.
2. Carp, pike, and certain other fish, 150 years.
3. Elephant, 200 years.
4. Goose, eider duck, raven, parrot, 200 to 300 years.

Certain kinds of ants have lived in captivity for 10 to 15 years. The hardest variety of eagles is said to live 500 years. The tortoise may live 1000 years; the whale, 1500 years, while the alligator is said to reach the extreme age of 1800 years.

The lowly swine, conspicuous in its domesticated state for ill-health and short life, in its wild state is said to live free from disease to the remarkable age of 300 years.

A consideration of the life-span of the beasts, fowls, and fishes, helps us to appreciate more fully the low level to which man has physically degenerated.

If we apply the rule of ten to the early men of the Bible, we observe that when they begat their first offspring at the ages of 90 to 100 years, they lived from 900 to 969 years.

This rule appears to indicate that these men were from 65 to 100 years in arriving at maturity. In other words, they were young men at the age of 100 years; and their long period of growth and development, gave them the splendid frame and the gigantic stature of from 10 to 12 feet in height, as we have seen.

We now come to a surprising change in human life. It is a change most remarkable because of its extreme abruptness. It were as though the former race of men disappears entirely, and a new race comes into existence.

The Flood passes into history; the permission to eat flesh has been granted; and now we shall see what follows the new grant.

Shem was 102 when he begat Arphaxad, and he died at the age of 600. He reached full maturity before the Flood, and was possessed of a body and intellect developed slowly, completely, and perfectly, from the same food and drink, and in the same ideal manner, as that of his ancestors.

We have observed the degenerative effect of stimulating flesh food, and fermented fruit juices, its concomitant, even on Shem's hardy and well developed frame—for it decreased his days to 348 years less than his father's age—the first decline of such great proportion from the days of Adam.

The most startling part of the situation comes in the case of Shem's son, Arphaxad, the first generation after the Flood, and consequently, the first to subsist on flesh food from child-

hood on, and later to indulge, as we assume, in the drinking of fermented fruit juices.

What is the result? His father did not develop and beget him until the age of 102, but he developed and begat Salah, his first offspring, at the astonishingly early age of 35 years—and he died at 438.

Arphaxad arrived at maturity in about half the period of time required for his ancestors, and he survived about half as long—living 164 years less than his father, and 512 years less than Noah, his grandfather.

The premature development of the human body continues, with little variation, and the length of life gradually shortens, except as to Eber, until we reach Nahor, six generations from Arphaxad.

Nahor arrives at full maturity with the speed of modern man, approximately. He was only 29 when he begat Terah, and died at the early age of 148 years.

Here is evidence to indicate, that as stimulating food and drink hasten the development and maturity of the body, they in the same ratio hasten its decline and decay. For when 90 years were required for the body to develop and mature, men lived 900 years and more. Afterwards, when the body developed and matured in 30 years, 150 years is the period of its duration.

What could be more obvious than these facts and figures? Here is evidence which appears to show—

1. The early men of the Bible lived 900 years.
2. The length of the years was approximately the same as they are now.
3. The eating of flesh and the drinking of intoxicants are largely responsible for the precipitous decline in the length of the life-span from Noah to Nahor, and for bringing man's days down to "an hundred and twenty years."

If we apply the rule of ten to modern man, he should now be living 250 to 300 years. Some few men are living 200 years, and some are living beyond that age.

If we apply the rule of twenty to man, as applies to some fowls and fishes, man should now be living 500 to 600 years.

If we apply the rule of 100 to man, as in the case of the Snow Goose, man should now be living 3,000 years.

If we apply the rule of 300 to man, as in the case of some species of parrots, man should now be living 9,000 to 10,000 years.

If we apply the rule of two to man, it gives him the age of 60—and a man who lives modernly, does well to live 60 years.

No one is competent to place a definite limitation on the duration of man's physical existence. All knowledge on this point is unreliable. It is based on experience, and experience is that only which has been, and not that which should be.

If a man dies at 80, the world thinks he has lived long. If another reaches the century mark, it is the talk of the town. If another lives 150 years, the world is astonished by such length of physical existence.

Noah lived 950 years. His son Shem died at 602. Arphaxad, son of Shem, lived 438 years, while Salah, his son, died at 433. Eber, son of Salah, lived 464 years, while Peleg, his son, died at 209. Reu, son of Peleg, lived 239 years, while Serug, his son, died at 230. Nahor, grandson of Reu, and eight generations removed from Noah, died at the age of 148.

Here is an example of experience. It does not explain why Noah lived 950 years, nor why Nahor died at the early age of 148.

For a partial explanation of the problem, we must go to the Law of Hybridization.

Lesson No. 24—Chapter No. 71

LAW OF VITALITY

There is no question on which physical science is more completely at sea than that of Vitality.

In the opening sentence of Prof. Joseph Le Conte's "Correlation of Vital with Chemical and Physical Forces," contained in Balfour Stewart's "Conservation of Energy," on p. 171, he observes:

"Vital Force: whence is it derived? What is its relation to the other forces of Nature? The answer of modern Science to these questions is: It is derived from the lower forces of Nature; it is related to the other forces much as these are related to each other—it is correlated with chemical and physical forces."

Vital Force is "derived from the Lower Forces of Nature." It is a fact, commonly accepted by Science, that the Greater can not come from the Lesser. It is a false Doctrine which holds that the Higher comes from the Lower. It is a dangerous Philosophy that is founded on such Doctrine.

Prof. Atwater attempts to show that Food is the source of the body's Energy and Vitality. He states:

"These experiments have shown that the material (food) which is oxidized, yields the same amount of energy as it would if burned with oxygen outside the body, e. g., in the bomb calorimeter.

"The experiments show also that when a man does no muscular work, save of course, the internal work of respiration, circulation, etc., all the energy leaves his body as heat; but when he does muscular work, as in lifting weights or driving a bicycle, part of the energy appears in the external work thus done, and the rest is given off from the body as heat.

"The most interesting result of all is, that the energy given off from the body as heat when the man is at rest, or as heat and mechanical work together when he is working, exactly equals the latent energy of the material (food) burned in the body."—Principles of Nutrition and Nutritive Value of Food, p. 11.

Atwater then bethinks himself of a further fact. He realizes that Energy is required for the function of Mentality and Consciousness, and that for this Energy, no account has been taken. So he writes on the next page:

"We have been considering food as a source of heat and muscular power. There is no doubt that Intellectual Activity, also, is somehow dependent upon the consumption of material which the brain has obtained from the food; but just what substances are consumed to produce brain and nerve force, and how much of each is required for a given quantity of intellectual labor, are questions which the physiological chemist has not yet answered."—p. 12-13.

It would be more proper had he said, These are questions which the physiological chemist has not yet *been able to answer*. And Orthopathy says, Until these questions are correctly answered, the "experiments" mentioned by Atwater can show nothing reliable and conclusive, with respect to the Energy and Vitality of the Living Organism.

Science has not the slightest idea of the amount of Energy that the internal and involuntary muscular-work necessitates, and no idea at all of the amount of Energy that the functions of thought and consciousness require.

Atwater himself admits that the "experiments" to which he refers, are unscientific and unreliable. He writes:

"We have neither the means for measuring potential energy, as such, nor a unit for expressing such measurements if they were made."—Experiments on the Metabolism of Matter and Energy in the Human Body, p. 145.

The only way in which the question may be tested, is artificially to digest or oxidize the food substance outside the body, and then *assume* that the heat and energy emitted is the same IN the body. This is all that Science could do or has done. On this *assumption* it has based its conclusions, then assumed these conclusions to be correct.

If the theory were correct, that Food is the Source of Vitality, it would be necessary only for the fatigued man to go first to the dining table, and then take vigorous exercise, to recuperate his Strength and Energy. A man should simply eat more food, then oxidize it off, and the process of its internal combustion would add more Energy and Vitality to his organism.

If the theory were correct, that Food is the Source of Vitality, then by increasing the patient's food supply, and oxidizing the greater amount of food, by deep breathing and vigorous exercise, the patient's Vitality should be increased.

The theory is not correct. It fails completely when put into practice. Daily experience proves that a man, when weary, must retire to bed, and not to the dining-room, in order to recuperate his Energy and Vitality.

There comes a time when the tired body must have that sleep which alone gives complete rest, or disintegrate. There comes a time when the body is too tired even for food; a time when the body is so weary that it is dangerous to feed it.

If we want to kill a weak patient, we should have him ingest large quantities of food, and then take vigorous and prolonged exercise, to oxidize that food. It can be done by merely feeding the patient, and omitting the exercise. Many are killed that way each year.

It is the general course of medical doctors to stuff weak patients with food, to keep up their strength. They are too feeble to take exercise. The logical result is, they quickly die—and it is the "disease" of course that kills them.

It is far less dangerous to feed freely when patients are able to take considerable exercise. The sicker and weaker they are, the more dangerous it is to feed them.

Helen W. Atwater has this to say:

"Using the proper factors, we may approximately determine the value of any food as a source of energy by measuring its heat of combustion."—U. S. Dept. of Agri. Bulletin No. 112.

If Food is the Source of Energy, whence comes the Energy to the body of the exhausted Soldier, who sinks to the ground, without food, after a long march, and arises the next morning, rested and refreshed, and marches another twenty miles—without food?

There was no Food Combustion here; but there was an increase of Energy and Vitality. Whence its source? Surely, not from food.

Sleep is a state of quiescence, in which all functions of the organism are reduced to the lowest point, including even the process of oxidation. Dr. Frank Horridge remarks:

"As to general character of sleep, there can be very little doubt. The decrease in the amount of carbonic acid produced shows that it is essentially a period of diminished oxidation."—Dynamic Aspects of Nutrition and Heredity, p. 41.

How can these facts be explained? Physical science makes no attempt to explain them. The restoration of Energy to the tired body by means of rest and sleep is not explicable by the chemical theory of Food Combustion. For that good reason, science omits these from its considerations.

According to the theory of science, man gains his Energy by a process of Food Combustion, as a steam engine gains

its energy by the process of Fuel Combustion. But the analogue is defective, and science has been unable to remedy it, or to offer a more plausible theory.

A time comes when the Living Organism is unable to evolve Energy, regardless of the quantity of Food forced into it. The energy evolved by the engine depends exactly upon the quantity of fuel it receives, and produces no energy when it receives no fuel.

The engine does not recuperate during its periods of rest. The Living Organism does. The engine, in use, undergoes a constant process of wear which it can never repair. The Living Organism is incessantly engaged in the work of repairing itself.

P. M. Hanney observes:

"In the case of the locomotive, the fuel does not build up the substance and structure of the machine, but in time destroys it."—How To Gain Health and Long Life.

The Living Organism is self-recuperative. For this purpose it requires rest and sleep, and not Food. The engine is not self-recuperative, and needs no rest, but Fuel, to keep it in operation.

In spite of this vast difference between the two, science takes no cognizance of it. Men easily ignore facts when blinded by a preaccepted theory.

To support the preposterous attempt to include Vital Energy in the Law of Conservation, science consistently ignores the question of rest and sleep. It treats the matter of the restoration of Energy to the Living Organism by Food as a proven fact, instead of a questionable theory, and rejects what it can not explain.

We know that animals can live longer without food than without sleep. The hibernating bear and snake live all winter without food. Man can live for weeks without food, but without sleep he can live only a few days. Dr. Friedrich Scholz, Director of the Bremen Insane Asylum, wrote:

"For while a man, fasting, may go 30 or 40 days, and under some circumstances even longer, without any sort of nourishment, the utmost limits of sleeplessness that can be endured, seems to be within ten days."—Sleep and Dreams, p. 89.

The Yogis of India hold that Vital Energy is received from the air man breathes, and practice and endorse deep breathing as the great energizer. Yogi Ramacharaka says:

"Prana is found in its freest state in the atmospheric air, which, when fresh, is fairly charged with it, and we draw it to us more easily from the air than from any other source. . . . The oxygen in the air is appropriated by the blood and is made use of by the circulatory system. The prana in the air is appropriated by the nervous system, and is used in its work."—Yogi Science of Breathing, p. 18.

This writer, in his Hatha Yoga, p. 154, defines Prana as the "active principle of what we call vitality."

If man derived his Energy from the Prana in the air, then so long as the air is pure, and the breathing is normal and regular, fatigue would be impossible. The tired man would need no rest and sleep. A few deep-breathing exercises in the open air, and his Energy would be restored.

The student who has finished Lesson No. 9 of Elementary Orthopathy believes not that Vital Energy evolves from Food and Air. He knows that Vital Energy does not even depend upon Food and Air. He knows that Food, Water, and Air are merely the physical agencies which evoke the activity of Vital Force, and furnish the occasion for its operation. *He knows that the Law of Vitality is the Law of Life.*

Chapter No. 72

LAW OF RECUPERATION

Physical science is as deeply in the dark regarding the Law of Recuperation, as it is relative to the Law of Vitality.

Physical science speaks of expending, of wasting, of exhausting Vital Energy. It holds that Vital Energy is innate, inherent in living tissue; that it is expended in every thought, emotion, conscious or unconscious muscular action; in sexual excitement, and in purely vital function, as digestion, assimilation, and excretion.

In order to replenish the expended, exhausted Energy, a man must only eat plenty of good nourishing food. For Vital Energy arises directly from Food Combustion in the Living Organism.

Such is the stupid teaching of all educational institutions with respect to this grand subject. Such is the belief that robs the World of an Animating Principle.

The Nature Cure school, which is growing rapidly, regards the Living Organism as being analogous to an electric motor. It holds that the motor, under certain conditions, is able to recharge itself with energy, which the motor seems to receive from some external source. So also with the Living Organism.

This school asserts that it is the Brain and Nerve System which are thus recharged. It holds that these organs are and constitute the "motor" of the Living Organism. It claims that the recharging process occurs ONLY during the hours of rest, and particularly of sleep.

Dr. Hereward Carrington, one of the leading lights of that school, observes:

"The idea we must conceive to ourselves is that the body is like . . . the electric motor, capable of recharging itself during the hours of sleep and rest. New strength, new energy is infused into the body during rest and sleep, and at that time only—since it is only then that the human motor—the nervous system—is in the condition that renders this recharging process possible

"During the day, this recharging process practically ceases; but the expenditure continues unabated. Hence the exhaustion we notice at the end of the day.

"No matter how careful we are in our habits; no matter how much food we consume and successfully oxidize off, exhaustion will eventually result in every case. The fact that we are tired, and that this feeling can only be satisfied by sleep, will dawn upon us more and more.

"No matter how great the amount of nourishment that has been taken and assimilated, loss of strength—of energy and vitality—is bound to result, as the day proceeds, and it becomes more and more obvious to us that we must retire to bed and not to the dining-room, in order to repair lost strength and energy."—Vitality, Etc., p. 251

Carrington contends that new energy is infused into the body *only during rest and sleep*. Orthopathy does not agree with this contention. A brief examination of it will reveal its incorrectness.

A strong man falls ill. His strength decreases, and he must go to bed. He lies in bed and sleeps sixteen to eighteen out of the twenty-four hours of the day, but continues so weak that he is unable to walk without aid.

The athlete sleeps eight or ten hours a day. He spends ten hours a day in vigorous exercise—expending and exhausting his Vital Energy, the Nature Cure school would say. He employs two hours a day in reading, and two hours a day in playing pool. These are all activities that consume Vital Energy.

According to the Recharging Theory of the Nature Cure school, the invalid, who rests and sleeps most of the day,

should accumulate energy and be a giant in strength. But he is too weak to rise from his bed.

The athlete who spends most of the day in vigorous exercise, exhausting his Vital Energy and sleeping only eight of the twenty-four hours, should be a weakling, debilitated and enervated—if the Recharging Theory is correct.

The true situation is just the reverse, proving that the Recharging Theory is wrong.

There is another theory advanced by some authors relative to Vital Force, which is that of Limitation. These writers hold that while the amount of Vital Force in the Universe is limitless, each man, at birth, is allotted a certain and definite amount, which can never be increased, and which means death for the individual when he has consumed and exhausted his supply.

Vital Force, they claim, is consumed by man's daily activities, but accumulates during the hours of rest and sleep. The amount of Vital Force that accumulates each time, they hold, never exactly equals the amount expended—making a time definite and certain to come when a man will have exhausted his "inheritance" of Vital Force, and the result for that man is "death."

Robert Walter, M.D., is one of the ablest of that class. This brilliant writer says:

"Whether we are considered mariners on Life's ocean, or laborers in the fields of destiny, the more rapid the pace, the quicker we reach the end. Death is the consummation of earthly life. Sleep and rest stay the progress; all other things, even food, hasten the end.

"The living organism, like the electric battery, is a reservoir of power, which continues silently inactive while the circuit remains open.

"Vitality . . . is an inheritance that comes to us as an income which cannot be increased indefinitely, and whose expenditure, though it may be restrained, cannot be wholly prevented. But we may restrain its expenditure instead of quicken it, as is the usual custom, and so wait until the reservoir is once more filled. It is impossible that great energy can exist other than by rapid expenditure, and unless the inherent capacities are very great indeed, early exhaustion must result."—Vital Science, p. 196-7.

If Rest stays the progress of exhausting man's Vital Force, the exercise that he takes, to improve his health and maintain it, must be compensated for by a shortening of his days. So in the end he has gained nothing for his thoughtfulness and care.

If this theory is the true one, then humanity should adopt the habits of the Sluggard. The Sluggard should not only possess the greatest amount of Vitality, but the length of his life-span, barring accidents, should be correspondingly increased.

"Even food hastens the end," wails Walter. We agree that wrong food and excessive eating do hasten man's end. They hasten the day of dissolution, but not by expending and exhausting Vital Force. The eating of proper food in the proper amount never shortened a man's days. *For he that takes of the Tree of Life, and eats, shall live forever.*

It is misleading to attempt to compare the Living Organism with an electric battery. The latter may be a reservoir of power, but that reservoir in time becomes destitute of power. This is so even tho the battery be never used.

The states of fatigue and sleepiness are measures of Self-preservation. The states of rest and sleep are measures of Recuperation. This is the holding of the Nature Cure school. With this Orthopathy agrees. But Orthopathy does not agree with the Recharging Theory.

Orthopathy holds that man can not expend, nor waste, nor exhaust Vital Force. That he can not conserve it. That he

can not prevent its expenditure. That his body is not recharged with it during Rest and Sleep.

Man grows tired and sleepy—but not because of consumed and exhausted Vital Force. This Infinite and Eternal Force cannot be consumed and exhausted by the inert Matter which it animates and quickens, any more than Gravitational Force can be consumed and exhausted by the huge boulder which it hurls from the mountain's steep side.

Man grows tired and sleepy because of two primal and important reasons. These reasons no school as yet has found occasion to notice. Orthopathy alone has recognized them, discovered their true character, and explained their nature.

These reasons are: (1) Consumed cells and tissues, resulting from every movement and motion of the Living Organism. (2) Destructive acids and gases arising from the consumption of said cells and tissues.

In a crude way, the Living Organism, as an Instrument of use, may be compared somewhat to a wire, made and used to conduct Electricity. The wire, with no energy of its own, is energized with a definite, mysterious and unknown Force. It is capable of receiving and conducting this Force so long as it remains a part of the circuit, and also retains its elementary composition and elementary relationship.

The Organism, with no energy of its own, is energized with a definite Force—a force that has existence as truly as has Electricity, and whose source and nature are as completely unknown. The Organism is capable of receiving and conducting this Force, so long as it retains its elementary composition and elementary relationship.

An electric lamp filament, in time, decomposes and finally burns out, due to a wearing and tearing influence of the force working in and thru it.

The Living Organism is subject to the same law of wear and tear. As Vital Force functions thru it, in doing vital work, in digesting and absorbing nourishment, in thinking and worrying, the Organism decomposes, cell by cell, and finally "burns out."

Vital Force, in its operation in and thru the Organism, may be said to exercise a vitolytic effect upon the cells and tissues, analogous to the electrolytic effect of Electrical Energy on the lamp filament, or upon the cells of a battery.

We must now observe a remarkable difference in the nature and character of the two forces under consideration. The Force that wears out the lamp filament is not capable of making a new filament, nor of maintaining the old one in repair, in the intervals of activity.

In amazing contrast to this, Vital Force, that mysterious Principle which no one understands, and the very existence of which science stubbornly denies, is capable of, and is constantly rebuilding, repairing, and renewing the cells and tissues of the instrument thru which it operates.

Vital Force performs this work both in time of activity and in time of rest and sleep. But during the hours of activity, the *vitolytic action* is in excess of the *vitosynthetic action*. This produces, at first, a condition of weariness, which appears more quickly as the person exercises more vigorously.

As the activity continues, the weariness increases. At last a point is reached where even rest is insufficient for the Organism's preservation and recuperation.

Then comes the demand for Sleep. Why? It is only during the hours of rest, and particularly of sleep, says the Nature Cure school, that there occurs the process of recharging the Organism with Vital Force. Then sleep comes because the Organism has exhausted its immediate supply of Vital Force, and must be recharged, or perish.

Science ignores the question of rest and sleep. It treats

the matter of the restoration of Vital Energy to the Living Organism by Food as a proven fact, instead of a questionable theory. It holds that man gains Energy from the process of Food Combustion, as a steam engine gains Energy from the process of Fuel Combustion.

The Nature Cure school holds that the Brain and Nerve system, during the time of rest, and especially of sleep, are recharged with an influx of Vital Force, somewhat similar to a motor, which seems to receive Energy from an external source.

The weakness of the theory of science is its ignorance and denial of the existence of Vital Force. The weakness of the theory of the Nature Cure school is its failure to consider the vitolytic and vitosynthetic processes occurring continually in the Living Organism.

Both views, being human, are narrow. Each is restricted by human prejudice, bent upon sustaining a certain theory.

The Nature Cure school and Orthopathy are in harmony in the taking of due cognizance of Vital Force as a definite and distinct Principle of Existence.

These schools are not in harmony in the consideration of (1) Why the Organism grows tired and sleepy, and (2) what occurs within the Organism during the time of rest, and particularly of sleep.

The Nature Cure school holds that the demand for Rest and Sleep arises from the effect of expended, wasted, and exhausted Vital Force. It holds that during the time of rest, and particularly of sleep, the Organism is recharged with a new supply of Vital Force, to replace that expended.

Orthopathy holds that the Organism's demand for Rest, and particularly of Sleep, is for the specific purpose of halting activity. The purpose served by halting activity is two-fold: (1) To decrease vitolysis, and (2) to increase vitosynthesis, thus serving to regain and maintain the Organism's equilibrium.

From both physical and mental activity there arises an excessive vitolytic action on the cells and tissues. As physical and mental activity increase, and in direct ratio therewith, so increases the vitolytic effect on the cells and tissues, resulting from the action of Vital Force working vigorously thru them.

Rest, and particularly Sleep, serve to decrease physical and mental activity. As such activity decreases, and in direct ratio therewith, so decreases the vitolytic effect on the cells and tissues, resulting from Vital Force working less vigorously thru them.

Rest reduces physical activity. But it is only profound Sleep that reduces mental activity to the minimum required for recuperation in this department of the Organism.

It is not Vital Force that must be saved and conserved. It is the instrument thru which the Force works. It is the Instrument that must be saved and preserved.

Unless the Instrument be saved, and its elementary composition and elementary relationship are maintained, it will be unable to receive and use Vital Force, even tho the amount of such Force be limitless. Then it will sink back into a lifeless mass—not from lack of air, water and food, not from exhaustion of its supply of Vital Force. But from its inability to receive and use that Force.

There is no end to the amount of Electrical Force in existence. Of this limitless supply, man can use only to the extent of the machinery he has made for using it. Without suitable machinery, none of this vast supply could be utilized by man.

There is no end to the amount of Vital Force in Existence. Of this limitless supply, man can use only to the extent

of the capacity of his physical machinery for using it. Without a body that meets the requirement of the Law, none of this vast supply could be utilized.

Unless the Organism's demand for rest, and particularly for sleep, be heeded, the next condition of it is that of (1) collapse, and then of (2) death.

These come surely, but not because of expended and exhausted Vital Force. They come because of the fact that vitolytic action upon cells and tissues has progressed so far in excess of vitosynthetic action, that the Organism is unable to receive and use Vital Force. They come because the Organism has lost its elementary composition and elementary relationship. They come because the Organism is "burnt out."

An unlimited amount of Vital Force is eternally permeating every particle of matter in the Universe. But the condition of the Organism must meet the requirements of the Law, in order to be able to receive and use the Force. A dead body is dead because it has failed in this respect. It has lost its elementary composition and elementary relationship.

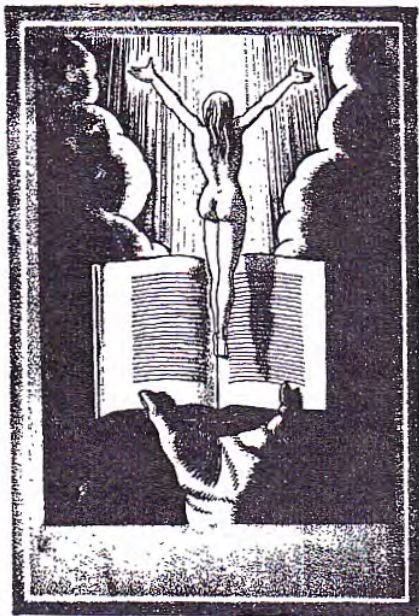
The student is here given the Law of Animation and the Law of Inanimation (Death). These he will not find in any other work. Orthopathy alone has discovered them, and here for the first time gives them to the world.

QUESTIONS FOR LESSONS NOS. 21, 22, 23, 24.

1. (a) Give your opinion as to the cause of the vast decline in man's life-span. (b) What would happen if man ate to live?
2. (a) Why do the same kind of trees on different soils show many variations? (b) What was the substance of the report of the Spies to their chief Moses? (c) Why would modern man be displeased if he were forced to feed on the foods mentioned in the report of the Spies?
3. (a) Name the greatest food found by the Spies. (b) Did the people of Canaan thrive on this food? (c) What did the Spies report as to the size of the people?
4. (a) Give the height of the tallest man you ever heard of. (b) How does the medical world attempt to account for the remarkable height attained by some men in this day and time? (c) Do you believe that modern man is the superior intellectually of the Giants of Antiquity?
5. (a) Name the three phases of the Law of Purpose as applied to the Life Principle. (b) What is the known function or office of the Life Principle? (c) From whence does the plant seed receive its guiding intelligence?
6. (a) Name one great difference between a plant and an animal. (b) Name one great difference between an animal and man that affects the existence of each. (c) State why a man should have better health and live longer than any other animal.
7. (a) Name the hardest and toughest of all animals. (b) What animal has the greatest powers of adaptation. (c) What animal, if any, is able to resist the changes and dangers of environment?
8. (a) State the Law of Development as explained in Lesson 22, Chapter 62. (b) Does the Same Law of Development that applies to the Vegetal World apply to the Animal World? (c) Are rapid and hasty growth desirable?
9. (a) What has been the effect of man's creating to himself new wants? (b) Does a change of food change the body of the animal? (c) Name three ways in which the body is affected by its nourishment.
10. (a) What is meant by the Law of Analogy? (b) What great fact does a study of the law disclose? (c) What great fact does the Law of Prefiguration disclose?
11. (a) Explain the two classes of Degrees. (b) What great fact does a study of degrees disclose? (c) Where should we begin in studying the various departments of Existence, and why?
12. (a) How does a knowledge of the Law of Promotion aid us? (b) How does a knowledge of the Law of Analogy aid us in studying growth? (c) Give briefly the effect of stimulating substances on plants and on man.
13. (a) Explain the Law of Correspondence. (b) In what two modes is Life Force expressed? (c) Name the three conditions that obtain in each department of the Organic Realm.
14. (a) Name the vegetative functions in man. (b) Name the purely animal functions, and state on what they depend. (c) Describe the analogy between man and tree.
15. (a) What help do we derive from a knowledge of the Law of Use? (b) Show how a plant serves the Law of Use. (c) State how Perpetual Youth will be supplied by the Law of Use.
16. (a) What do you understand by the Law of Duration? (b) Does the length of the period of growth and maturity affect the normal duration of a living body? (c) If man is 30 years reaching maturity, how long should he live, barring death by accident?
17. (a) Recite the Law of Vitality. (b) Give the Law of Vitality as advocated and taught in our schools. (c) What method would you pursue to build Vitality in the body of a patient?
18. (a) What makes a strong man weak? (b) What makes a patient weak? (c) What makes the athlete strong and vigorous?
19. (a) Recite the Recharging Theory of the Nature Cure School as to Vital Energy. (b) Recite the Limitation Theory of the same school as to Vital Energy. (c) Why is it erroneous to compare the Living Organism with an electric battery?
20. (a) Why does man grow tired and sleepy? (b) Can Vital Energy be consumed and wasted? (c) Why does an electric lamp filament burn out?
21. (a) Does Vital Force exert a similar effect on the body as Electric Force exerts on an electric lamp? (b) Can you relate the one vast difference between these two Forces?
22. (a) What is Vitolytic Action? (b) What is Vito-synthetic action? (c) Which is greatest during the body's activity?
23. (a) Why does Rest fail to serve the body's needs completely, making a time come to pass when the body must have Sleep? (b) What occurs during Sleep, according to the theory of the Nature Cure School? (c) What occurs during Sleep, according to the theory of Orthopathy?
24. (a) Why does Physical Science ignore the questions of Rest and Sleep? (b) In what respect, if any, are the Nature Cure School and Orthopathy in harmony as to Vital Force? (c) In what respect are they not in harmony?
25. (a) Recite the Orthopathic Law of Animation and the Law of Inanimation (Death).
26. (a) Is Electrical Force limited? (b) How much of it can man utilize? (c) Is Vital Force Limited? (d) How much of it can man utilize?
27. (a) If the demand for sleep be not heeded, what will result? (b) If your answer is Death, give the reason.



Two pictures of Prof. Hilton Hotema taken in 1930 when he was 52, and one taken in 1960 when he was 82.



INTERPRETATION OF THE SYMBOL (Opposite)

The open book indicates release of knowledge. The nude body rising with outstretched arms signifies man's Consciousness rising to a higher level due to Rays of Light flowing to the Mind. Knowledge is Light that elevates Man's Consciousness.



Lessons Nos. 25, 26, 27, 28

Lesson No. 25—Chapter No. 73

LAW OF CAPACITY

If the student has grasped the principles involved in the Law of Recuperation, he will comprehend the significance of the Law of Capacity. Unless he understands the fundamentals of the Law of Capacity, he will be only partially successful in caring for the sick.

The Living Organism is animated, from birth to death, in proportion (in quantity and quality) to its capacity for receiving, conducting, and using Vital Force. This is the Limit of Use, which law we shall proceed to explain.

The Force that quickens the impregnated ovum in the uterus of the female, is the same Force that ceases to operate in and thru the body at death. From first to last the Force remains constant and unchanged.

The Law of Change springs from the operation of Force thru Matter. The Law affects the instrument thru which the Force works. It does not affect the Force that does the work.

While the Living Organism is always changing, as to its material, its animating Force changes not.

As the Infant grows, develops, and comes to maturity, it appears that Life grows—that the body each day, until maturity is reached, expresses more Life. This is an apparent truth, but not an actual truth. As the body grows and increases in size, its capacity is correspondingly increased to receive, conduct, and use Vital Force.

As the size of the mass does not determine the amount of Gravity present, so the size of the Living Organism is no index by which to determine the amount of Vital Force present. But the size and composition of the mass do determine the amount of Gravity that will be received, conducted, and used. So the size, composition, and condition of the Living Organism determine the amount of Vital Force that will be received, conducted, and used.

As we cannot apply to Gravity any degree of measurement, which means limitation, so we cannot conceive of any degree of limitation, which means measurement, to apply to Vital Force.

Vital Force is as omnipotent and omnipresent as is

Gravity or Electricity, and just as impossible of growth.

The Nature Cure School holds that man is born with a certain Fund of Vitality, or Vital Force, which may be expended slowly or swiftly, with Death resulting from complete exhaustion of the supply. Walter writes:

"Vitality . . . is an inheritance that comes to us as an income which cannot be increased indefinitely, and whose expenditure, though it may be restrained, cannot be wholly prevented."—Vital Science, page 200.

On page 191 he says:

"If an individual is born into this world with a capacity to live seventy years, he is necessarily endowed with the capacity to appropriate the forces to sustain these years.

"For we do not inherit all our forces in a lump. The wise parent has secured to us the power to draw on our inheritance as a daily income."

Again on page 202 he observes:

"Vital power is vital inheritance secured to every man as a daily income, which food, drink, medicines, work, responsibility, call forth and expend."

The Nature Cure School sees in the Living Organism merely a machine, the vitality of which is analogous to the spring-action of a clock. The spring is wound up at birth, and the body functions from the pressure exerted by the spring. The action of the spring may be hastened or retarded by the conduct of the individual; but a time certainly will come when the spring will run down—then the body is dead.

Some authorities hold that nerve (vital) force is generated in and by the brain, and from thence distributed over the body through the nerves.

The student has been told that Matter, as such, is indestructible. It cannot be annihilated nor augmented. The same rule applies to all Universalities and Eternalities. Force belongs to this class.

There is Force as truly as there is Matter. Force cannot be created, nor generated, nor augmented, any more than Matter can be created, or generated, or augmented.

Matter cannot generate Force, any more than Force can

generate Matter. The brain is only Matter organized. Hence it cannot generate nerve (vital) force.

The student was told that the chemist has pursued Matter through its manifold and mysterious changes, and found it to issue from a combination, the same in mass and in properties as when it entered the combination.

He was told that an atom of oxygen, of nitrogen, or of hydrogen is everywhere and under all conditions one and the same, endued with the same eternal and inseparable properties, and can never become anything else.

We must regard Force as universal, eternal, and unchangeable as is Matter. Everywhere, under all conditions, it is one and the same, endued with the same indestructible properties. It can never change nor become anything else, any more than Matter can.

Matter is presented in multitudinous forms, but Primitive Matter is and remains ever the same. Force is presented to us in multitudinous phases, but Primary Force is and remains ever the same.

Science has found that Primary Matter is neither changed nor diminished by use. It holds that Gravity and Electricity are neither changed nor diminished by use. Primary Force is neither changed nor diminished by use. No Primal Element is either changed or diminished by use.

Orthopathy holds that the Life Principle has existence; that it is a Primal Force; and that it is neither changed nor diminished by use. It constructs and operates thru differently and definitely arranged instruments. The effect presented depends upon the kind, condition and capacity of the instrument.

The effect of Electrical Force operating thru mechanical instruments depends upon (1) capacity, (2) kind, and (3) condition of the instruments.

1. Capacity of the instrument determines the amount of Force that may be used.
2. Kind of instrument determines whether the effect presented will be the (a) revolution of wheels, (b) generation of heat, or (c) production of light.
3. Condition of the instrument determines whether the Force will operate (a) efficiently, (b) deficiently, or (c) fail to operate.

The effect of Vital Force operating thru physical bodies, depends upon (1) capacity, (2) kind, and (3) condition of the bodies.

1. Capacity of the body determines the amount of Force that may be used, and the amount of strength that may be exhibited.
2. Kind of body determines whether the effect presented will be (a) vegetal function, (b) animal function, or (c) human function.
3. Condition of the body determines whether the Force will operate (a) efficiently (normally—health), (b) deficiently (abnormally—disease), or (c) fail to operate (death).

When an electrical lamp is originally made, there is not apportioned to it a certain quantum of electrical force. The lamp will not fail and die when it has consumed a certain quantum of electrical force. It will continue to receive, conduct, and use the force to the extent of its capacity, according to its kind, and in ratio with its condition. The lamp will function so long as it maintains its elementary composition and elementary relationship. That alone is the determining factor in the function and life-span of the lamp.

When an animal body is originally made, there is not apportioned to it a certain quantum of vital force. The

body will not fail and die when it has consumed a certain quantum of vital force. It will continue to receive, conduct, and use the force to the extent of its capacity, according to its kind, and in ratio with its condition. The body will function so long as it maintains its elementary composition and elementary relationship. That alone is the determining factor in the function of the body and in the length of its life-span.

The difference between the amount of light given off by two lamps, depends upon the capacity of the lamps. The same force flows to 10-candle power lamps that flows to 100-candle power lamps; but the 10-candle power lamps lack capacity to RECEIVE AND USE the amount of force received and used by 100-candle power lamps.

The difference between the strength of a hog and a horse, or of a child and a man, or of a pigmy and a giant, lies in the difference in the capacities of their bodies, and not in the difference in the Force that animates their bodies.

It is ridiculous to suggest that Vital Force may be exhausted. The supply is limitless. But each kind of body can receive, conduct, and use only according to its capacity, kind, and condition.

Let us observe the analogy between the living organism and an electric motor: The motor receives electrical force in the amount or at the rate proportional to its capacity and to the load applied to the motor. But as the motor is used its condition deteriorates, its efficiency decreases, and unless duly repaired, in time it falls to ruin. It is dead.

The living organism receives vital force in the amount or at the rate proportional to its capacity, and uses it in ratio with the work performed. But as the organism uses the force its condition deteriorates, its efficiency decreases, and unless duly repaired, in time it falls to ruin—it is dead.

Deterioration of the organism arises from vitolytic action in excess of vitosynthetic action. The desire for sleep comes in order that this condition may be corrected, as explained in the Law of Recuperation. The condition is not fully corrected because the caretaker fails to supply the organism with the right kind of material. This increases the deteriorative effect, which may properly be called degeneration. In time the body falls to ruin—it is dead.

When the living organism falls ill, it indicates deterioration of its parts in excess of reparation. It indicates vitolytic action in excess of vitosynthetic action. It indicates degeneration in excess of regeneration.

A sick body is a degenerated body. A degenerated body cannot use 100 per cent of vital force, as determined by its normal condition and capacity. Its condition is below par, so its capacity is below par.

The decrease of vitality will be in ratio with the degree of degeneration. The greater the degeneration, the greater the decrease of vitality.

A sick body, no less than a well body, is in direct communication with the limitless supply of vital force. However, due to adverse mechanic and chemic conditions, the body, like any defective machine, cannot receive and use a normal amount of force. The difficulty does not arise from wasted or exhausted vital force, but from the inability of the body to receive and use the force.

The purpose of all sickness, which man so dreads because of blind ignorance, is to preserve the body and prolong its existence. It is a process instituted to (1) free the body from food and labor, (2) to give it rest from the abuse of its caretaker, (3) to stop the bad habits—

all this that its cells and organs may be repaired and regenerated.

During sickness (disease) a process of regeneration puts the body back in condition, so that it, as an instrument, may again be able to receive and use, to the fullness of its capacity, the mysterious force that makes it move.

Large libraries have been written about disease, its cause, cure, and prevention. But disease is nothing except a state in which a process of regeneration is occurring within the body.

All doctors are taught to regard this process as dangerous, and to treat it accordingly, with heat, cold, drugs, poisons, knives.

It is exceedingly easy to kill a patient at this time. For if the Process of Regeneration is completely defeated by the work and poisons of the doctor, the patient dies.

If the Process of Regeneration is only partially defeated by the work and poisons of the doctor, the patient lives; but he suffers the rest of his life from the effect of the work and poisons of the doctor.

Feeding and treating the sick are highly dangerous. The sick body needs perfect rest, pure air, and pure water. Then the regenerative process will proceed correctly, under the influence of Eternal Intelligence. Then the process will proceed unhampered, under the influence of the Force that built the body.

The danger in sickness does not arise from expending and exhausting Nerve (Vital) Force, as some schools teach. It arises from interference with the work of Eternal Intelligence and Infinite Force by (1) feeding, (2) treating, (3) stimulating, and (4) poisoning the patient.

The sick body does not need food; it cannot use food. If the patient is fed, the food is not properly digested. It lies in the digestive tract, where it ferments and rots, filling the body with deadly toxins.

The sick body does not need so-called medicines. They are poisons. Their use further degenerates the body. This further decreases its condition and capacity to receive and use Vital Force.

The sick body does not need stimulants. Stimulation quickens function, which means rapid disintegration of cells at a time when extraordinary repair work is being instituted. This means decreased ability and capacity of the body to receive and use Vital Force. This means prolonged illness, with slow recovery. It may mean death.

Chapter No. 74

LAW OF WEIGHT

A more fuller explanation of the Law of Vitality and Law of Recuperation, requires a brief review of the Function and Condition of the Living Organism.

If we hope to relieve some of the suffering of man, and to succeed in extending the length of his years, we must demolish the errors taught in our Educational Institutions regarding the Function and Condition of the Organism, and in their place put Truth.

The medical profession exhibits a growing tendency to urge people to weigh themselves often. People are told that if they find their weight decreasing, it is a sure sign of increasing impairment of health, and that such persons should see their physician at once.

There are many methods by which to advertise for business. This is one of them. By well-planned propaganda people are kept in ignorance. They fail to see the commercialism lying back of these schemes, and such informa-

tion sets them hurriedly on the road to the physician's office.

Losing weight is a condition that seems to frighten many people. There are two chief reasons for this fear: (1) Ignorance of the character of the substance that composes a certain proportion of the weight of many persons, and (2) the erroneous belief, arising from false teaching, that keeping one's weight up to a good-sized figure, has a beneficial effect on one's health.

Medical doctors themselves believe that a fleshy person is a healthy person. They insist that people should eat freely and frequently of "good, nourishing food," in order to keep up their weight. If one's appetite is poor, take something, some medicine or tonic, to stimulate and increase it, and then proceed to stuff the body with food.

In his book, "Eating and Health," James J. Walsh, M. D., Ph. D. Sc. D., etc., tells people how to live and eat to be healthy. True to his teaching, he believes in eating plenty of good, nourishing food, and in putting on weight, for he observes:

"Persons who are underweight must put on weight, and there is no other way to do this except by eating more. A great many so-called nervous people, that is, those who react too readily to irritation of various kinds, mental or physical, and who become, as a consequence, over-solicitous about their health, are underweight.

"Many of these nervous symptoms will disappear when they put on weight. It is easy to understand that a person who weighs 120 to 130 pounds, when he ought to weigh 160 to 170 pounds, has no surplus energy that will enable him to stand the irritations of life. Such people become very tired toward the end of the day."

Dr. Walsh proves by his remarks that he is a typical type of the product turned out by medical schools. He is a member of that band which controls the health and life of this Nation; and the teaching of that band is as dangerous as it is false. Having set forth in the foregoing quotation, the substance of that teaching, we propose in this paper to prove that it is both dangerous and false.

In accordance with the doctrine advanced by Walsh, the principal aim of medical treatment, in the so-called wasting disease, such as tuberculosis of the lungs, is to try to stop the loss of weight by feeding the patient several times per day with meat, milk and eggs.

A lady came to us with her 15-year-old boy, suffering from consumption. He was being attended by a regular medical doctor, under whose care the boy was fed four times daily, of beef, milk and soft-boiled eggs. She brought the boy to us because his health continued to decline. We ordered a fast, to be followed by a diet of oranges, grapefruit, apples and grapes.

The lady exclaimed: "What, fast my boy in his weakened condition, and then feed him such worthless, watery foods as oranges and grapefruits?"

We carefully explained the boy's condition, going into the cause and giving the remedy. We told her that if she continued to feed the boy as she was, she would kill him.

Our explanation fell on deaf ears, for in spite of our advice, she continued to feed the boy on beef, milk, and eggs until he died; and then she attempted to free her guilty conscience of her crime, and exonerate the medical doctor of blame, by declaring that it was the Hand of Providence; that the boy's time had come, and nothing could have saved him.

This is an example of the density of the layman's ignorance that saves medical practice from dying and passing

into history, a relic of the Dark Ages.

Under this mode of treatment, it is possible to increase the patient's weight; and as the patient gains in weight, it is thought that he is growing in health. But the many sudden deaths that often follow this kind of care, is strong evidence that the patient was not growing better.

This method of treatment, down to this day, has never helped one single patient in all the years that it has been tried; and tuberculosis of the lungs has always been considered by the medical profession, as one of the many incurable diseases.

Generally, under this method of treatment, there is an increase in the patient's weight. But there is no improvement in his health, and we shall explain why the weight increases while the health continues to decrease.

The weight of the body does have much influence upon its condition, but not in the way that Walsh and the medical world teach men to believe. It is the surplus weight that men carry, which medical doctors prize so highly as being important to health, which brings its victims down to sick beds and early graves.

As an illustration: Here is a man who has the frame and build of a man who should weigh 120 pounds, but who ought to weigh 160 pounds, according to Walsh.

When we say that the man should weigh 120 pounds, we are not basing our statement on tables supplied by medical doctors and life insurance companies. Of these tables Leonard Williams, M. D., of England, states:

"In the ordinary published tables that inform us as to the weight which is proper to a person of a certain age and a certain height, we are brought face to face with some rather surprising facts. We find, for example, that a man of 5 ft. 8 in. at the age of 25, when he is in the prime of his muscular manhood, should weigh 10st. 7lb., and that same man, arrived at the age of 50 years, should weigh 11st. 8lb.—that is to say, when his heart and lungs have been subjected to a quarter of a century's additional wear and tear, it is regarded as normal for him to impose upon these sorely-tired organs an additional burden of 15 lbs.

"If we consider for a moment what the addition of but one pound on a horse's back means to its chance of winning a race, we can form some estimate of what an addition of 15 lbs. on a man's back means to his chance of achieving even a moderate place in the human race for efficiency.

"Now it is to be remembered that this increase of 15 lbs. represents not only an accession of lard superimposed on the man of 25—it represents lard that has replaced muscle. It would matter less if the extra weight were merely useless lard that he carries on his back, so to speak, but it is not—it is useless and deleterious adipose tissue that has invaded and supplanted useful and necessary muscular tissue. It is not only an additional load—it is a degeneration."

These tables present another surprising fact. They show that the death-rate is lower in persons said to be 20 pounds UNDER "average weight," than it is in those of "average weight." The figures, compiled by life insurance companies, are as follows:

MORTALITY RATE.

20 lbs. under average weight.....	89%
10 lbs. under average weight.....	90%
5 lbs. under average weight.....	91%
Average weight mortality.....	94%
5 lbs. over average weight.....	98%
10 lbs. over average weight.....	102%
20 lbs. over average weight.....	112%

Those craving more weight, please notice that these statistics show an increase in the death-rate, which obviously means a decrease in the degree of health, with

every pound of weight above that given as "20 POUNDS UNDER AVERAGE WEIGHT!"

As all will agree that health and the length of the life-span are more important to human happiness than is weight, then 20 pounds under that given as the average weight, should be regarded as the AVERAGE WEIGHT; for it is at this weight that the degree of health must be highest, since the death-rate is lowest.

Such faulty tables are the result of an examination of 100, 1000 or more abnormal persons. The average weight of these abnormal persons, of certain ages and heights, is carefully set down as being the average weight of a normal person, of a certain age and height.

The average weight of 100, 1000 or more abnormal persons, cannot be the proper weight of a normal person, even though this statement disputes the doctrine of the whole medical profession. We remember, however, that the world was not flat, even though such was the teaching at one time of all educational institutions on earth.

This 120-pound man follows the advice of Dr. Walsh, and in time weighs 160. He is now 40 pounds overweight, and should be in good health, according to the theory of medical schools. But an examination will show that he is suffering with many disorders. He has frequent headaches, his stomach, bowels, liver, and kidneys are deranged. He is constipated, his waist-line is many inches too large, he has pains in his back, muscles, and joints. He has dizzy spells, he has shortness of breath when he partakes of mild exercise, like most medical doctors have, who have reached the age of 35 or more, and he is quickly fatigued, like they are.

This man now writes us for advice, and we direct him to fast, and to follow the fasting with a diet of uncooked fruits and uncooked green vegetable salads. He heeds the advice, and begins to lose weight. In 15 days he loses 20 pounds or more. He then becomes frightened, and consults Dr. Walsh, who orders the fast stopped at once, as being silly and harmful, and he puts the patient back on a diet of meat, milk, eggs, and other "good, nourishing food." The patient in time recovers the lost weight, and with it come again the old aches, pains, constipation and other disorders. Dr. Walsh then proceeds to treat him in the orthodox way for these ailments, and in six months or less the man goes to his last resting place.

Another patient, carrying 40 pounds of excess weight, with the same distressing symptoms, is given the same advice by us. Like the other patient, he loses weight at the same rapid rate, and, becoming frightened, he stops the fast, but instead of consulting Dr. Walsh, he begins to eat the foods we prescribed. The loss of weight continues, and he writes us that while his health seems to be improving, he is worried about the continued loss of weight which medical doctors declare is a dangerous symptom, and he wants to know what to eat to prevent further weight loss.

Did you ever notice how fast a fleshy person loses weight when he falls ill, even though the illness may be mild, and last for only a week or so?

Healthy tissue does not diminish so rapidly as that. But the useless lard, mentioned by Williams, and injurious waste, fluids, and acids, piled and packed in the cells, tissues, joints, and bowels, are thrown off quickly when the intake is stopped—and that is what happens in a sick body.

This same favorable process of depuration and elimination will continue when one eats of uncooked fruits and

uncooked green vegetables, but not so rapidly as when one is fasting and taking nothing but water.

When a man who should weigh 120, increases his weight to 160, the extra weight does not consist of healthy muscle tissue, but of useless lard, accumulated waste, poisonous fluids and injurious acids.

In this condition he gets sick. The sickness destroys the appetite, and stops the eating; and the body machinery, being thus freed from the labor of caring for food, turns with vigor to the task of cleansing the body and depurates and eliminates the accumulated morbid matter. The weight of the body decreases fast, as the filth is thrown off—and the sickness diminishes in proportion as the body is cleansed.

This clear statement of the case suggests two self-evident facts, neither of which is known to the medical world, to-wit: (1) Why the body got sick, and (2) why the body got well.

Lesson No. 26, Chapter No. 75

OBESITY

Beware of the enlarging waist-line. Here lies a dangerous area. Keep the waist-line down if you would keep your health and live long.

Every fat person has a large waist-line. The man who weighs 120 pounds, and then adds 40 pounds of weight to his body by following the advice of Walsh and eating more, develops a large waist-line.

Every fat person likes to eat, otherwise he would not be fat; and he grows fat because he eats in excess of the actual needs of the body.

Many fat people assert that Obesity runs in the family. In response, we insist that the love of eating and the habit of setting a good table also run in the family.

We know that a fasting man does not grow fat. If we want to "fatten up" we must "feed up." The fat folk hate to admit this fact. Most of us find it hard to face the truth, especially when our conduct is condemned by what we learn.

When a person becomes fat and plump, his body is in an abnormal condition, and to this disordered state the term of Obesity has been applied. Dr. Williams refers to the matter in these words:

"Obesity, though grotesque, is not a joke; it is a disease. Corpulence is not a comedy; it is a tragedy.

"It causes pain, disability, inefficiency, and, worst of all, it shortens life. It shortens life both directly and indirectly. It shortens life directly by clogging the wheels of being in the manner which I have already indicated, and brings life to a close in sorrow and tribulation soon after fifty, whereas if obesity had been avoided or cured, as it so easily can be in the early stages, the life would have been worth another thirty years' purchase and pleasure.

"Obesity shortens life indirectly by decreasing and weakening the powers of resistance to infectious disease. Any doctor will tell you that the seemingly strong, healthy fleshy man is the very worst of all possible subjects for pneumonia, typhoid, or influenza, and no surgeon, however bold, will fear to declare that he dreads to operate upon a fat patient."

Any person whose abdomen protrudes more at the age of 35 or 40, than it did when he was 15 or 16 years old, is carrying in that part of his anatomy, a surprisingly large amount of putrifying waste, which is both dangerous and weakening.

From this mass of filth, lying in the bowels, foul gases

and liquids are seeping into the blood. They are conveyed by the blood to all parts of the body; they settle in the brain, joints, and cells. They make a person appear fleshy; his friends think him healthy; but all the while this mass of waste, generating deadly poisons, is working grave harm, which will eventually take its toll.

Insurance statistics show that the death-rate for diabetes, apoplexy, heart disease, cirrhosis of the liver, and Bright's disease, per 10,000 persons over 45 years of age, is only 65.1 for those of "normal weight," while it is 135.8 for those who are 30 pounds or more overweight. Does Dr. Walsh know about this?

Postmortem examinations reveal the astounding fact, that the walls of the large bowel of most people are coated with a layer of rotting waste, ranging from one-fourth of an inch to one inch or more in thickness. In some instances, the morbid matter lining the walls of the colon was found to be as hard as wood, and contained live maggots, diligently at work.

To give a fair picture of the situation, we desire to say that an eminent surgeon has preserved the large intestine of a deceased patient, distended to 19 inches in diameter, and containing nearly 20 pounds of putrifying filth. In the same body we know that more pounds of filthy waste were lodged in cells, tissues, and joints, and that the person appeared to be fat, and had a waist-line of exceedingly large proportions. He should have weighed 160 pounds, perhaps, but he weighed 200 pounds instead, meeting the condition said by Walsh to be proper, in order that a man may have a surplus of energy to enable him to stand the irritations of life.

We shall estimate, and with good grounds therefor, that at least 40 pounds of the weight of this man was composed of morbid matter, that should have been in the sewer instead of in the body. The morbid matter had made the man sick; it had finally killed him—being aided in its work, without doubt, by the treatment of the medical doctor who attended him, and who believed, as Walsh does, in a man's putting on plenty of weight.

This man, weighing 200 pounds, 40 pounds of which was due to a waste-clogged, water-logged state, under a fast, followed by a diet of uncooked fruit, would quickly have lost 40 pounds, and this by doing no more than freeing the body of that amount of poisonous, putrifying filth.

Had this occurred, the sudden loss of so much weight would have alarmed his friends, and their adverse remarks would have alarmed him, with the result that he, in his ignorance, would have begun again to eat and drink as before, in order to recover the lost weight—weight that was destroying his health and dragging him down to an early grave.

Oh, ignorance, what a ruthless enemy are you. The shadow of you casts the only darkness in which men walk. You make of us slaves; you destroy our health, our happiness, and, finally, our life. You enslave our mind, and our mind enslaves our body. We grovel at your Shrine, while you mock our stupidity. We do your bidding, while you lure us into the terrible abyss. The only power that can free us from your deadly clutches and chains is KNOWLEDGE. Knowledge is power; it is the only Saviour; yet Knowledge is rejected by men for tradition and superstition; for these rule every human action.

You cannot be fleshy, as advocated by Walsh, without having a large waist-line; and you cannot have a large waist-line and also have health. For a large waist-line indicates that the abdomen is bloated with morbid matter,

and health and morbid matter cannot abide in the same body at the same time, regardless of the assertions of Walsh and the whole medical world.

Chapter No. 76

CONSTIPATION

Enlarging waist-line and Constipation go together and grow together. As the one increases, so increases the other.

The large bowel, called the colon, is the habitat of constipation. This organ is frequently referred to as THE GREAT SEWER OF THE SYSTEM.

Even a sewer must be kept clean, open, and active, in order that it may do its allotted work. If allowed to become clogged, it fails to perform its function. Then what is to become of the steady stream of waste and refuse, which cannot pass off thru the proper channel? It will accumulate, overflow, and flood other parts, seeping into places where it will do great and often irreparable injury. Now, that is exactly what occurs in the body, when the human sewer is allowed to become clogged.

Let us briefly consider what passes thru the great human sewer, in the name of food and drink. Here is a person suffering with indigestion. We meet them on every hand, and find them taking all sorts of "remedies," as per advertisement, guaranteed to "cure" their complaints.

The person lives in the conventional style, eating modernized foods: Foods consisting of dead and decaying flesh—for flesh begins to decay the moment life leaves the body. Much of this flesh is pickled, peppered, salted, sugared, smoked, spiced, canned, ground into sausage and seasoned with all kinds of condiments until its real identity as to flavor is entirely lost. All these processes are often necessary in order to sell flesh, so old and decayed that it can no longer be sold in any other style.

Then there is hash, which includes all the remnants of various foods left from several meals, chopped, salted, peppered, vinegared, greased, and mixed together till no one, not knowing, can tell of what it is composed.

Bread and cakes, made of white flour that has been robbed by the miller of its principal body-sustaining elements, and mixed with milk, baking-powder, soda, salt, sugar, butter, grease, and baked till it is dry and dead.

Gravies, made of denatured flour, milk, water, grease, butter, salt, vinegar, pepper, mixed, stirred, and cooked into a splendid paste for paper-hangers. And so on ad infinitum. In fact, he who can concoct the most abominable mixtures, is considered as the best cook; and to this end countless cook-books have been written, and many women have slaved and striven in bake-oven kitchens, until in that way some of them have utterly ruined their health.

And there are the tea, coffee, cocoa, soft drinks, and intoxicants; and between meals come candy, ice-cream, peanuts, popcorn, lunches, tobacco, and so on. Contemplate the horrible mixture that the average person, in the course of just one day, puts into his stomach, there to be mixed with the digestive juices, churned and stirred, and passed on thru the delicate digestive organs, to be used by the body in making blood to build cells and tissues, bone and brain, and to renew and repair the waste, wear, and tear of daily life.

We trace this badly digested, denatured, decayed, concentrated, fermenting mixture along its course from the stomach thru the small bowel and into the colon. All the way the stream is an exceedingly foul one. It finally finds its way into the GREAT SEWER OF THE SYSTEM, and

there becomes obstructed and slowed in its movement, accumulating and spreading out into a filthy, festering, stagnant morass of poison, so horrible and so repulsive as to beggar description and stagger the imagination.

One author describes it as:

"A tube full of abomination such as we dare not touch, nor smell, nor see, nor even think about."

The carcass of a dead animal, rotting by the roadside, and emitting a stench so strong that one stops his nostrils as he passes, to keep out the fearful odor, is far less offensive and repulsive than the awful mixture of festering filth found in a clogged colon. The vomit of a person is considered very obnoxious, but the putrifying waste in the sewer of the average individual compares to vomit, about as vomit compares to a bowl of fragrant vegetable soup.

This is the material that many people carry in their body from year to year, and it lends to the abdomen a nice full, rounded appearance, and adds additional weight to their body. Walsh thinks that its presence in the bowels, cells, and tissues imparts surplus energy to the body, that will enable a man to withstand the irritations of life.

One patient writes us:

"I have to take two pills every night of my life, as well as Abby's Salt the first thing in the morning, to get a bowel movement. I have done this every night for 15 years. I have been afflicted with constipation all my life, and it seems to be growing worse as I approach my 40th birthday."

This man is one of millions in the same condition. He is carrying around in his body many pounds of that weight which Walsh regards so essential to impart to one that energy which enables one to withstand the irritations of life.

Of Constipation, that unrelenting enemy of health, Dr. J. E. Cummins says:

"When a man is constipated he is constipated all over. All the tubes, tissues, and organs of his body are involved. His brain is sluggish, his circulation is deranged, and all his powers are greatly diminished. It may go so far as to produce insanity, as every insane person is constipated. In every disease there is more or less constipation. In every death, the bowels are found in a constipated state."

Regular bowel movement once per day is no proof of the absence of constipation. For the walls of the colon may be incrustated with foul, fecal filth, with a small passage in the center, thru which there is a scant daily discharge. In fact, postmortems show that such is the condition of the colon of most persons of the age of 40 years and beyond, as we have said.

This accounts for some of the weight that old and middle-aged men carry around, a loss of which weight frightens them almost into fits. This accounts for some of the additional weight that the published tables state that a man of 50 should have over and above the weight that he had when he was 25.

Think of it! Medical science unequivocally declares that a normal man, at the age of 50, should weigh 15 pounds more than he weighed at the age of 25—and that extra weight consists of festering filth lying in the body and lining the walls of the large bowel. This extra weight is essential, says Walsh, to give a man the energy that will enable him to withstand the irritations of life.

What can be the state of one's health, when the main

drainage canal of the body is clogged its entire length with putrifying sewage, perhaps with maggots in it, generating the foulest of gases and liquids, with the accumulated filth, fluids, and gases flooding all parts of the body? If you would see, go to our hospitals and insane asylums; for there you will get your answer.

Chapter No. 77

LAW OF ENERGY

In considering the subjects of Energy, Endurance and Vitality, Orthopathy is constrained to oppose the generally taken, accepted and unproven theory of physical science.

The reason of this is clear: Physical science denies the existence of a Life Principle. Orthopathy is based on the theory, that Animation proves the Existence of such a Principle, just as the falling Apple proves the Existence of Gravity.

The world admits that Gravity is; but no one is stupid enough to attempt to say what it is. Orthopathy does not attempt to say what Life Principle is.

Physical science asserts that the energy of the animate body arises as a result of chemical action, reaction, and interaction occurring within the body. Orthopathy holds that the energy of the animate body arises as a result of the action of Infinite Force and thru Infinite Matter.

Physical science asserts that the office of food is fuel to the body. Orthopathy holds that food is building material to the body, and that its only office is to supply the body with elements for use in constructing new cells, to replace the cells worn out in the constant activity of the body.

If the theory advanced by science were correct, then the glutton should outlive Methuselah in years, outlive the Gorilla in strength, and the Hog should outlive all other animals, outrun the antelope and outweigh the elephant. This was explained in Elementary Orthopathy, Lesson No. 5, to which the student is referred.

In Lesson No. 9 of that course, the subject of Strength was discussed. The medical world urges people to eat large quantities of food, to build up weight and increase strength. It urges patients to eat plenty of "good, nourishing food," in order to build up their strength and powers of resistance.

Orthopathy showed in Lesson No. 9 that this was wrong. It showed that Strength is the Product of Vital Force, as it operates in and thru the body. It showed that the amount of Strength present depends upon the Condition of the body, and not upon the quantity of Food fed into the body.

Orthopathy showed in that lesson, that where the Force of Life is most abundant, there exists the greatest Strength; while the least Strength is found where Life Force is at its lowest ebb; with a total absence of all Strength when Life Force is no longer operative in the body.

The Force of Life is most abundant in a Healthy body. The body's strength decreases in exact ratio with its transition from normality to abnormality. The body grows weaker as its condition grows more abnormal, until it finally loses all its power when Life Force departs from it, producing the state termed Death.

A healthy body is one that contains no waste substances not natural to it, and only the right amount and proportion of the substances of which it should be composed.

No person can be sick, or get sick, when his body is internally clean of morbid matter and excess liquids and

gases. One gets sick if, when and because his body is filled with filth, which accumulates in the bowels, tissues, cells, and joints, making the person present the appearance of being fleshy, and adding weight to his body.

The sick body gets well because it cleanses itself of filth. As the filth is cast out of the body, the patient improves in health, but loses weight; he becomes thin—and his friends say, Oh, how bad you look!

The surprising reduction that occurred in the weight of the body in so short a time, is indicative of the large amount of filth that had accumulated in it. As the filth was thrown off, the weight decreased, and the patient's health correspondingly improved.

As soon as the patient recovers, he proceeds, in his ignorance, to stuff his body again with lots of food, as directed by James J. Walsh, M.D., Ph.D., Sc.D., etc., in his book, "Eating and Health," in order to gain back his weight, which Walsh says is essential to provide that surplus energy which will enable one to withstand the irritations of life.

The recovered patient believes that he is still in danger until he regains the weight he lost during the illness. He believes that Walsh knows what he is talking about; for Walsh holds himself out to the public as being a physician of the regular school, who knows something about the needs and care of the human body—and the layman cannot be blamed for following his advice.

As the patient's weight increases, his friends remark, You are looking so much better; and he is thus encouraged to eat and drink all the more, as directed by Walsh, that his body may add more weight and continue the improvement, which his friends think they observe.

The cleansed body is able to withstand this sort of treatment again, only until its existence is threatened as before, with an accumulation of filth, and then there follows, in order, another case of sickness—perhaps of a different type this time, but for the same reason and the same purpose.

By overeating, as Walsh urges people to do, when he says to eat more, the blood becomes surcharged with nutriment. This surplus nutriment decomposes, and affects adversely not only the blood, but through the blood it affects all excretions, and all organs, cells, and tissues of the body.

Destructive fermentation and putrefaction begin, thus increasing the amount of poisons and acids in the stomach and body. All the digestive fluids are abnormal and acidic resulting in faulty digestion, and a general deterioration of the cells and tissues takes place.

In this abnormal state, the body is weakened, and there is a lack of energy and endurance. In due time, the condition that first weakens the body, eventually brings it down to a sick bed. The purpose of the sickness, as we have said, is to cleanse the body of the accumulating waste, which cleansing process also reduces its weight. If this did not occur, the accumulating waste would soon poison the body unto its death.

Some people think that the remedy for a lack of energy and endurance is found in some kind of food, eaten in abundance, or even to excess, as advocated by Walsh. No wonder so many people write us, asking the kind of food to eat, in order to increase their weight, energy and endurance.

Increasing one's energy and endurance is not exactly a matter of food—notwithstanding the fact that medical doctors and some dietetic dunces teach that it is. It is entirely a matter of health.

Energy and endurance abide in a healthy body only. They are the products of health, not of food and drink. Build health if you want energy and endurance. Anything that will improve one's health, will ipso facto increase his energy and

endurance. That is why the energy and endurance of sick people are increased by fasting.

Fasting improves the health by cleansing the body of waste, filth, and acids, and with improved health come increased energy and endurance. Accordingly, improving the health of him whose body is so badly poisoned with accumulated waste, filth, and acids, that it lacks its normal tone, energy, and endurance, is far from being a matter of food.

Another timely illustration is that of the athlete. What course does the boxer or wrestler pursue when training for a bout? Does he turn to food? Does he eat more, as advocated by Walsh, to increase his weight? He should, according to the advice of the medical world. But does he do these things? Ask Fitzsimmons, or Jim Corbett, or Jack Dempsey; ask any of the great boxers or wrestlers.

When boxers begin training, the goal of their labor is more energy and endurance. How do they gain these? By living on a simple, frugal diet, by drinking only water, by exercise in the open air, and by reducing their weight. For, as Dr. Williams says:

"If we consider for a moment what the addition of but one pound on a horse's back means to its chances of winning a race, we can form some estimate of what an addition of 15 pounds on a man's back means to his chances of achieving even a moderate place in the human race for efficiency."

George Gable of Cincinnati had been a great wrestler for his size and weight. He retired from the game, and his waist-line expanded to 36 inches and his weight went up to 170 pounds.

Along came Jack Reynolds, another wrestler, and challenged him for a match. Gable accepted, and went into training. In due time he reduced his weight to 146 pounds and his waist-line to 30 inches. He was working for strength, energy, and endurance, and knew that to gain these, he must take pounds from his body and inches from his belly.

Chapter No. 78

THE LEAN MAN

Walsh holds that the adding of pounds to your weight adds energy to your body. We shall cite a concrete case to show that he is mistaken.

Fitzsimmons, was the greatest fighter for his inches that ever pulled on the padded mits. He is the only man who ever held three world championship titles: middle-weight, light-heavyweight, and heavyweight boxer. He spent 34 years in the square circle, from 1880 to 1914, having his last fight when he was past fifty—an age at which most medical doctors and health officers are dying of decrepitude.

Fitzsimmons stood a quarter of an inch under six feet in height; he had a waist-line that measured only 29 inches, but the girth of his chest was 40 inches. He weighed only 149 pounds when he won the middle-weight championship of the world by putting the original Jack Dempsey to sleep in 14 rounds, and only 156 pounds when he put Gentleman Jim Corbett on the floor for the count of ten in 1897, to win the heavyweight boxing championship of the world.

His clean, simple, frugal living habits kept his abdomen clear of filth, kept down his waist-line, kept down his weight, and KEPT UP HIS STRENGTH AND STAMINA. His various opponents declared that he was bear-like in energy and endurance, never appearing to grow weary under the grind of the fight, and seemingly as fresh at the end of 15 or 20 rounds of strenuous boxing, as when the battle began. How could any common boxer beat down a fighting machine of such untiring vigor and vitality?

Fitzsimmons did not carry around 35 or 40 pounds of weight that comes from that amount of morbid matter lying in the body, or fatty tissue that has displaced useful muscle tissue—weight which most people crave, and recommended by Walsh and the medical world as being so essential to health.

Most of us remember when Jack Dempsey defeated Jess Willard at Toledo, Ohio, in 1918. Willard stood 6 ft. 6 in., weighed 238 pounds, and was champion heavyweight boxer of the world. Dempsey floored him five times in the first round.

Dempsey's height is 6 ft. 1½ in. When he fought Willard he weighed 192 pounds, and his waist-line measured 32 inches. His abdomen was not filled with filth that makes people plump and gives them weight.

I seem to be healthy, but I do not weigh as much as I should like, write many persons to us, when seeking health advice. Outline a diet that will give me weight, they cry in their ignorance. It requires weight, says Walsh, to give you energy that will enable you to withstand the irritations of life.

From whence came the wonderful energy and endurance of Fitzsimmons, the equal of which few men in the ring ever possessed, and none ever surpassed? It did not come from weight; for he had a frame that could easily have carried 190 pounds, and still not appear to be unduly fleshy.

We shall later see from whence came this remarkable energy and endurance. For there is still another factor, besides weight, that has considerable bearing on the matter.

When athletes retire from sports, and take up some other occupation or profession, they grow careless in eating, drinking, and the care of their body. The result is, they begin to degenerate physically. Their muscles grow soft and flabby, their waist-line expands, their weight increases, their energy decreases, and their endurance diminishes.

With added weight comes loss of energy and endurance—and impaired health. This is a Universal Law, applying to all men alike.

If weight were so important to the welfare of the body as medical doctors claim, why do the lean horse and the lean athlete win the long race? Or why do the boxer and the wrestler train to reduce their weight? Medical doctors are always working to correct their errors, and here is one that needs early attention.

Regardless of how plausible a theory may appear, if it fails upon examination to correspond with facts, it should be rejected. In the matter of weight being beneficial to the body, and to health, we shall give another instance with which to compare the theory of Walsh and the medical world.

At the old Confederate Veterans' Reunion in 1929, it was evident that from the ranks of the lingering hundreds, old Father Time has winnowed out all the fat and fleshy men. Even drummer boys of 1861 are now 84 years old or older. Of this gathering of old warriors of the rebellion, it was the lean, lank, wiry ones who had succeeded in fighting off the passing years, and who are now frolicking thru their annual reunions.

Health and Long Life travel hand in hand, barring accidents. What produces health also produces long life. Fleshy people never reach an advanced age, therefore fleshy people cannot be normal, healthy people. But Walsh and the medical world urge people to eat more food in order to increase their weight and energy.

Disease is the great dividend payer. Continued good health in this country on the part of all the people, would quickly drive medical doctors and medical institutions into bankruptcy. Remember that fools are the only ones who kill the goose which lays the golden egg.

Waste, accumulating in the body, adds to its weight. This waste seriously irritates and poisons the cells, and the body calls for an extra amount of liquid to dilute and weaken the poisonous waste. Such persons have an unusual thirst, and drink lots of water and other liquids. In fact, the general condition of civilized man's body is such, that he drinks far more water, and other liquids, than the needs of a normal body require. This also adds to its weight.

The weight of a person increases (1) from an accumulation of morbid matter, and (2) from an infiltration of fluids in the intercellular spaces of the body. These persons have the appearance of being fleshy and fat, and their friends exclaim, How well you look! The next day you drop dead—of heart disease, the doctor says.

Many of our leading physicians go quickly in the same way—showing that they believe and live what they teach.

Some persons have dropped dead within 24 hours after a thorough examination at the hands of what was supposed to be a competent medical doctor, and pronounced as fit as a fiddle.

Lesson No. 27, Chapter No. 79

FERMENTATION AND ACIDOSIS

Stomach and Intestinal Fermentation are responsible for much of the extra weight of the body. They are also responsible for much of the very prevalent condition of Acidosis from which humanity suffers.

The abnormal weight that comes from this course, arises from the infiltration of fluids into the intercellular spaces of the body, excreted into these billions of places by the blood, in an effort of the body to counteract the effect of the poisons resulting from fermenting acids.

The hog raiser knows from experience that to fatten swine requires food which will ferment, like malt in a brewery vat, sour, mushy grains, brans, or swill.

Poisonous acids and gases arise from the process of fermentation, and they irritate the delicate cells and tissues. The body calls for water to allay the irritation, and the person or animal in this condition, drinks so freely, that the body becomes bloated. People, in their ignorance, think that a body thus bloated is fleshy and healthy.

Acidosis is civilization's most prevalent disorder, being even greater than Constipation. It is the primary state of practically all ailments; it is present in every disorder. It results from fermentation that begins in the stomach and intestines.

By the term Acidosis, we mean here a lessening of the alkalinity of the blood and body. The tissues, cells, and fluids of the body are always alkaline; and normal blood is highly alkaline. It is when the normal alkalinity of the blood and body is reduced by an excessive amount of acid, that the harmful condition, called acidosis, arises.

Not only health, but the life of the body, depends upon a normal alkaline balance. If breathing were prevented for a few seconds, the person's face and body would turn bluish-black, and death would quickly come from carbonic-acid poisoning. Patients often die quickly in instances of pneumonia or influenza, because the function of respiration is seriously obstructed by the congested state of the lungs. They die of carbonic-acid poisoning, aided, perhaps, by the stupefying drugs administered by the fool physician.

Acids in the body tend to disintegrate the tissues and cells. Even the bones do not escape; and bones in various parts of the body are found disintegrating from the effects of the harmful acids. This condition is called tuberculosis

of the bones, and medical institutions claim that it results from the work of germs. They have no remedy but the saw and knife.

Max Gerson, M.D., of Germany, after 25 years of labor in experimenting with diet, because drugs had failed him, found to his surprise that he could correct the acidulent condition of the body with certain foods. In instances of lupus (tuberculosis of the skin), and tuberculosis of the bone, he has accomplished astonishing cures with his methods of feeding patients. His great diet consists chiefly of oranges, grapefruit, the juice of lemons, tomatoes, and uncooked salads made of green vegetables.

Nature Cure doctors have used these foods for many years, and with the same happy results, in instances of disorders, said by medical institutions to be incurable. But no medical institution has yet been sufficiently interested in the HEALTH of humanity, to try or test these sane, safe, simple, sure methods.

Why? Because Natural Methods are of such a revolutionary character, that they cast discredit on time-honored methods of treating disease. They upset old theories and nostrums, wipe out or greatly disturb old sources of incomes; threaten profits and pocketbooks.

For these reasons Orthopathic doctors, and their patients, are subject to sneers and ridicule, and people are persuaded whenever possible from taking treatment of these doctors. They are told that Orthopaths are "crude quacks," that their treatments are dangerous, and to have nothing to do with them. They are asked, If Natural Methods are so wonderful, why has the medical profession not adopted them?

When harmful acids saturate the cells and tissues, grave danger arises. Against this danger the body strives to protect itself by (1) reducing the acids to crystals, hardening them so that they can no longer float so freely in the fluids and settle so readily in the surrounding cells; (2) using up the acids and morbid matter in growing tumors, ulcers, and cancers; (3) diluting the acids with water so that they are too weak to do much harm immediately.

As the acids are crystalized, they assume long, needle-like forms. These begin to pierce and tear the delicate walls of the cells and tissues, causing sharp pains that may be called neuritis, or dull pains that are called rheumatism. If the crystals settle in joints, arthritis may result. If the crystals localize in the liver, gall-bladder, or kidneys, they become somewhat rounded in shape, and are called stones or gravel.

If the acids accumulate in certain parts of the body, without crystalizing, a growth begins that may be tumorous, ulcerous, or cancerous. This is a protective measure, and helps the body to prolong its existence. It is a little short of murder to cut out these growths, when they can be so readily removed under the care of an Orthopathic doctor, who understands the condition, knows the cause of it, and what the remedy (cure) is.

As the acidity of the body increases, the thirst also increases. This is the S. O. S. of the body for fluids for use in diluting the injurious acids. The water is taken up by the blood, carried where it is mostly needed, and excreted into the cells and tissues, for the purpose of diluting the acids, and thus weakening their harmful effects.

Persons in this condition appear to be fleshy. They may even appear to be healthy. But, as we have said, their body is only bloated with the infiltration of fluids in the intercellular spaces.

The end-products of digestion are either acid or alkaline, depending upon the kind of food eaten, and the condition of the digestive fluids.

If the digestive fluids are abnormal, it results in faulty

digestion, and the reaction will be of an acid character, no matter what kind of food is eaten.

If the food eaten consists chiefly of flesh, fish, fowl, eggs, cheese, bread, cooked cereals, in the end-products of digestion are excesses of acid phosphorus, sulphur, chlorine, etc. This is so even though the digestive fluids are normal.

These acids exert a baneful effect on blood-pressure and heart action. Moore, at the Harvard Laboratories of Physiology, demonstrated that the eating of flesh, called meat, produces acceleration of the heart rate that is surprising in its magnitude and startling in its duration.

After partaking of a meal of flesh, the increase in the heart rate of a man regularly amounted to a 25 to 50 per cent rise above the fasting level, and persisted, in experimental subjects, for from 15 to 20 hours, to reach a total of many thousands of extra heart beats.

Moore showed that a protein meal thus throws much extra labor on the heart, very damaging in effect, and comparable in extent to the total performance of the heart during three or four hours.

Arthur Hunter, M.D., actuary of the New York Life Ins. Co., recently found from investigation that flesh-eating increases blood-pressure.

This investigation disclosed the fact that blood-pressure among the Chinese, Japanese, Filipinos, and Hindus, people who subsist almost entirely on fruits and vegetables, seldom eating flesh, living in their native lands, is markedly lower than it is among people living in the United States; while the same foreigners, living in this country and eating flesh regularly, as do the Americans, had a blood pressure that did not differ by more than two mm. from the blood pressure of Americans living in the United States. It was further found that blood-pressure among non-flesh eaters in this country is lower than among Americans as a whole.

Twelve rabbits were fed on grain, with minor additions of other food to prevent deficiency disease. Seven died in two years on this diet. Every rabbit that lived longer than eight months, developed high blood-pressure and Bright's disease, with albumin in the urine, and retention of waste products in the blood.

Twelve rabbits were fed on grains and meat. Minor additions of other food were made to prevent deficiency disease. Eleven of the rabbits died in fourteen months. Increase in blood pressure was noted at the end of the third month, which continued to increase until it averaged nearly 100 per cent above normal, with much waste retention in the blood.

Twelve rabbits were fed on a high protein, acid-forming diet. All of them developed high-blood pressure and nephritis, and all of them died in less than eighteen months.

The use of common table salt increases one's weight, decreases his energy and endurance, quickens heart action, raises blood-pressure, and forms stones in the kidneys and gall bladder.

Salt is a poison and an irritant to the body. The irritation is first indicated by a dryness of the throat and quickening of the pulse. The body calls for water to weaken the effect of the salt and allay the irritation. The excess water accumulates in the tissues and cells, increasing a man's weight. The condition may grow so serious as to produce dropsy, and many dropsical conditions have been relieved by no other treatment than a salt-free diet.

Dr. W. C. Dawes says that he never saw a case of rapid heart and high-blood pressure, that the patient was not a free user of salt.

Observe the price we pay for the degenerative habits we form, largely because of our ignorance of the Law of Life that governs the body.

Chapter No. 80

LAW OF ENDURANCE

The fact has been mentioned that carbon dioxide (carbonic acid gas), a waste product of and in the body, is quite poisonous thereto.

When normally alkaline, the blood carries about twenty per cent of its own volume in carbon dioxide from the cells and tissues to the lungs, where it is excreted as insensible vapor. But if the alkalinity of the blood stream is only slightly decreased, its acid-carrying capacity is greatly diminished.

When the normal alkalinity of the blood of rabbits was reduced by the mild use of certain acids, so that it could carry only three per cent of carbon dioxide, the rabbits were so near death that (1) they were unable to move, (2) could scarcely breathe, and (3) heart action almost stopped.

We have previously observed the remarkable strength and stamina of Fitzsimmons, and his extraordinary freedom from surplus weight. We now come to another one of the secrets lying back of his unusual energy and endurance.

There is a vast difference between physique and endurance. A man may have the splendid build of an athlete, yet lack the endurance of a lean, lank, rawboned person. The difference lies in the condition of the organism, and not in the size of the muscles nor the build of the body.

Endurance is not the product of big muscles. It is the product of a healthy body—a body comparatively free from acids. A healthy body is the product of a normal blood stream. A normal blood stream is the product of pure air, pure water, and proper food.

In addition to the carbonic acid produced incessantly in the body, another acid, called lactic acid, is produced with every motion and contraction of a muscle. Before that muscle can act again, the acid must be neutralized or removed. This work falls to the blood. The condition of normal blood being alkaline, it is possible for normal blood to neutralize and remove quickly, the lactic acid produced in the body by muscular work and activity.

Violent exercise, such as athletic contests, will produce as much as a pint of lactic acid per minute in the body. The acid must be neutralized by the blood and reconverted into other substances. Most of it is transformed into carbonic acid gas and liquids. The carbonic acid gas is conveyed by the blood to the lungs, where it is excreted; while the liquids are filtered from the blood by the kidneys, and passed off as urine thru the bladder.

Some of the liquids also pass off thru the lungs and skin as insensible vapor. But the vapor excreted thru the skin becomes large drops of perspiration, when vigorous and prolonged activity produce lactic acid so fast, that this rapid state of elimination becomes necessary.

For the same reason, a person also puffs and pants. This is one method by which the body quickens its eliminative processes. The act of puffing and panting casts out thru the lungs abnormal quantities of poisonous waste, produced by vigorous exercise.

Dempsey weighed 192 pounds when he entered the ring to box Willard. The match went three rounds, or nine minutes of actual boxing, with one minute rest between each round, making the total time of eleven minutes that the fight lasted.

Dempsey was weighed as soon as he left the ring, and tipped the beam at 188 pounds—a loss of four pounds in eleven minutes. Some of the weight-loss consisted of body fluids; but most of it represented cells and tissues that were used up and worn out by the violent activity. In breaking down, these formed lactic acid and other poisonous compounds, passing

off thru the skin and lungs as carbonic acid gas and vapor.

If the body is internally clean, if it is not handicapped by the condition of acidosis, if the blood is of its normal alkalinity, so delicately adjusted is the mechanism of the body, that these processes are performed promptly and efficiently, and the alkalinity of the blood is maintained with sufficient margin to insure safety.

But if the alkalinity of the blood and body has already been lowered by impure air, bad water, and wrong food, the blood is unable to care for the acids properly, and fatigue soon follows, because of inadequate elimination of the acids very largely.

If acid is produced rapidly in the body, as when a man is running or boxing, the alkaline equilibrium is soon reduced, the oxygen in the cells is consumed, and acids begin to accumulate in the cells, tissues, and blood, with labored breathing and fatigue resulting.

Breathing automatically becomes rapid and deep during violent activity, for the purpose of supplying more oxygen to the blood, and of speeding up the excretion of the carbonic acid gas.

But a time comes to all when activity must cease, and the body must have rest, because cell destruction and the accumulation of acids have reached a high point.

When this point shall be reached, depends upon the alkalinity of the blood and body in the beginning. For this reason, it is important that boxers, runners, swimmers, and other athletes should feed on food that will promote the alkalinity of the blood.

It is a lack of this knowledge that leads ill-advised trainers to encourage and insist upon the eating of meats, eggs, and cereals, with the result that their charges suffer from reduced alkalinity, and usually fail in the contest.

A man with a large alkaline reserve, like that possessed by Fitzsimmons, will have an active muscle power far more lasting, than a man whose alkaline reserve is low at the start of the contest.

Horace Fletcher knew something concerning such matters, when he appeared at the Yale food laboratory about thirty years ago. A retired business man, he was in his fifties, and was not in athletic training; yet he proceeded to break many of the records for energy and endurance that had been established in the University gymnasium by the best of the young athletes.

It was found that Fletcher ate considerably less total food, and much less protein, than had been believed to be essential to the highest degree of energy and endurance. In fact, he did not eat one-third as much protein as the expert food chemists prescribed for an athlete.

Here is more evidence to prove that Walsh and the medical world are in error in asserting that a man should eat more food and put on more weight, in order to build surplus energy that will enable him to withstand the irritations of life.

The real facts of the matter are, the more a man eats above the actual needs of the body, and every pound of flesh that he carries above a certain figure, are both a burden and a danger. They weaken him. They take years from his life and life from his years.

Chapter No. 81 REST AND SLEEP

We shall now consider more fully the states of Rest and Sleep as measures of Recuperation.

Why does man grow tired and sleepy? "What does sleep do?" asks Dr. Walter. He continues:

"It stops the expenditure of the vital income. It thereby recuperates the Vital Force. It does what no food can do—

it secures real strength to invalid or well man.

"No matter how much the physician may rely on his stimulants, he knows that sleep is a thousand-fold more important. One hour of sleep has turned the scales in many a case of sickness. Did the physician possess any agency that would take its place, he might act independently of it.

"Sleep shuts up the avenues of expenditure and the reservoir fills. Sleep is a closing down of the vital activities, that real power may accumulate."—Vital Science, page 162.

Orthopathy challenges the accuracy of this assertion. Orthopathy holds that it is incorrect. Orthopathy says that the Living Organism grows tired and sleepy, not because of exhausted Vital Force, but because of (1) consumed cells and tissues, and (2) destructive liquids, acids, and gases, arising from this consumption and accumulating in the body.

When electrolysis finally wears out the lamp filament, the lamp fails. The power is still present, and is not diminished in volume. But it cannot be utilized because the instrument made by man is unsuitable for the utilization. It has been worn out by use, and the Electrical Force is incapable of repairing the wornout lamp. The current is turned off, a new lamp is installed, the current is turned on, and again there is light.

The Life Current cannot be turned off, for the purpose of repairing the Organism thru which it works. Nor is such course necessary. But it is highly necessary that the activity of the Organism be reduced to the very minimum. Why? So that "real power may accumulate?"

No. All activity must be reduced to the very minimum in order to decrease to the lowest point, the cell and tissue destruction that arises from vitolysis.

The state of profound sleep is the condition that serves the purpose of reducing to the very minimum the activity of the Organism. It is in this state that vitosynthetic action is in excess of vitolytic action. It is in this state that the (1) consumed cells and tissues may be repaired and renewed, (2) the destructive liquids, acids, and gases neutralized and excreted, and (3) the normal alkalinity of the blood and body regained.

Rest and sleep are the greatest remedies for acidosis, because then there is a minimum of muscular exertion, with a concurrent minimum production of lactic acid by the muscles.

After a good night's rest and sleep, we should awake with the rising of the Sun, ready and eager for another day of toil. But if we get up in the morning with a feeling of lassitude and weakness, if we have a lack of energy, it indicates, in the language of the body, as plainly as it can speak, that (1) the cells and tissues have not been fully repaired, and (2) that the blood and body are still saturated with an abnormal amount of acids.

People in this condition are afflicted with headache, languor, weakness, nausea, sleeplessness, muscle aches, called neuritis or rheumatism, and other ailments. They are seeking foods and remedies to give them energy and endurance; their doctor is unable to tell them what is wrong. We have explained the situation and indicated the remedy.

This statement of the proposition disproves the theory advanced by those, who hold that (1) activity produces fatigue because of using up Vital Force faster than it is received by the organism, and, also, that (2) Vital Force accumulates in the reservoir during the hours of rest and sleep.

Does Gravitational Force accumulate in the stone as it lies at rest on the ground?

If the statement were true, that Vital Force accumulates in the body during the hours of rest and sleep, then all of us should wake up in the morning with a feeling of vim and vigor, whereas many people wake up with a feeling of weakness and fatigue.

It is the condition of the body that determines how we shall feel, and it is also the condition of the body that determines the degree of our vim, vigor, and vitality. The supply of Vital Force is infinite and inexhaustible; but man's use of Vital Force depends upon the condition of the body.

Fitzsimmons seemed to have unlimited Vitality. His body was in proper condition to receive and use Vital Force. That is the secret.

The acid products of consumed cells and tissues, and of digestion, accumulating in the blood, decrease its acid-carrying capacity, as we have seen. This causes the body to grow weak and weary, as did the rabbits, when, by the mild use of certain acids, the alkalinity of their blood was reduced.

The state that makes us tired is not fatigue of the muscles, nor the expenditure of Vital Force. It is wornout cells and tissues, and the accumulation of acids in the blood and body. And what makes us tired, also makes us sick, in time; and what makes us sick, if continued, will continue the sickness, event unto death, unless corrected.

Chapter No. 82

LAW OF DISEASE AND CURE

In Lesson No. 11 of Elementary Orthopathy, under the heading Disease—Its Cause and Cure, the student's attention was directed to the Blood Stream. He was shown that the state of the body depends upon the state of the blood.

If we pollute the blood-stream, we plunge the body into disorder, called disease. If we pollute the blood-stream more, as by injecting some virulent poison into it, the body's function becomes an appalling convulsion, that soon ends in death.

From the dawn of history, we find man searching for the Cause lying back of the movements of his body.

For centuries the scientist has sought to ascertain what makes the body move, and what gives it heat.

At this hour the scientific world has got no farther than the nourishment that enters the body. The combustion of food in the body gives it life, and heat, and makes it function, says the scientific world.

Science takes no cognizance of the common fact that bears, snakes, and insects sleep all winter in many parts of the world, without partaking of any food, other than air; and still their bodies are alive, have a certain degree of heat, and perform regular function.

Science ignores the fact that men have fasted from 30 to 90 days, taking nothing but air and water into their bodies, and their bodies remained alive, retained their heat, and performed the regular function.

Medical institutions regard the animation of the organism as arising from its function, and its function as arising from food combustion. They hold that Function is Life, and declare that it arises from chemical action, reaction, and interaction.

If this theory of Life were correct, the body, as such, could not come into existence. It is a law without exception that Matter, of itself, does not move. Before there can be movement, there must be a (1) Something that is capable of being moved, and a (2) Force that is capable of producing movement.

The Principles of Orthopathy are based on the doctrine that (1) it is the Spirit (Life Force) that quickeneth; (2) the Flesh (Body) Profiteth nothing.—John 6.63.

This doctrine of animation was promulgated by the great philosophers of the past, many centuries before the dawn of the Christian Era. They held that all Life is One Life, but expressed through many Forms.

Explaining the doctrine more fully: The Living Organism

is a physical instrument that is not only quickened by Life Force, but is formed and constructed by this Force, from an invisible speck in the female uterus, to matured manhood.

The Orthopathic Law of physical preservation is, *The Life of the Flesh is in the blood.*—Lev. 17:11.

Without the nourishing properties of the blood-stream to preserve the Flesh, there would be no Form for the Life Principle to animate.

The (1) Life Principle builds and animates the physical organism; the (2) Blood Stream preserved the organism by supplying the necessary Building Material.

We shall not attempt to explain what the Life Principle is. No man can explain what Electricity is. But a discovery of some of its laws of operation has enabled man to employ this mighty and mysterious Force in the performance of much useful work.

We cannot explain what the Life Principle is, yet Orthopathy has discovered some of its laws of operation. This has enabled the Orthopathic Student to supply such conditions in and about the Physical Organism, that it quickly returns to normal function when suffering from some abnormal state.

"*The Life of the Flesh is in the blood,*" said the Sage of long ago. He did not here refer to the Life Principle; for that he termed as the Quickening Spirit. He referred to the Preservation of the Flesh. He meant that the Existence of the Flesh is *dependent* upon the blood. And it is so.

The Blood is the marvelous and mysterious Stream that turns the "Wheels of Life." The Living Organism is the only chemical laboratory that can make blood. A chemist is able to analyze a drop of blood and name most of its constituent elements. But no man is able to make a drop of blood.

Science says that the blood is forced through the body by the heart. It regards the heart as a Pump.

The theory is ridiculous. The heart is the Central Blood Station. It is a measuring and mixing chamber, and "the central organ of the blood vascular system," says Dr. Willard Carver, who observes:

"Blood moves through its vessels by the propulsion of nerve stimulus (Life Force—Clements), in the same manner that the particles of muscles respond to that same force in the process of contraction and extension.

"We cannot think of force applying itself to the substance of a muscle, any more easily than we can conceive of force applying itself to the particles of a liquid; only we have been prepared by a long line of materialistic training to consider, not very closely, the former; but to be shocked into disbelief by the mere statement of the latter, which, upon the closest investigation, will be found to recommend itself to our acceptance as completely as any phenomenon which we are capable of accepting."—*Psycho-Bio-Physiology*, page 317.

All solids and liquids respond to the Force of Gravity. No one will question this statement. So all solids and fluids of the Living Organism respond to the Force of Animation. But science makes a pump out of the heart because it denies the existence of the Force of Animation.

By denying the existence of this Force, science is compelled to make a pump out of the heart. Otherwise it could not account for the movement of the blood through the body.

There are many other fluids besides the blood, that flow through the body. But science makes no attempt to account for their movement.

If the fluids of the organism do not respond to the Force of Life, just as orderly and readily as do the solids of the organism, then, says Carver,

"how is lymph raised from the feet to its points of entrance into the blood, generally against gravity? how is sweat conveyed to the surface of the body? how is seminal fluid impelled from the cul-de-sacs of the tubules of the testes and

through the vas deferens into the seminal vesicles, and from thence to the completion of its functional office? how is the follicular fluid carried and directed from the Graafian follicles of the ovary into the fimbriated extremity of the Fallopian tubes, and thence to its functional offices? and so on throughout all the twenty-four or more liquids of the body? For it is clear that each of these liquids moves in the scope of its function in the same way, and by operation of the same force, applied in the same way."—Ibid.

What great errors there do spring from a system that ignores plain facts of observation, in order to build support for preposterous theories.

The Blood Stream performs seven chief functions. They are:

1. To carry nutrition to the cells.
2. To carry waste products from the cells.
3. To furnish material to the glands for the elaboration of various products.
4. To carry these products from the glands to cells where they are used.
5. To distribute heat uniformly over the body, and provide for the elimination of the excess heat.
6. To defend the body against the invasion of poisonous substances.
7. To heal the body of its ailments, cuts, and wounds.

As the blood absorbs nutrition from the air, water, and food taken into the body, its nutritive volume is increased, as is the size of a freight train as it picks up cars at various stations.

As the blood feeds the cells, its nutritive volume is decreased, as is the size of a freight train as it sets out cars here and there.

A definite part of the blood becomes a definite part of the cells, as the cars become a definite part of the train. As the flesh is only a mass of millions of cells, then flesh is *only consolidated blood*.

The gross volume of blood does not decrease as it solidifies into flesh. The activity of the body is incessantly decomposing the millions of cells. These waste substances resulting pass into the blood as gases and fluids. That maintains approximately the same at all times the gross volume of the blood in the body.

This statement gives the student a crude description of the constant cycle thru which his blood is always passing. From fluid to flesh and back to fluid, without variation or change, is the regular order of the blood supply.

Just as all cells of the body are constantly changing, so are all elements of the blood constantly changing. Some authorities hold that the entire volume of blood in the body changes hourly. The blood of this hour is the flesh of the next, and returns to blood again in another hour. But the first is a stream of nutrition, while the last is a stream of pollution.

Under the Law of Hybridization, you were shown how man has mongrelized his body by the practice of flesh-eating.

If man eats decaying flesh, it is dissolved into liquid by the action of the digestive fluids, passed into the blood, becomes a part of the blood, and then solidifies into flesh again.

If that blood is made of the flesh of a cow, when it solidifies into human flesh, then the cells of the cow become the cells of the man who ate of the cow. Nothing could be plainer, simpler, or truer.

With these preliminary statements, we now come to Rule No. 1 of Orthopathy: The condition of man's blood depends absolutely upon what he breathes, drinks, and eats; for of these is man's blood made.

2. The condition of man's body depends absolutely upon his blood; for his cells, tissues, brain, and bone are solidified and consolidated blood.

3. As the blood remains normal and active, and to that extent only, will and must all glands, tissues, and cells of the body remain normal. *That is Health.*

4. In direct ratio as the blood becomes abnormal and stagnant, will and must all glands, tissues, and cells of the body decline from the normal. *That is Degeneration. That is what the world calls Disease.*

The "Life of the flesh is the blood thereof." As the condition of the blood is, so must the condition of the flesh be. As the body is dependent upon the blood for its building material, so good health and poor health depend upon the blood.

1. The Vital Stream is the (a) body-building and (b) health-promoting agent, when normal.

2. The Vital Stream is the agent of (a) degeneration and (b) death, when abnormal.

At this juncture the student is referred to Elementary Orthopathy, Lesson 13, page 5, "First Evidence of Disease." He should begin here and read carefully to page 10. It explains the Evolution of Disease, and shows how an abnormal blood stream is the starting point.

Orthopathy is based on the self-evident truth that:

1. The continuous existence of the living organism depends on the blood.

2. A normal flow of normal blood builds health.

3. Retarded flow and abnormal blood builds degeneration (disease).

4. Purification of the blood, and acceleration of its flow is regeneration (scientific cure).

5. The means by which to accomplish these are supplied by the body itself. The body alone makes blood and purifies it. Nothing else can do the work.

6. The supply determines the method of procedure in treating all ailments.

7. The procedure must be in compliance with Law to produce favorable and lasting results.

This explains the great medical mystery of Health and Disease. It does it so clearly and simply, that the man in the street can comprehend it. Great truths are always easily understood, even by children.

These are the basic principles of Orthopathy. They are scientific because they are true. They are true because they are in accordance with Universal Law. Their intelligent application to the ailing body will not fail to produce improvement.

As you learn these things, you realize that the basic principles of Orthopathy prove their correctness by their consistency and logic.

The Principles of Orthopathy prove that contagion is a medical myth; that disease is a medical myth; that disease is a symptom of degeneration.

The Principles of Orthopathy prove that vaccination and inoculation are wrong and dangerous; that physical degeneration cannot be halted nor prevented by injecting pus and poison into the living organisms.

The Principles of Orthopathy prove that the methods used by the medical world are a menace to the race.

Lesson No. 28, Chapter No. 83

BLOOD PRESSURE

The physiological phenomenon of Blood Pressure may be described as that pressure exerted by the blood stream on the walls of the containing arteries, as the stream is propelled thru them by Life Force; or, as that resistance offered by the walls of the arteries to the stream of blood, as it is propelled thru them by Life Force.

The arteries are muscular tubes, and are quite elastic. Thru these the blood flows from the heart to all parts of the body. The blood that goes to the lungs, leaves the heart thru the

pulmonary artery, which arises from the base of the right ventricle. The blood that goes to all other parts of the body, leaves the heart thru the aorta.

The aorta is the main trunk of the general arterial system. It begins at the base of the left ventricle of the heart. From this main artery smaller arteries branch off and lead to every part of the body.

The arteries are connected with the veins by a vast network of blood tubes, called capillaries. These are so small as to be invisible to the unaided eye. They can be seen only by the aid of the microscope.

When Harvey, in A. D. 1616, discovered the circulation of the blood, he was unable to determine how the blood reached the veins from the arteries. In his day there was no microscope, and the smallness of the capillaries placed them beyond the reach of the visual range of man.

With each contraction of the heart, a certain amount of blood is forced into the aorta and pulmonary arteries. The same mysterious and unknown power that causes the heart to contract, carries the same contracting effect along the muscular walls of the arteries, thus forcing the blood thru the arteries in a series of continuous waves.

The wave-effect steadily decreases as the size of the arteries grow smaller in their approach to the capillaries. It finally disappears as the tiny terminals of the arteries (arterioles) become capillaries.

Beyond the capillaries the veins begin. Thru them the blood, now a dark-purple, poison-laden stream, returns to the heart.

In the veins the blood flow is a steady motion, the wave-effect of the arteries being totally absent. Valves in the veins prevent any backward flow. There are no valves in the arteries.

The speed of the blood-flow is slowest in the capillaries. It is in these tiny tubes that occurs the vital phenomena of distributing food to the cells, and of collecting their waste, resulting from the wear and tear occasioned by their function.

It is this waste that makes the blood in the veins a dark-purple, poisoned-laden fluid. It is this waste in the tissues of all flesh that helps to make the flesh of animals and fowls such deadly food for man.

The pressure or tension of the blood within the arteries is maintained by—

1. Contraction of the heart;
2. Condition of fluidity of the blood;
3. Elasticity of the arterial walls;
4. Resistance of the small arteries and capillaries;
5. Gravity and barometric pressure (altitude).

An abnormal heart affects the blood-pressure. If the heart is weak, the blood-pressure is usually below normal.

If the blood-stream is polluted with waste, it may produce either hypertension (increased blood-pressure), or hypotension (decreased blood-pressure).

As the walls of the arteries, arterioles, and capillaries lose their elasticity, as they grow thickened and hardened, the blood-pressure increases. Such persons begin to notice a loss of vigor and say that they are growing old.

But the revolution of the earth on its axis has no effect on man's arteries. The number of times the Sun rises and sets does not make man's arteries grow thickened and hardened.

The student was informed in Lesson No. 15, Chapter No. 42, that Thomas Parr lived 152 years, and showed no decay in any of his organs, according to Harvey, who dissected the body. Harvey stated that the arteries were soft, pliable, and elastic, with no indications of hardening and thickening, so common in modern men of 45 to 50 years of age.

The condition of the arteries not only, but of every cell, tissue, and gland of the body, depends upon the care-taker of

that body. If the care-taker does not know how to live for health and strength, if he misuses and abuses the body, he will pay the penalty in sickness, suffering, and early death.

It is not necessary to comment upon the affect of gravity and altitude on blood-pressure. The rule is that blood-pressure is higher at sea-level, and decreases as one ascends above that level, due to atmospheric pressure on the body.

There is also a maximum and minimum blood-pressure. The maximum blood-pressure is called the systolic, and is that occurring at the moment of ventricular systole.

The minimum blood-pressure is called the diastolic. It occurs during the momentary pause in the work of the heart, known as the diastole, which immediately precedes or succeeds the systole.

The difference noted between these two degrees of pressure is called the "pulse-pressure," or the effective working-pressure power of the heart.

There is no way of determining what the normal blood pressure of man should be, for there is not a normal man on earth.

What passes current as normal blood pressure, is the average blood-pressure of a large number of supposedly healthy persons, who have passed life-insurance physical examinations. Their blood-pressure has been recorded, with the following averages for the ages given:

Age	15-30	31-40	41-50	51-60
Blood-pressure	122 mm	127 mm	130mm	132mm

According to Lane, the figure for the blood-pressure of a healthy adult is around 120 mm. This means that it requires a pressure of 120 millimeters of mercury to overcome the force produced by the contraction of the heart and arteries. That is the systolic pressure. The diastolic is about 30 to 40 below the systolic.

Hypertension may exist for years without the knowledge of the person. The condition, if serious, may be discovered by feeling the radial artery at the wrist (pulse). The artery will feel firm, and can be rolled like a piece of cord.

Blood pressure may be measured by means of an instrument known as the sphygmomanometer. An elastic sleeve is bound around the arm, usually above the elbow. Connected to the sleeve is a clock-manometer, which registers the blood-pressure in millimeters of mercury.

After the sleeve is bound around the arm, air is pumped into the sleeve until the air-pressure is sufficient to block the large artery in the arm and stop the blood flow. This is shown by the inability to detect any pulse at the wrist.

Air is then allowed to escape slowly. The point at which the indicator on the dial coincides with the first evidence or sound of blood passing again thru the artery, represents the systolic or maximum pressure. More air is slowly let out, and the diastolic or minimum pressure is the point at which thumping sounds cease.

There are many causes responsible for hardened arteries, high blood-pressure, and old age. Some of these will be noticed in a later lesson.

Chapter No. 84

RETURNING TO YOUTH

In Lesson No. 19 of Elementary Orthopathy, the student was told that it is possible, under the Law of Change, for a man to improve the integrity of his body each day.

We have seen that the daily activity of the body does not wear out its organs and parts. Activity aids in producing the change described as metabolism. This means disintegration and reintegration. It does not mean degeneration, but becomes degeneration when the care-taker of the body, either knowingly or ignorantly, fails to perform his part of the work.

John Gardner, M. D., of England, in his book upon longevity, observes:

"Before the Flood men are said to have lived five and even nine hundred years. As a physiologist, I can assert positively that there is no fact reached by science to contradict or render this improbable. It is more difficult, on scientific grounds, to explain why men die at all, than to believe in the duration of life for a thousand years."

Comparatively recent experiments have convinced the leading Biologists that the body does not wear out. At one time they believed that the cells of the body became impaired with age. They have now found that the cells are constantly being renewed. This knowledge has led them to state, that the human body, as a machine, is perfect; that it contains within itself no marks by which we can possibly predict its decay; that it is apparently intended to go on forever.

More light is shed on the subject by the experience of Dr. Alexis Carrel, as related by Shelton, to-wit:

"On January 17, 1912, Dr. Carroll took a piece of connective tissue from the heart of a chicken, and set about to maintain its life apart from the chicken's body.

"That piece of heart is alive yet (1926), and is apparently as strong and vigorous as ever. Every day it is washed and supplied with a fresh nutrient media. The washing completely rids it of waste products. Kept clean and properly nourished, it grows so rapidly that it is frequently necessary to subdivide it. Yet the piece of heart does not seem to grow old in the sense that its vitality is diminished.

"On November 21, 1925, it was announced that so rapid had been the growth of this piece of tissue, that had it not been cut down each day, it would have overspread the entire city of New York."—Living Life, Etc., page 13.

In the same work, Shelton relates certain experiments of prolonging the life-span of worms, from which vital information may be gathered as to how to prolong the human life-span. He states:

"A few years ago Prof. Huxley of England, son of the older Huxley, took some young *Planaria*, or earth worms, and performed a very interesting and instructive experiment with them. He fed a whole family of these as they ordinarily eat. One he isolated and fed in the same manner, except that he forced it to undergo short periods of fasting. It was alternately fed and fasted.

"The isolated worm was still alive after 19 generations of its brothers had been born, lived their regular life cycles, and passed away. The only difference in the mode of life and the diet of this worm, as compared to that of its brother worms, was its periodic fasts.

"Huxley explained that overfeeding clogs the body and produces death. Habits of eating are formed during the period of growth, when more food is needed, and when the vigorous functions of Life easily dispose of the excess. When maturity is reached and less food is needed, particularly of certain kinds, the habits of eating, already well formed, do not undergo any material changes. The individual continues to consume large quantities of food, eating as much building foods as during the period of rapid growth.

"This excessive consumption of food clogs the body, overworks its organs, and due to the acid-forming character of much of it, fills the body with powerful acids that destroy its vital tissues.

"By fasting the worm at repeated intervals, the excess of food that was clogging and poisoning the body, was used up and the toxins or acids were cleared out. Thus the cells and tissues of the worm were kept soft and pliable, and its system kept free of all encumbrances. The result was that it lived over nineteen times as long as it otherwise would have lived.

"Some interesting experiments, in which flat worms were used, were recently performed by Prof. C. M. Child of Chicago University. He makes a specialty of studying the growth of complex animals. He found that the worm, like an overfed mule or an overfed man, becomes fat, lazy, and infirm. They begin to grow old.

"Child took such fat, lazy and infirm overfed worms and fasted them for a long time. They grew smaller and smaller, living off of the food stored in their tissues, but they did not die.

"After the worms had been reduced to a minimum size, the Professor fed them again, and they grew again. But they started to grow as young worms. They were young worms, renewed by the fasting process."

Huxley makes the statement that the excessive consumption of food clogs the body, overworks its organs, and due to the acid-forming character of much of it, fills the body with powerful acids that destroy its vital tissues.

Huxley then proceeds to put his theory to a test. By fasting the worm he apparently proved that his theory is correct. For by this method the worm was enabled to outlive nineteen generations of its brothers.

If this course could be followed in the case of man, and with the same results, then a person dying at the age of 50, could have his days increased to 950 years—the age of Noah. A person dying at the age of 100, could increase his days to 1,900 years.

The ancient dream of Perpetual Youth appears to be rising from the fog of mythology. With the knowledge being accumulated, we are better able to account for the unceasing search of the ages for the Fountain of Perpetual Youth. Back of the urge appears to lie an uncanny reality that has never before been clearly described. It is this reality that has supplied the propelling power which has spurred man on and on; in his untiring efforts to escape the infirmities of old age, and to conquer death.

Chapter No. 85

THE AGING PROCESS

"What is there in the turning of the Earth on its axis to Age a man?" asks Waite.

Science has so generally considered Old Age and Death as unavoidable conditions, that no systematic investigation has ever been made to discover ways and means to prevent them from occurring.

Death, standing we might say as the one condition without an exception, and taking so many men while yet in the prime of life, has brought such terror to the race, that humanity has turned to the idea of a Life Beyond the Grave, as the best that could be done.

All the religions of men are merely attempts to solve the problem of what comes after death, for death is considered as inevitable. This course is a condition of surrender; for Man is not the victor until he has conquered his greatest enemy—Death!

Death is not natural. No man has ever died a natural death. All men, including every Doctor, have died of disease.

Great libraries have been written about disease, its cause, cure and prevention. In spite of this vast expenditure of work and wealth, there is more disease in the world today than ever before in its history, and the life-span after the age of 40 is steadily declining.

Prior to A. D. 1616, when Harvey discovered the circulation of the blood, little was known about the functions of the body, and man was without a fundamental principle upon which to base his work of attempting to improve his health and prolong his life-span.

Now it is known that the blood-stream is a transportation system. It conveys new building material to all parts of the body, for use in constantly renewing the billions of cells that are incessantly wearing out; and it carries away from the cells the waste resulting from their constant disintegration.

Out of this knowledge comes forth the fact, that the body every hour is constantly renewed. There could be no greater argument than this, to show that the living organism was originally made to go on forever. But science, still believing in the certainty of old age and death, has made no effort to use and apply this knowledge.

"A man is as old as his arteries," said the Sage. Science is learning that this statement contains more truth than poetry. It has found that old age results from deposits made by the blood in the walls of the arteries, which cause them to thicken and harden. It has found that a man of 75 or 80, who still possesses extraordinary vigor and vitality, has arteries that are soft and pliable.

It is not the arteries alone that suffer the hardening process. The veins, cells, glands, and all tissues are also affected. The process proceeds at a certain rate, until the blood-vessels and vital organs have lost their normal tone and elasticity. Then the condition called old age appears.

Old age is a relative term. There is no precise period of years at which this condition appears. The symptoms of old age occur in exact ratio with the progress of the hardening process. If the body of a boy of 15 were hardened to the same degree as that of a man of 70, the body of the boy would show the same signs of old age as a man of 70.

If it is possible to prevent the process of hardening from occurring, it is possible to prevent old age. If it is possible to remove the hardened condition of the body of a man of 70, it is possible to remove the condition of old age, and restore the body to the condition of youth.

Thomas A. Edison, the great inventor and scientist, in 1911 said:

"There is absolutely no reason why a man should die. Could the arteries be kept free of scale and our bacterial environment fought, and proper fuel taken in, life should go on for centuries."

These statements are pointed and unequivocal. There is no indication of hesitation or doubt. Edison's attitude on the subject is that of positiveness. But he makes one little slip when he speaks of fighting our "bacterial environment." He appears to believe in the absurd germ theory of disease.

With complete renewal of the body every day, what is there in the rising and setting of the summer Sun to produce the symptoms of old age? With the symptoms of old age resulting from a slow process of hardening, what is there in pills and powders, vaccines and serums, saws and knives, that can increase the life-span of man?

The hardening process of the body grows out of man's misuse and abuse of the body. It comes from foul air, bad liquids, wrong food, excessive eating and drinking, sexual excess, and other bad habits. What is there in the repertoire of medical institutions that can remedy this condition? Can the taking of medicine make a man change his habits?

The deadly carbon in the air, from smoke, motor car exhaust fumes, etc., enters the lungs as a person breathes, passes into the blood, lodges in the cells, and there forms solid deposits, as it does in automobile engines.

Water from creeks, springs, wells, and especially from so-called mineral springs, is highly charged with solids in solution. When man drinks of such water, the minerals pass into the blood, are carried to all parts of the body, and in time they settle in the cells as hardening deposits.

The condition called old age appears with the same speed that this hardening process proceeds. When the process has reached a certain point, the person dies. That is governed by the Law of Limitation. Death comes when the limit is reached in old persons. Those who die before that point is reached, are killed during sickness by the doctors who treat them.

This subject is more fully discussed in a later lesson.

Chapter No. 86

THE HUMAN INTELLECT

The student should study again Lessons Nos. 5 and 6. He was told there that Perpetual Youth will be transformed from

a possibility into a reality under the Law of Perfect Correspondence of Individual Intelligence with Eternal Intelligence.

Man is endowed with a greater degree of individual intelligence than any other living creature. Upon him alone has there been bestowed the marvelous powers and capacities, which were designed to enable him to rise above the purely animal plane, where Grim Death takes its daily toll.

Man is endowed with this greater individual intelligence not merely to seek that which is harmonious, but also to repel that which is hostile.

By the development and employment of his strictly human powers and capacities, man can accomplish that which no other living creature is competent or equipped to accomplish. He is able to secure such complete harmony and co-operation, as between Individual Intelligence and Eternal Intelligence, that he is able to dominate, control, and master his environment. This state is above and beyond the powers and abilities of any other living creature. That is why man alone, of all living things, is able to rise to the exalted plane of Perpetual Youth.

We have seen that man's living existence is not determined by, nor limited to, a certain number of years. Neither is his vitality measured and decreased by the rising and setting of the summer Sun.

Youth and age are conditions appertaining to the body only, but not to Life. For man is young or old, depending on his physical condition, and not on the Force that animates his frame.

It is not Life that grows old with toil and time; and if the body, thru which Life functions, remained forever in a condition favorable for its continuous and harmonious operation. Life would never depart therefrom.

But, says the student, all things appear to be "born to die," and all living things do die. All vegetal and animal forms die. Why should man alone be excluded from this category?

There are many reasons why man should not be included in this class. Man is the crowning work of Eternal Intelligence and Eternal Formation. He is Lord of the Visible Realm, with dominion over every living thing that moveth upon the earth. He alone, of all that inhabit this great globe, possesses the marvelous ability to think, reason, and understand, by virtue of which he is able to search out the secrets of Existence, and appropriate to his use, the fruits of his discoveries.

Thru the use of his Intellect, man alone can detect the existence of Universal Law, can discover the mode and manner of its operation, can change and control his environment to his advantage. He can, in fact, so regulate his conduct, as to remain in harmony with the law, and in perfect correspondence with his environment. By these means, he can supply conditions that will inure to his improvement and advancement, just as truly as water flows downward.

Why does man forget these mighty attributes, and make so little use of them? Because of ignorance arising from false and misleading education. Due to this cause, the highly educated is more helpless than the Savage. Due to this cause, the American Indian is a degenerated and dying race.

Civilization has trained the Indian away from Natural Living Methods, which he once understood so well. In consequence, he is today but a Degenerate as compared to his fathers of the past.

According to Ripley, Hakoo, an Indian, carried a piano, strapped to his back, over the Chilcote Pass, during the "Gold Rush" to the Klondike in 1898. The account was related by Tex Rickard, who participated in the "rush." This is an example of Man, whose body has not been blighted by the withering breath of civilization.

It is impossible to say to what heights man might rise, were he educated to know the law, and taught how to harmonize his existence with his environment. He would then recover his lost Paradise; regain the dominion that was originally his; and have a life-span of 900 years, as was possessed by the Bible Patriarchs.

Man takes a piece of chicken tissue, and supplies conditions that carries its existence on and on in a state of perpetual youth. He takes an earth-worm, and supplies conditions that enables it to outlive twenty generations of its brothers.

By knowing the law, and by supplying the proper conditions, man should be able to carry on and on, in a state of perpetual youth, the existence of his own body.

Why not? If this state is possible for chicken tissue and a single earth-worm, it is possible for the whole chicken and for all earth-worms. If it is possible for chickens and earth-worms, shall we hold that it is impossible for man?

In the Tree we have a splendid symbol of Eternal Living Existence. Some trees survive for thousands of years. But, in time, even the tree, like all animated forms, degenerates, decays, and dies. Why? Because of certain conditions which the tree lacks power to control.

The body of a tree, like the body of a man who knows nothing of the law that enables him to dominate his environment, enters into a state of calcification and hardening. This is due to an accumulation of excess minerals in its trunk, making it impossible for the tree to draw adequate nourishment up from its roots, thru the long stretch of hardened, mineral-laden wood. So the tree decays and dies of starvation. This is not from a lack of food within reach of its roots, but from a lack of ability to absorb and assimilate the food.

The branches of the tree are still young and vigorous. If newly rooted, or ingrafted onto younger trunks, they will exhibit renewed vitality, and continue to grow until the state of calcification again threatens their existence. By repeating the process as often as may be necessary, the life-span of the branches may be prolonged for thousands of years, and they will maintain a state of perpetual youth.

By virtue of a degree of individual intelligence possessed by no other creature, man is able to control the environment of trees, worms, and chicken tissue, and supply conditions that bring to these a state of perpetual youth.

Knowing these facts by experience and demonstration, why does man not use this information to the advantage of his own body? There appears no reason why he should not be able to do for himself, what he is able to do for trees, worms, and chicken tissue.

Physical science will sneer at these remarks, as it did at the suggestion of wireless telegraphy, talking machines, horseless carriages, and flying machines. But sneers did not deter the workers in these fields, and these seemingly impossibilities came to be realities.

Man can control his own environment as well as he can that of worms and trees. By the acquisition and application of knowledge of how to do this as to his own body, he can prevent the calcification of his tissues and the hardening of his blood-vessels. Thus he gains for himself the state of perpetual youth which has always been the dream of the race.

Now and then we read of some man who makes a little more than the ordinary use of the powers that obey his beck and call, and are astonished by the remarkable results obtained.

Lewis Cornaro, in the 16th century, makes but partial use of these powers, and from a physical wreck at the age of 40, given up by physicians to die, he brings himself back from the brink of the grave, to a state of health that carried him

onward to the age of 102. He lived to see planted all of the physicians who so solemnly assured him that he could live but a few short months. This is one of multitudes of similar instances.

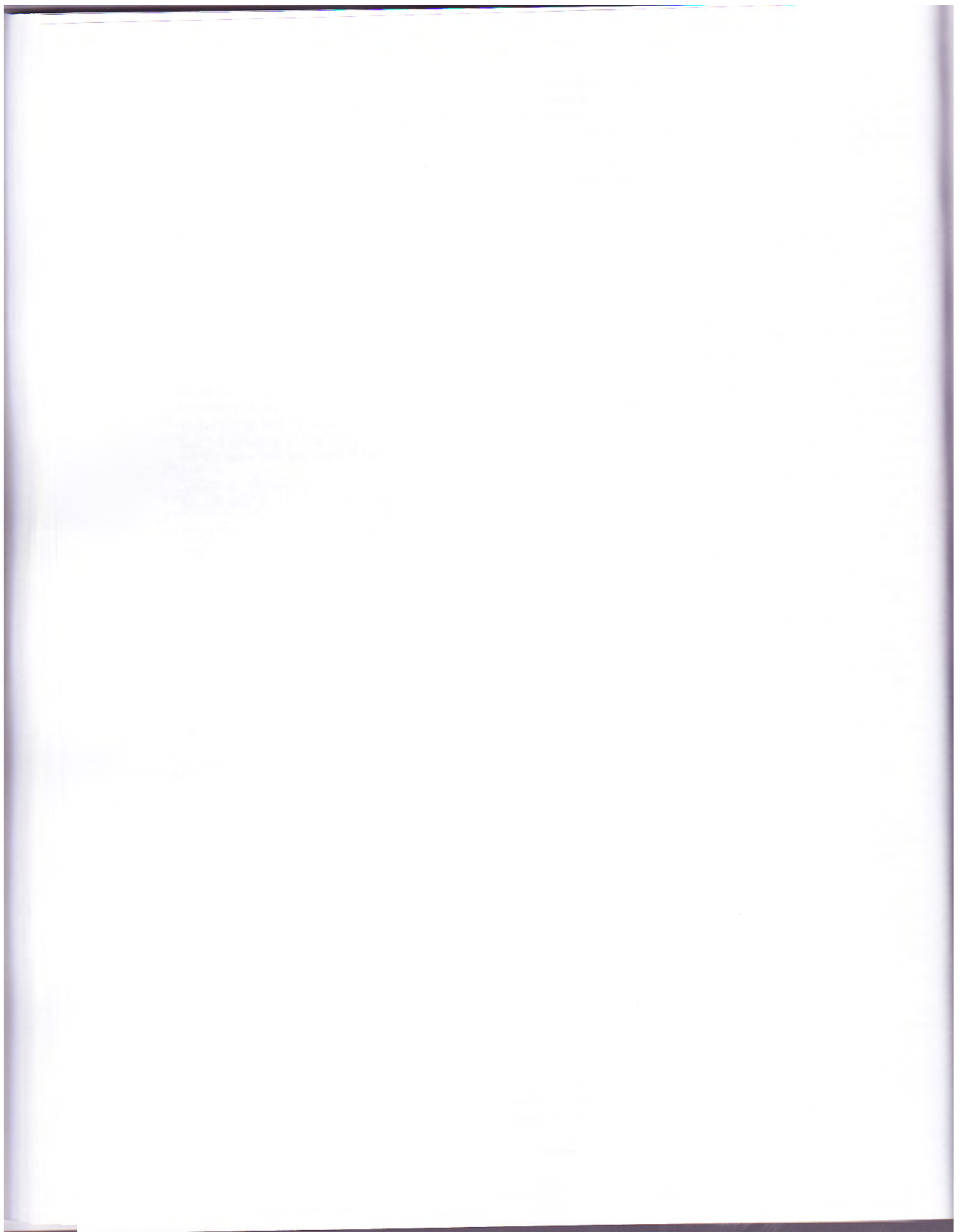
If Cornaro, by his ability to control his environment, was able to supply conditions sufficiently favorable to bring him back from the shadows of death at the age of 40, to a degree of health that enabled him to live 62 years longer, would it not have been possible to supply conditions so favorable as to enable him to live 602 or 6002 years longer? If not, why not?

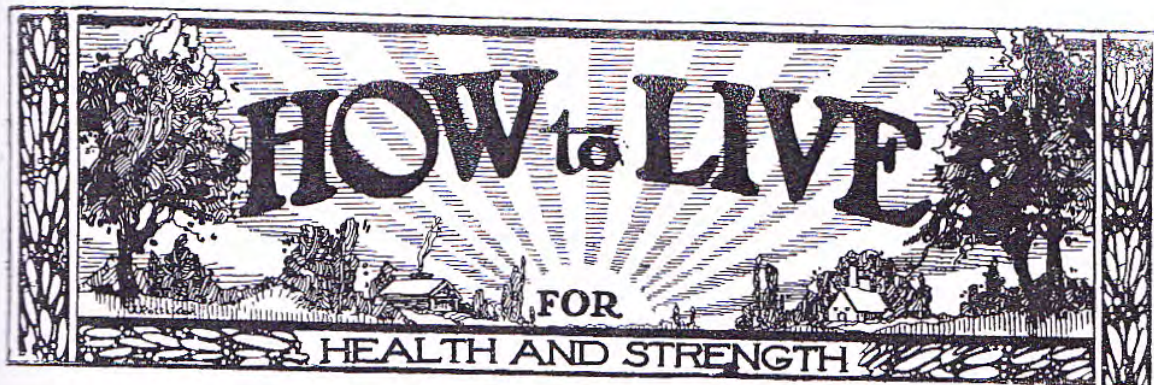
No person has yet died a natural death; for we have seen that death is not natural. Death is the termination of a course of physical degeneration, self-inflicted by man.

If man can live 100 years, he can live 1000 years. If he can live 1000 years, there is no reason why he should ever die.

QUESTIONS FOR LESSONS NOS. 25, 26, 27, 28

1. (a) State the law of capacity. (b) Does the body at birth have a certain quantum of life force apportioned to it? (c) What principle governs the length of a person's life?
2. (a) When a person gets sick, what fact is indicated? (b) What sort of treatment for the sick is indicated by that fact? (c) If wrong treatment is given the sick, what are the effects?
3. (a) Which is most dangerous, overweight or underweight? (b) As a rule, which live longest, fat or lean people? (c) What state does Obesity indicate?
4. (a) What is the cause of constipation? (b) How would you remedy the condition? (c) Does a daily bowel movement prove the absence of constipation?
5. (a) Give the source of the body's energy. (b) What governs the amount of man's energy? (c) How would you increase a man's energy? (d) A patient's energy?
6. (a) What is acidosis? (b) How would you prevent and correct acidosis? (c) State the three ways in which the body strives to defend itself against the conditions arising out of acidosis.
7. (a) Does one's endurance depend upon the size of his muscles? (b) What state diminishes one's endurance? (c) How would you proceed to increase your endurance?
8. (a) What occurs during sleep, according to the nature cure school? (b) What occurs during sleep, according to the teaching of Orthopathy? Which is correct, in your opinion? (c) What makes a man tired?
9. (a) Does the state of the blood affect the state of the body? (b) Give the Orthopathic law of animation. (c) Which depends upon the blood, the Life or the Flesh?
10. (a) State the function of the heart? (b) State the 7 functions of the blood? (c) State the 4 rules showing the relation between the state of the blood and the state of the body. (d) State the 7 rules that explain the cause and cure of what the world calls disease.
11. (a) Define blood-pressure. (b) Name the 5 conditions which affect blood-pressure. (c) Give the blood-pressure of a man of 28. (d) Give the difference between systolic pressure and diastolic pressure.
12. (a) What discovery has shown us how to proceed to improve health and lengthen life? (b) What is the cause of old age? (c) How would you remove the cause?
13. (a) What quality raises man above the purely animal plane? (b) What is the greatest use that man can make of this quality? (c) By the use of this quality, what has man done for the lower animals?
14. (a) State why a tree decays and dies? (b) State how you would prolong the life of a tree? (c) If perpetual youth is possible, how may it be gained?





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Lessons Nos. 29, 30, 31, 32, 33

Lesson No. 29, Chapter No. 87

PROCESS OF SCLEROSIS

Man is as young as his body is soft. Or, man is as old as his body is hard. A young body is a supple body; an old body is a stiff body.

The body of a new-born child is largely a liquid body. It is soft and pliant. The bones are plastic and elastic. They may be flexed or bent somewhat, without causing much inconvenience.

After the child is born and begins its independent existence, its bones begin to fill-in with mineral salts. It is this process of mineralization that increases the size of the bone and the solidity of its structure. For this purpose, the growing infant requires considerable lime, comparatively speaking, in the form of calcium phosphate and calcium carbonate.

The composition of bone is about 60 per cent calcium phosphate, and 8 per cent calcium carbonate. These salts supply the blood with solid material for building bones and teeth. They make the bones and teeth hard and lasting.

These minerals should not be bought separately at the drug store and given to a person. The body must be supplied with them in the natural way. The drug-store products are poisonous, and the body cannot use them. Only harm comes to the body from their use in this way. Regardless of this fact, medical doctors give them freely to their patients.

The growth of children is often stunted, because sufficient mineral elements are not supplied in their nourishment during the growing period.

But this rule works both ways. An excess of mineral salts will stunt the child's growth by hastening the hardening process of the bony structure.

As in all things, the happy medium here must be determined and maintained. Too much is injurious; and too little is injurious. But these minerals occur, in the proper quantity and quality, in the substances provided by Eternal Intelligence for man to drink and eat.

The process of mineralization is comparatively rapid until the body reaches maturity. After that, when growth stops, less lime salts are required for the body's needs.

If mineral salts enter the organism in excess of its requirements, they can no longer be used up to develop and solidify the bones; for this part of the body has now

attained its maximum of development. So the excess minerals begin to form dangerous, calcareous deposits.

The result of this soon becomes manifest in the Process of Sclerosis. This means hardening.

The soft, pliant body of childhood becomes the hardened, stiffened body of old age. The spry conduct of youth becomes the slow movements of decrepitude. Various aches and pains appear; vitality seems to decrease; the age of senility has come.

In some instances, the medical world appears to believe that the arteries alone are affected by the process. Dr. Logan Clendening observes:

"In youth the arteries are elastic, but as the body grows old, they become stiffer on account of the replacement of their elastic tissues by fibrous tissues and lime salts.

"In many cases the arteries . . . may be markedly thickened and even so calcified as to have earned the term goose-neck arteries . . . because the deposit of lime salts gives them a corrugated feeling like that of a goose as one feels its neck."—The Human Body.

It is erroneous to think that the arteries alone suffer. The process of mineral accumulation, after maturity, extends to the entire body, involving every cell and tissue, every gland and organ, and often producing stones in bladder and kidneys. Arterio-sclerosis is merely one phase of the effect of the process of mineral accumulation.

But arterio-sclerosis results from other causes. In Lesson No. 17, Chapter No. 50, the student is told that arterio-sclerosis has been produced by administering by mouth to animals over prolonged periods, small quantities of especially powerful poisons produced in the colon by putrefaction.

The scleral process goes on in cells, tissues, glands, and in the walls of the blood vessels. Some of the smaller blood vessels become so hard and brittle in time, that they burst under very slight pressure.

The average individual thinks of his arteries only as large tubes leading from the heart to various parts of his body. The main systemic artery, the aorta, as it extends from the heart, divides and subdivides millions of times, filling the body so full of fine branches (arterioles), that the sharpest needle inserted into the body at any place, will pierce one or more of these small branches.

Thru this vast network of tiny arterioles, flows the

river that supplies nutrition to every cell. The cell may be of soft tissue, as muscle, or of hard tissue, as bone, but from the same stream it receives its nourishment.

Even the walls of the larger arteries and veins are filled with tiny arterial branches. The cells composing these vessels are nourished in this way. They are nourished by blood plasma extruded through the arterioles, the same as are all other parts of the organism.

The student is informed that nourishing the body occurs in the great capillary network, on the arterial side. The capillary walls are equipped with billions of small, winking valves, thru which exudes the blood plasma.

As the blood plasma flows around the cells, they select therefrom, according to the Law of Eternal Intelligence, such certain elements as they require to repair the wear and tear of use.

The cells of the hard tissues, as teeth and bone, select from the same blood, more of the solid elements, as calcium phosphate and calcium carbonate; while the cells of the soft tissues select more of the softer colloidal elements, that ordinarily retain their soft and elastic properties, as proteins.

When the muscles lose their tone and become flabby, when the skin loses its resilience and becomes baggy, when the glands begin to falter in their function, when the vitality begins to wane, one cause of this is starvation.

This state of starvation does not arise because the person is not eating sufficient food. He may be overeating, as most people do. It is a condition that results from the accumulation of hardening deposits in the walls of the artery-beginnings of the capillaries. The deposits obstruct the passage of nutriment to the cells.

The cells begin to grow inferior, due to lack of proper nourishment. The process of degeneration now increases.

The same sclerous deposits that occur in the artery-beginnings of the capillaries, also occur in the vein-beginnings of the capillaries. This obstructs the flow of waste from the cells back into the blood-stream.

The cells become poisoned by their own excrement. That helps to hasten the process of degeneration.

The person feels weak and tired; he fears that some terrible disease has attacked him; he consults a doctor; the doctor knows nothing of the Law of Life and the Law of Vitality; the text-books of his school admit this fact. So he gives the patient some pills, and urges him to eat more good nourishing food, well-cooked to make its digestion easy, and well-seasoned to make it quicken the appetite.

This adds fuel to the fire. It further hastens the degenerative process; it hurries the patient to his grave. The doctor did all he could; it was just too late.

With these facts known; with some knowledge before us of the Law of Life and the Law of Vitality, we readily observe why the death-rate of civilized man, and especially of medical doctors, increases so rapidly after the ages of 40 and 50.

As a general rule, the Process of Sclerosis arises chiefly from the following common causes:

1. Breathing foul air;
2. Drinking unsuitable liquids;
3. Eating wrong foods;
4. Eating too much food.

Other causes may be mentioned, as lack of sufficient exercise, sexual excess, the use of condiments on food, especially salt, pepper, and vinegar, the use of drugs and other poisons.

The body grows stiff from lack of exercise. Joints will grow stiff from lack of use, as we shall show later.

Sexual excess means any indulgence beyond that for the purpose of perpetuating the race. This law is violated by no animal but man.

Common table salt, when taken into the body, is active in producing the condition of sclerosis. This is covered in Lesson No. 19, Elementary Orthopathy, under Salt a Deadly Irritant, which the student should study again.

Pepper and vinegar, due to their irritating properties, cause hardening of cells and tissues. This applies to all irritating condiments.

Many drugs are composed of metallic elements, held in solution. When taken into the body, the solid metals precipitate and accumulate in cells and tissues, forming sclerous deposits that can never be removed by any kind of treatment.

A soft, pliant body is a young body, regardless of its age. A hard, stiff body is an old body, regardless of its age. It is not the number of times the earth revolves on its axis, but the condition of the body that determines the proposition.

The body would not grow old and feeble, if it did not grow stiff and hard. It would not grow stiff and hard if the care-taker of it knew his duty, and performed that duty with scrupulous care.

Knowledge is Power. By the acquisition of proper knowledge, and by conduct governed by that knowledge, man is able to correct every condition that has been cited above, as being responsible for the body's becoming stiffened and hardened.

Chapter No. 88

COMPOSITION OF THE BODY

If we would learn something of value about nourishing the body, we must first acquaint ourselves with that which composes the body. If we know nothing about the composition of the body, we have no information as to how to proceed to nourish the body.

As to the composition of the body, the Philosophy of the Ages speaks to us, saying:

"God formed man of the dust of the ground."—Gen. 2:7.

Less than a generation ago, little was definitely known of the chemical compounds entering into the composition of the human body. The statement that man's body is composed of the "dust of the ground," found no encouragement from science. Scientists ridiculed the idea. Those who believed in the infallibility of science, never thought of taking the statement seriously.

The general ignorance of the body's composition left science without a fundamental principle upon which to base its study of the subject of Nutrition. The result is, the scientific world has been unable to do more than make assumptions and advance theories in this field, which present knowledge proves are ridiculous and preposterous.

Having declared itself and taken its stand, science is loath to acknowledge its error and change its position. It assumes that its assumptions and theories are proven facts, and strives by all sorts of dishonorable means to cast discredit on those patient workers, whose present labor is building now a new Science of Threpsology.

Every substance known to man, may be reduced to Invisible Gas. By the application of a sufficient degree of heat, the flinty face of the mountains of the world may be reduced, first to liquid, then to vapor, and then to invisible gas, sending the earth, and all it contains, back to its original home in the sky.

Certain solids turn into liquids merely by being shaken. From this state heat quickly reduces them to invisible gas.

The human body, in the ultimate analysis, is merely a compound of Invisible Gases, as is the Earth upon which man lives, and out of which his body came. This discovery of science has destroyed the Resurrection Doctrine as preached by Paul: that there shall be a resurrection of the dead, both of the just and unjust.—Acts 24:15.

These Invisible Gases, we have seen, become visible by being compounded under the chemical process of crystallization and solidification, and the controlling action of Vital Force.

Science is unable to study Ultimates. To know Ultimates is to know all things. To know all things is to know the God of the Universe. Science can do no more than to study mediates and intermediates. From these precarious premises, it makes its speculations and deduces its conclusions as to Ultimates.

Science must study the body as a chemical compound, and not as a mass of invisible gas. A chemical compound is a substance made visible by the union of two or more invisible elements.

In Lesson No. 3, Elementary Orthopathy, the student was told that Primitive Matter is not visible until compounded. Anything that can be seen, however simple it may appear, is proved by the condition of its visibility as being compounded.

By studying the human body as a chemical compound, science says that it is composed of the following elements:

1. Oxygen	72.00
2. Carbon	13.50
3. Hydrogen	9.10
4. Nitrogen	2.50
5. Calcium	1.30
6. Phosphorus	1.15
7. Sulphur	0.1476
8. Sodium	0.10
9. Chlorine	0.085
10. Fluorine	0.080
11. Potassium	0.026
12. Magnesium	0.012
13. Iron	0.010
14. Silicon	0.0002
15. Iodine, copper, lead, aluminum.....	Trace
Total.....	100

1. Oxygen is a colorless, odorless, tasteless gas. It is heavier than air, is very active chemically, and is the most abundant and widely distributed of all the chemical elements. It exists in a free and combined form. In the free state it forms about one-fifth by volume of the air. Water is about 88 per cent and rocks about 45 per cent oxygen. The existence of this gas was discovered by Priestley in 1774.

2. Carbon is a non-metallic element, common to all organic substances. It occurs in two forms, (1) diamond and (2) graphite. It also occurs in impure form in charcoal, coke, and soot. It is found in all living or animate tissues. The study of its vast number of compounds constitutes organic chemistry. Carbon dioxide is a heavy gas without odor or color, produced in animal bodies by fermentation and decomposition. It is eliminated through the lungs and skin. In common with other gases, it may be liquefied or solidified by cold and pressure. Carbon monoxide is a heavy gas formed by the combustion of carbon with a limited supply of air. It is a colorless, odorless, poisonous gas, its toxic effect being due to its strong affinity for hemoglobin.

3. Hydrogen is an odorless, colorless, tasteless element, gaseous at ordinary temperatures and pressure. It is the lightest of all known substances. The weight of one of its

atoms is the unit of atomic weights. It forms one-ninth of the weight of water, and is present in almost all organic compounds.

4. Nitrogen is an odorless, colorless, tasteless element, gaseous at certain temperatures and pressure. It may be liquefied with the aid of cold and a high pressure. It forms about four-fifths of the atmosphere, appearing to act chiefly as a diluent to moderate the activity of the oxygen.

5. Calcium is a metallic element, of a light yellow color. It is the most widely diffused of the alkaline metals. It decomposes water with great readiness, and rapidly changes into the oxide or quicklime in the air. It is never found in the free state, but in combined form it is widely distributed. Marble, chalk, and limestone contain large amounts of calcium. It occurs in animal tissues, but chiefly in the more solid parts, such as cartilage and bone. In the form of calcium phosphate, carbon carbonate, and calcium fluoride, it comprises about 67 per cent of the composition of bone.

6. Phosphorus is a non-metallic chemical element, occurring extensively, but always in combination, in rocks, the soil, the organisms of plants, and the bodies of animals. In animals it is combined with carbon, nitrogen, hydrogen, oxygen, and sulphur, and is found in brain, nerve, muscle, and bone tissue. In the mineral kingdom it is combined with metals forming phosphates. It has great affinity for oxygen, inflaming in the air at a temperature only a little above 100 degrees F. and burning with an intensely bright light and great heat. At ordinary temperatures it oxidizes slowly, being luminous in the dark.

7. Sulphur is a non-metallic element, found in great abundance in the mineral kingdom, sparingly in the vegetal kingdom. It is of bright yellow color, and occurs as a crystalline solid or as an amorphous powder. It combines with oxygen to form sulphurous and sulphuric acids, and with many of the metals and non-metallic elements to form sulphides.

8. Sodium is a metallic element of the consistence of wax, oxidizing readily in air or water.

9. Chlorine is a gaseous element. As commonly isolated it is a greenish, highly poisonous, liquefiable gas, with an offensive, suffocating odor. It is two and a half times as heavy as air, and can be liquefied by cold and pressure. The extraordinary affinity of chlorine for hydrogen enables it to decompose compounds containing that element. Common salt is a compound of sodium-chloride.

10. Fluorine is a gaseous element, with a strong, pungent odor. It is very active and decomposes water with great readiness. It does not exist in a free state, but is always found in combination.

11. Potassium is an alkaline metallic element, of a waxy consistence at ordinary temperatures. At high temperatures it boils with the formation of green gases. It acts on water with great energy, decomposing it. It has a strong affinity for oxygen, which it takes from many other compounds. It is not found in the free state, but in combination it occurs in many salts. These salts are absorbed by plants from the soil, and find their way into animal tissues thru the consumption of the plants.

12. Magnesium is a metallic element, easily combustible, and tarnishing in moist air. It burns with an intense white light, and is rich in actinic rays.

13. Iron is a metallic element. It occurs in the chlorophyl of plants and in the hemoglobin of the red blood corpuscles of animals, is stored in the tissues in the form of ferratin, a loose organic compound, and is excreted in the bile.

14. Silicon is a non-metallic element, occurring widely distributed as silica, and in the form of silicates. It resembles carbon in its chemical action. It does not exist in a free state, but is always found in combination.

15. Iodine is a non-metallic element.

16. Copper is a metallic element, and is widely diffused in the mineral kingdom.

17. Lead is a metallic element.

18. Aluminum is a very light metallic element. In its various compounds it forms about one-twelfth of the crust of the earth.

In considering the foregoing elements as entering into the composition of the body, the student should not regard them as they appear in the free or uncombined state. For instance, there is considerable difference between Iron as a metallic element, and Iron as an element of the body.

Of the above 18 elements, five are invisible gases; five are non-metallic elements that may be reduced to invisible gases by the application of heat; and eight are metallic elements that may be reduced to invisible gases by the application of a high degree of heat.

Lesson No. 30, Chapter No. 89

SCIENCE OF THREPSOLOGY—Air.

The term Threpsology may be new to most students. It is derived from the Greek, Threpsis, meaning nourishment, and is the science that treats of the Nutrition of Living Organisms.

We saw that the blood is a transportation system. Part of its work is to supply fresh building material to renew constantly the billions of body cells, which are as constantly disintegrating.

The blood receives its supply of building material from the (1) air man breathes, the (2) liquids he drinks, and the (3) foods he eats. The blood is made up of the elements derived from these sources.

Nutrition is the basis of all growth and development. Not only are man's health and the length of his days dependent upon proper nutrition, but his very character is formed and influenced by the substances that he (a) breathes, (b) drinks, and (c) eats. In a word, man is what his nutriment makes him.

This statement gives the student some impression of the importance of the subject of Threpsology. Medical institutions regard the subject so lightly, that medical students, even in Class A medical colleges, are required to spend only sixteen hours of the entire course in the study of nutrition. The substance of that sixteen hours of study may be summarized by saying, "All Food Must Be Well and Thoroughly Cooked." That is the beginning and the end of medical teaching in regard to food and feeding.

In response to this teaching, we ask, Who made Adam's cook stove? Did Noah eat cooked food? The Philosophy of the Ages says that Noah planted a vineyard, ate grapes, and lived 950 years. We do not believe that he ate cooked grapes.

Under the heading, Body Building Material, Elementary Orthopathy, Lesson No. 11, the student was told that the primary need of the body is for oxygen. He is more impressed when he learns that 72 per cent of the body is composed of this gaseous element. In that lesson we quoted Dr. Vos, as saying:

"Of all food required by the body, 90 per cent must be oxygen. A man weighing 150 pounds is composed of 110 pounds of oxygen, by weight. If the oxygen contained in his

body were set free, it is estimated that it would fill 750 cubic feet of space."—Philosophy of Health.

Air is a mixture of many invisible gases. It liquefies at 220 degrees below zero (F.), at a pressure of 39 atmospheric. When liquid air is exposed in a glass container, it absorbs heat rapidly from the surrounding environment, and boils actively until it is entirely evaporated.

Liquid air may be frozen to a clear, transparent solid by surrounding it with liquid oxygen, and then forcing the evaporation by means of an air pump.

Of the admixture of gases of which air is composed, it appears that oxygen is the most vital to the needs of living animals.

If man's supply of oxygen is cut off for three or four minutes, he dies. He can exist fairly well on air that is 17 per cent oxygen. His ability to work ceases when the oxygen in his air is reduced to 13 per cent. Below that figure he grows dizzy, pants, has rapid heart and headache. At eight per cent he becomes unconscious, with death near.

Fully ninety per cent of the body's nourishment comes from the air man breathes. The lungs consume daily about 777,000 cubic inches of air, and in the same time they purify 125 barrels of blood.

There is 1400 square feet of purifying area within the lungs. Man permits large portions of this to decay from disuse, because of insufficient daily exercise to make him breathe deeply.

The vegetal world works night and day to return to the air the oxygen that is daily used to feed the fires of the earth and keep living creatures alive.

Nearly one-half of the weight of the earth's crust consists of oxygen. After everything that could be oxidized had been oxidized, there is still enough oxygen left for man's needs, and the amount is always the same.

Air is food. It is man's greatest food. It is more important by far in the maintenance of his body than any other element. Frederick M. Rossiter, M. D., observes:

"Men have lived for weeks without food, some have lived seven days without water, but no one can live many minutes without air."—Romance of a Living Temple, p. 140.

Hibernating animals and insects live all winter in their dens with no other food than air. Air is the only food of some plants, such as the moss found on trees in the southern states.

Air is the first food of the new-born infant, and the last food of the dying. The infant would soon perish without air. As long as the patient is breathing, inhaling air, we know that all is not yet over. While there is breath, there is life. With the cessation of the breath comes death.

The ancients believed that man received his Vital Energy from the air. Out of this belief comes to us the phrase "Breath of Life," as the student was told in Lesson No. 3, Chapter 10, which he should read again.

The Yogis of India hold that Vital Energy is received from the air man breathes. They accordingly practice and endorse deep breathing as the great energizer. This is referred to in Lesson No. 24, Chapter No. 71.

Man, by habit, has come to consider as Food that only which he eats. But more important is the nutriment supplied his body by his breathing.

Man may observe all other rules of right-living, but if he breathes impure air, he will suffer from many maladies, aches, and pains. His life-span will be relatively shortened.

Every step up the ladder of progress appears to bring with it destructive consequences. Most of the great discoveries and inventions have served to inflict man with undesirable and even dangerous incidental results.

Dr. Albert Bachem, professor of biophysics, University of Illinois, College of Medicine, described in a recent lecture how inventors have taken away from the race, one after another, nearly all the healthy natural habits of man's early ancestors.

The discovery of fire is rated as man's greatest find. On it depends our entire mechanical age. Fire is called the great purifier. So it is. But man has ingeniously perverted its use, until fire has become the world's largest producer of filth.

Carbon monoxide is a gas, deadly to living creatures. It is formed from the burning of materials. It pours out of every public and private chimney and stack, mounted or stationary.

Carbon monoxide is food for plants. They take it in through their leaves, separate the carbon from the oxygen, keep the carbon and use it to build up their structure, exhaling the pure oxygen so that it may again be used by living creatures.

In the Carboniferous Age of the earth, the atmosphere, we have seen, was heavily laden with carbon monoxide. Vast portions of it entered into the structure of the massive plants and trees that then lived and thrived. Much of it also entered into deposits of limestone and other carbonated rocks and minerals.

Experiments recently made reveal the surprising fact that there are nearly 3,000 tons of dirt, dust, soot, and poisonous gas in every square mile of air in some of our large cities. And air is man's greatest food.

The Chicago health department has asserted that one-sixth of the annual death-rate in that city, is due to contamination of the air by man's inventions and discoveries.

In considering the great number of motor cars of all kinds, constantly pouring carbon monoxide gas into the streets of our cities, the health commissioner of Chicago has estimated that more people are dying in the larger cities from contaminated air than from any other cause.

In some sections of Chicago, there is so much sulphuric acid from smoke in the air, that it rots clothes hung on wash-lines to dry. What does such powerful poison do to the delicate tissues of nose, throat, lungs, blood, and cells? Think of infants growing up under such health-destroying conditions. How do they live to reach maturity? The condition of many of the larger cities is fully as serious in this respect as Chicago.

In his home, man is constantly inhaling the deadly fumes of tobacco smoke, burning coal, and burning gas. Some of these he produces within his home, while others enter from the polluted air surrounding his home.

In the streets of the cities and towns, man is breathing under a constant cloud of dust, in the form of gas-fumes, soot, and cinders, from burning oil, burning gas, and burning coal, in home, hotel, bank, office, factory, railroad yards.

In the press we read:

"New York, Jan. 10.—(AP.)—Half a dozen persons were overcome and nine others made ill Saturday by coal gas that spread from a basement through a 60-story apartment house in the Bronx."

"Corsicana, Texas, Jan. 11.—(AP.)—Seven persons, passengers on a bus, were treated at a hospital here today after being overcome by carbon monoxide gas fumes, believed to have escaped into the bus while it was in a garage for repairs."

Prof. Gayfree Ellison, University of Oklahoma, after a university student had died from the effect of fumes from an open gas stove in his room, issued warnings to all students of the dangers of carbon monoxide gas.

The press said:

"Carbon monoxide is so poisonous, that persons have been overcome by breathing air that contains only a small fraction of the gas, Dr. Ellison stated . . .

"When an open flame gas stove is lighted in a room, it is absolutely necessary that fresh air be let into the room constantly through a partly opened window or door, Ellison warned.

"When a motorist starts his car in a closed garage, it is best for him to drive it outside immediately, and not attempt to warm up the motor inside, the expert warned.

"Opening the doors will not always offset the danger of asphyxiation, especially if the car has been backed into the garage away from the doors."

The Cincinnati Enquirer of December 9, 1930, published some data showing the amount of dust, fumes, soot, and gas in the air of that city. The purest air was found on College Hill, where the total deposit of dust and soot was 5.14 tons a square mile. In the business section of the city, where observations were made at Fourth and Vine streets, the total deposit was given as 1,176.02 tons a square mile.

What can be the condition of the air in homes, halls, hotels, banks, offices, and stores in such places? The delicate lung tissues of those living in such dirt and filth, become, in time, as black as the smoke and soot they inhale. Health under such conditions is impossible. To rear children in such unhealthy places is a crime.

In winter, when windows and doors are kept closed, in public places, like hotels and banks, the air in these places is heavily charged with the deadly fumes of tobacco smoke, burning gas, and the exhaust from motor cars.

In this deadly atmosphere, people work year after year. Many of them seldom see a well day; and they know not why. They are puzzled that they are sick. They buy and take various remedies for their ailments, and expect to get well. They never pause to consider that their unhealthy environment is the cause of their sickly state. They do not even know that their environment is unhealthy. Their doctors and advisers seem to be just as ignorant; for they say not a word about it.

One evening, when Dr. Clements had finished a lecture on health in Ft. Worth, Texas, a lady of about 35 approached him and wanted to know why she had certain aches and pains through her breast, back, shoulders, and head. He asked her whether she used gas in her home. Her reply was yes, that she used gas for both cooking and heating purposes, that the house where she lived was not equipped for any other kind of stoves. Dr. Clements advised her to move into a house where she could use wood instead of gas; that her aches and pains were due to the deadly fumes of burning gas, inhaled with every breath of air.

Dr. Kellogg observes:

"Much valuable information about air pollution has been gathered by the National Smoke Abatement Society in England. Dr. J. S. Taylor, assistant health officer of Manchester, points out that in that city 3,000,000 tons of coal are burned annually. Of this three-fourths of a million tons are for domestic purposes. Eleven hundred factory chimneys and 150,000 houses are pouring out the products of incomplete combustion. About 20,000 tons of solid matter fall each year in the city area, besides tar to the amount of 75,000 gallons and acids to the amount of 200,000 gallons. Yet it is reckoned that in the last thirty years, the industrial smoke emission has been reduced seventy-five per cent.

"While legislation protects the food and water supplies of citizens, it permits air pollution, although man consumes seven times as much air per day by weight as he does food and water. Thirty-five pounds of air are inhaled daily; the lungs of the inhabitants of industrial cities are black from deposited carbon while in country dwellers they are pink. The tarry matter and sulphur acids produce catarrh of the respiratory tract, bronchitis, emphysema and heart failure.

"The London correspondent of the Journal of the American Medical Association gives further particulars. Dr. W. A. Brend, an authority on public health, points out that in 1928 the deaths of infants under one year per 100,000 births were 744 in urban as against 555 in rural districts. He believes that the smoky atmosphere has more to do with this difference than poverty, bad housing, poor sanitation, insufficient feeding and the industrial employment of mothers. For rural England the infant death rate in 1928 from pneumonia and bronchitis was 88; for Manchester it was 23.16. One-twelfth of all deaths in England and Wales are due to respiratory diseases but in Manchester the rate is twice as great.

"This big industrial center receives only 55 per cent of the light enjoyed by the surrounding country. On a clear day the amount of sulphur trioxide in the atmosphere varies from one to three milligrams per hundred cubic feet; on a foggy day it rises to eight to thirty milligrams. Deprivation of light aids in bringing on anemia, rickets and tuberculosis. Smoke may also be a factor in the production of thoracic cancer. Tars and lubricating oils have been shown to bring on cancer. Professor Shaw Dunn and Doctor Duguid have proved that the incidence of thoracic cancer is higher in places where the atmosphere is badly polluted by smoke."—Good Health.

Anthony Wayne, writing on the subject of Gas-Blanketed Cities, says:

"Tasteless, colorless and odorless, carbon monoxide gas has taken a terrible toll in American cities in the last ten years

"A commercial agency, interested in furnishing ventilators, compiled figures to show that last year more than 700 persons were found dead in garages, sitting in automobiles, victims of monoxide gas.

"People walking along city streets, men and women inhaling the deadly fumes from gasoline engine exhaust pipes, sometimes suffer from headaches. In most cases they have had too much carbon monoxide gas

"Dr. Sayers says that anything which burns gives off this gas. 'Whenever you light a fire—of coal or of wood—whenever you light a lamp, or start an oil stove, or an oil burner, you are releasing carbon monoxide. It remains then to see that there is some method of carrying off this gas through a proper flue, and that ventilation is what it should be. Otherwise—' he waved his hand expressively—it's all over."

"Many American cities have great smoke blankets that hold down the gases and tend actually to smother the people that live and work in the office buildings and on the crowded streets

"With such a deadly blanket, Dr. Louis I. Harris, Health Commissioner, New York City, says that the parks and playgrounds cease to be places of health. The invisible layers of carbon monoxide that accumulate, unable to get away, are such that 'the air is being contaminated at such a rate, that if allowed to continue unchecked, it ought almost to be posted with skull and crossbones signs to warn the public.'"

Alfred McCann has studied diet from every angle. He is the author of "Starving America," "This Famishing World," "God or Gorilla?" and "The Science of Keeping Young." His dietetic knowledge and advice saved the starving sailors of the Kronprinz Wilhelm, as related in Lesson No. 15, Elementary Orthopathy.

Of this extraordinary man the press says:

"New York, Jan. 19, (1931) (AP.)—Dr. Alfred W. McCann, noted food expert, died suddenly in New York today,

a short time after he had completed a daily food lecture over radio station WOR. Mrs. McCann telephoned news of his death to the radio station."

That morning, apparently in his usual health, McCann went to the New York studio of WOR to fill his hour on the radio. He left the studio and went to his apartment.

After chatting awhile with his wife, he went into the bath room to take a shower. She heard him fall, and found him lying on the floor unconscious. Dr. S. A. Jahss, who lives in the hotel, found him dead.

The decedent was born in Pittsburgh, Pa., a city noted for its steel-mills and coal-smoke, for its soot and filth. He grew up where there is no such thing as one breath of pure air. He later moved to New York, where millions of chimneys and smoke-stacks belch forth their deadly smoke, soot and fumes. Perhaps during his whole life, he never had a single breath of pure air.

McCann was 52 when he died. For fifty-two years his body had suffered a constant process of slow-poisoning by polluted air. His body went thru a process of gradual degeneration, just as does the body of any one who lives under such degenerative conditions. The point was finally reached where the body lost its elementary composition and elementary relationship. Then the operation of Vital Force thru it stopped. That was the end.

Because McCann was a writer and lecturer on food, now the wiseacres are having fun in criticising the students of nutrition. Dr. Robert K. Williams says:

"Is there a perfect diet? Who knows? We are convinced that nobody we know or have read about, knows what the perfect, properly proportioned diet is.

"We see the foremost experts in the dietetic field dropping off at 45, 52, 65, and 70, and even of lesser years, after following, we presume, their dietetic systems.

"Just recently one of the foremost dietitians passed away with heart disease at 52, another who stressed 'balanced meals' at the young age of 67, and Metchnikoff of sour milk fame, who favored koumiss for changing 'intestinal flora' in order to produce longevity, passed under 70.

"Fletcher went under 70, after leaving his theory of 'chew, chew, chew.' Sanford Bennett also left things terrestrial a few steps beyond 80, and the 'Grand Old Man' Gladstone, with 32 chews to each bite, went to his reward in the eighties."—Llano Colonist, Feb. 21, 1931, p. 11.

Man's food consists of (1) air, (2) water, and (3) substances from the soil. In these lessons we are showing the student the relative importance of these to the body. We may study No. 3 all the days of our life, but if we neglect No. 1 and No. 2, our knowledge of No. 3 will do us little good as in the case of McCann.

Man may live on a perfect diet, as to No. 3, but if he breathes polluted (1) air, and drinks improper (2) liquids, his body will suffer degeneration, which may be prevented somewhat by proper diet, as in the case of McCann, who might have died much sooner had he subsisted on spare-ribs and sauerkraut (sour-cabbage).

W. A. Murphy, state labor commissioner of Oklahoma, on February 2, 1931, said over radio:

"There are few things more deadly than carbon-monoxide gas. It is odorless and colorless, cannot be seen nor smelled, and is the result of incomplete combustion of a large number of organic materials.

"Air containing as little as one-twentieth of one per cent of carbon monoxide will cause headache, and one-fifth of one per cent may result in total collapse."

Dr. Louisa Burns, dean of the A. T. Still research institute of Chicago and Pasadena, since 1903 has examined speci-

men of blood from more than 20,000 persons, in studying the effects of carbon monoxide gas on man. She observes:

"Carbon monoxide gas seeps into the blood thru the lungs. It mixes with the hemoglobin or coloring matter of the red corpuscles, to such an extent that the blood cannot perform its normal function of carrying oxygen to the rest of the body."

In the press of Feb. 7, 1931, appeared the following:

"Birmingham, N. Y., Feb. 7.—The nine-months-old daughter of Mr. and Mrs. Edward Klinko, was asphyxiated when coal gas from a furnace seeped into a bath room, in which she was placed."

Prof. H. H. Sheldon, New York University, erected an apparatus in the Times Square theatrical district, that drew in air at roof-level. In one week the apparatus cleaned 341,250,000 cubic feet of air. From this air it removed 12 cubic feet of solid matter, composed of dust, soot, tar, that weighed 35 pounds.

From this data, Sheldon computed that between five and ten tons of solid material are contained in the dust and smoke cloud hanging over New York City all the time.

The average city dweller usually is unaware of the condition of the air he breathes. He even wears a coat of dust and soot on his skin without knowing it.

The effects on the body of inhaling such smoky and sooty air is decidedly injurious. The lung-tissue becomes weakened and blackened, the blood-stream becomes polluted and poisoned, the body becomes weakly and sickly.

Dr. Thomas Darlington, former health commissioner of New York City, observes:

"The New Yorker gets little pure oxygen and almost less sunlight. I have performed many autopsies upon New Yorkers, and almost without exception, their lungs were as black as night."

Many observers hold that after a rain or snow or a strong wind, the smoke and soot cloud over a large city is dispelled. But this is not so. Dr. E. E. Free, consulting engineer of New York, found that most rains have little effect upon the smoke and soot cloud. The rains remove some of the soot and smoke from the air, but only for a brief period. Thousands of chimneys belch forth their streams of smoke and soot continually, and for every particle blown away, many more come to take its place.

In A. D. 1273 the use of coal was prohibited in England. Even the smiths were obliged by law to burn wood. The use of coal had become so widespread by A. D. 1257, that Eleanor, wife of Henry III, found it necessary to leave the town of Nottingham, where she had been sent to stay during the King's absence in Wales, and remove to Tutbury Castle, owing to the "unendurable smoke of the coal."

Queen Eleanor established a precedent that has been observed since her day. The rich and the powerful, and some who are neither, trek to southern climates in winter to escape both smoke and cold.

Despite the law of A. D. 1273, the situation became so bad, that in A. D. 1307 the King named a Commission of Oyer and Terminer to enforce the anti-smoke law.

Great damage to health results from the sulphuric acid in the air. The acid feeds upon such things as copper spouting and building stone and sensitive human tissues. Copper guttering in the business district of St. Louis lasts about 10 years, in the West End about 20 years, and in the country beyond the smoke zone it lasts almost indefinitely.

The most conclusive studies of the effect of smoke on health have been made at the Mellon Institute in Pittsburgh. A two-year survey showed a strikingly close relationship between pneumonia death-rate and the smoke content of the air as charted by wards.

The presence of smoke constantly irritates the mucous membrane of nose, throat, and lungs. The gradual deposit of carbon that it built up in the lungs of all dwellers in the larger cities, slowly reduces the functional capacity of the lungs and impairs their elasticity. Autopsies performed on city dwellers show lungs ranging in shade from a chocolate color to jet black.

H. B. Meller, head of the air pollution investigation at the Mellon Institute, recently observed:

"The constant inhalation of poison-laden air results in a gradual process of absorption by the human system of the poisonous products of combustion.

"This insensible intake may not give rise to any definitely recognizable acute disorder or specific disability. But the process of slow-poisoning may eat away insidiously, like a mild canker, at vital tissues, making it impossible for body and brain to function at their points of normal efficiency."

In the loss of McCann, the drugless world has great cause to mourn. His untimely death without doubt is due to the fact that he lived under a great smoke blanket, where one single breath of pure air is impossible. May others take warning from this, and look well to the air they breathe.

From one of our students we received a letter dated December 27, 1930. In it he says:

"I got mixed up in a Knights Templar meeting last Tuesday night. It was the annual visit of the Grand Commander. The hall had just been repainted, and the fumes from the paint were to me almost unbearable—even so far that my eyes could hardly stand it.

"I managed to stay in the hall for a couple of hours, and the next two days I was all in. I attributed it to the two hours in the hall. I was bilious and ached all over, just like the lagrippe. I was feeling fine when I went there, and I shall never do it again, if I can help it."

If this man had not been equipped with the knowledge we teach regarding health and disease, he would not have known what was back of his aches and pains, and how to get rid of them. He would have been scared, fearing, in his ignorance, that some deadly disease germs had found their way into his body, and were trying to kill him. He would have sent hurriedly for a medical doctor, who would have come, looked wise, and doped him with all kinds of poisons—to kill the germs and cure the disease.

In that condition, this man might have died; for such treatment has killed, and is now killing, thousands of mis-educated people every year, who get sick as this man got sick, but who do not know, as this student knows, the cause of the sickness and the cure for it.

Viewing the matter in this light, what is this course worth to this man? For what is a man profited, if he shall gain the whole world, and lose his own health? Or what shall a man give in exchange for his health?

In December, 1929, Dr. Clements went to Cincinnati to hold a series of health lectures. After he had been there one day, he began to feel dull pains in the bottom of his lungs. At the end of a week, and before his lectures were finished, he departed in obedience to the first law of life, that of Self-Preservation.

He went from there to Quincy, Illinois, to make a short visit with some relatives. The air in the latter city was not so badly polluted with deadly fumes as in

Cincinnati; but it was sufficiently foul to keep up a continuous dull pain in the bottom of his lungs.

What surprised him most was his reaction to the air in the homes of his relatives. They used coal for heating and cooking, and the fumes from the coal-stoves in the homes caused greater pains in his lungs than the fumes in the air of the streets. So while visiting, he was forced to spend most of his time outside. He cut his visit short and hurried back to his home.

The student is learning why Dr. Clements lives in the clean little city of Hugo, Oklahoma. It is surrounded by a splendid agricultural community, with no factories and no black smoke. The air is pure, except in the main part of town, where it is slightly contaminated with motor car exhaust gas.

He spends little of his time in that section of the city. Nor does he attend his lodge meetings, or go other places, because the air of the halls and rooms is laden with foul fumes and tobacco smoke.

His home is located at the edge of town, where the air is fresh and pure, being alternately washed by the rains and sterilized by the rays of the sun.

However, if there were no dust in the air, there would be no beautiful sunrises and sunsets, and, worst of all, no rain.

In the highest parts of the sky, little motes of dust wander hither and thither, looking for passengers, here a little water-vapor and there a little more, until finally enough is collected to form a drop. Then the journey back to Earth may begin.

In European history one of the outstanding events during the Middle Ages was the shower of blood that occasionally fell. There have been such showers in recent years, but with the aid of the microscope, the telegraph and the airplane it has been proven that these supposed showers of blood are merely showers of fine red dust, gathered up in the Sahara desert and sprinkled over Europe, often to the extent of more than a million tons at a time.

Sometimes the dust particles are in the air for years before they settle. Even over the center of the great oceans, there are as many as six or seven hundred particles in a thimbleful of air. If there were no dust particles in suspension in the outer air, the sun would appear distinctly bluish, instead of white or yellow.

Statistics for Wisconsin show that the chance of becoming a centenarian is three-times as good in the rural districts as in the cities. In the last twenty-one years in that state, 247 people in the rural districts reached the age of 100 or more, while the number of centenarians who died in the cities in the same period of time was only 89.

Air is man's greatest food. In our cities it is poisoned almost beyond description. What shall we say to those living in these places? It is almost useless to give them health advice. In spite of their most careful habits of living, they will have coughs and colds, influenza and pneumonia, rheumatism and tuberculosis, and go down to the grave long before they should.

The air surrounding Hugo is comparatively free from dust particles. Red River is twelve miles south, and Kiamichi River is twelve miles northeast. The latter is a clear mountain stream, surrounded by beautiful scenery and tall pines. It is a regular summer resort, such as one finds in the mountains of Colorado and California. If you are looking for pure air and a healthful climate, come to sunny Southern Oklahoma.

It is found that the longest-lived people now, are those

living in the pure air of the mountains. We cannot expect good health and long life in our cities, where humanity is surrounded with all sorts of health-destroying agencies.

Chapter No. 90

SCIENCE OF THREPSOLOGY—Water.

We have seen that Oxygen is man's greatest food.

As food for man, Water comes next to Oxygen. It forms about three-fourths of the weight of the whole body.

Water is a compound of Oxygen and Hydrogen, two invisible gases. It is readily decomposed and reduced to its invisible state by the application of heat. Its relative amount in some of the principal solids and fluids of the body is shown in the following table, from Robin and Verdeil:

QUANTITY OF WATER IN PER CENT	
Teeth	10.0
Bones	13.0
Cartilage	55.0
Muscles	75.0
Ligaments	76.8
Brain	78.9
Blood	79.5
Synovia	80.5
Bile	88.0
Milk	88.7
Pancreatic juice	90.0
Urine	93.6
Lymph	96.0
Gastric juice	97.5
Perspiration	98.6
Saliva	99.5

In observing the importance of water to the body, Dr Carver says:

"One physiologic law of the tissues of the brain and nerves must be noticed at this time. It is a law that is general in its application to tissue, which is, that the more highly refined and delicate a tissue is, the greater the per cent of water entering into its composition. In some parts of the nerve system this amounts to some ninety per cent, in others eighty-five per cent, and in ordinary nerve tissue about eighty per cent."—*Psycho-Bio-Physiology*, p. 254.

In all the fluids and tissues of the body—blood, lymph, muscle, gland, etc.—water acts the part of a general solvent, and by its means alone circulation of nutrient material is possible. It is the medium also in which all fluid and solid aliments are dissolved before absorption, as well as the means by which all, except gaseous, excretory products are removed from the body. All the various processes of excretion, transudation, and nutrition depend of necessity on its presence for their performance.

If pure air is necessary for good health and long life, it is necessary for the same reason that the liquids man drinks be pure.

We have stated that the condition called old age is the result of a process of hardening occurring in the body. We shall now observe the part that water plays in this process.

Water is the dissolvent of food before it can enter the blood and lymph. The water excreted by the body carries off, in solution, countless solids and substances that are poisonous to the body.

But caution should be exercised as to the kind of water we use. One kind hardens blood vessels and glands, and produces stones in kidneys and gall bladder. Another kind dissolves the very mineral deposits that produce the condition

mentioned, and washes them out of the body, thus improving the health.

Nearly all water used for drinking purposes is what we call "hard." Hard water is that in which quantities of lime and other minerals are held in solution.

All water that comes out of the ground is highly charged with minerals in solution. Hence, all such water is hard. Water from certain wells, springs, and lakes is often called "soft." But such water is soft only in comparison with water that is harder.

These so-called soft waters contain large amounts of minerals in solution. Dr. G. A. Dorsey observes:

"Each year the earth's rivers carry to the sea five billion tons of dissolved minerals, and other unnumbered millions of tons of carbon compounds."

So-called mineral water from various springs is very hard. It is highly recommended by some authorities as being healthful. Most of those making such recommendations make large profits out of the use of the water.

Some patients experience relief by drinking this kind of water. That is because they drink large quantities of it, which aids in cleansing the glands and tissues somewhat. But if the use of such water is continued, grave effects will appear from mineral deposits left by the water in the cells and tissues.

Boiled water is recommended by many authorities. Boiling removes none of the minerals. It may kill the tiny animals found in all raw water. The student was told in Lesson No. 7, Chapter No. 21, that in the hundredth part of a drop of raw water the microscope reveals a world of tiny animals. But the dead bodies of the animals remain in the water, and help to clog the depurating and eliminating organs.

By drinking boiled water one may avoid taking the live animals into his body, but he buries their dead remains in his body. If raw water is an aquarium, boiled water is a cemetery.

Take a teakettle so clean on the inside that it shines. Take water from a well, spring, lake, or creek, and after boiling such water in the kettle for a week, a stony coating will form on the inside of the kettle.

When water is hot, it passes into the air as vapor. But all the minerals are left behind. It is these minerals that coat the walls of the kettle.

What occurs on the inside of the body when a man drinks such water for forty or fifty years? If the body were as helpless to protect itself against the accumulation of these deposits as is the kettle, the body would be a solid pillar of lime-stone before it was five years old. It would be as hard as concrete from the accumulation of minerals found in the drinking water.

Liquid lime is always present in the blood-stream. When a structure or gland of the body decomposes in the presence of the liquid lime, the lime fills in the space resulting from the decomposition, and there solidifies. Many of the fossil-remains of ancient animals and vegetation are limestone casts thus filled in as the original entity decayed.

Bunions and enlarged joints arise chiefly from this cause. When a joint is held open, as where an ill-fitting shoe holds the great toe pressed over towards the other toes of that foot, the blood fills in the space thus caused with mineral deposits, and the joint becomes enlarged and stiff.

If the knee, or elbow, or any joint, is held in one position for a long time, without movement, it will grow stiff from minerals deposited around the joint by the blood.

Rain water is distilled by the heat of the sun. It is free

from all minerals; but when it falls as rain, it passes through air filled with tiny animals, dust, smoke, soot, and filth. By the time it reaches the earth as rain water, it is so saturated with dirt and decaying substances that its color is a very light straw. But as the rain continues and the air becomes washed of its impurities, then the rain water grows clear and clean.

Rain water may be cleansed by passing thru a filter. But dirt collects on the bottom of the filter, and if not kept clean, after it has been used for a time, the filtered water contains more dirt than the water as it falls from the clouds.

Distilled water is water that has been turned into vapor, then condensed into water again. It leaves all solids and minerals behind. It is the only water that is free from all impurities.

If pure distilled water is boiled in a teakettle, no deposits will gather on the inside of the kettle, even though the same kettle is used for years.

Water is the great solvent. It dissolves solids so that they may be absorbed by the blood and assimilated by the cells. It dissolves the waste products of the body so they may be depurated and eliminated.

Distilled water is the greatest solvent known. Aside from pure rain water, it is the only water that may be taken into the body without damage to cells and tissues. By its continued use, it is possible to dissolve mineral deposits, acid crystals, and other waste products lodge in the body, without injuring the cells.

Man does not realize why he grows old. In old age, every cell is hardened with mineral deposits. Some of these enter the body with the substances man drinks.

People living in limestone localities, who drink water from wells, springs, and creeks, are invariably afflicted with hardened glands and blood-vessels at a comparatively early age. Instances of longevity among them are rare.

Lesson No. 31—Chapter No. 91

SCIENCE OF THREPSOLOGY—Food.

The subject of Food is rather well covered in the lessons of Elementary Orthopathy, which the student is urged to study with care. For this reason, we shall only briefly discuss the subject here.

Going back to a time when Primitive Man, in supplying his needs, must have depended solely on his own unperverted instinct, we realize that it was his sense of sight that guided him in his choice of food, and that he would logically select such substances as were "*pleasant to the sight*."

Viewing the matter in this light, we know that the golden and redden and purple fruits of trees and vines, would most strongly attract his attention.

This man had no implements—nor had he the least use for any. Man did not appear on earth until all his actual and necessary wants were as completely provided for, as are those of the beasts of the field and the fowls of the air.

It was never intended by Eternal Intelligence that man, in supplying his needs, should perform any more labor than is performed by any animal below him, in its native state.

In the tropics, where man first appeared, there is spontaneously produced to this day, the most luscious fruits that can be found anywhere.

Without implements and without labor, except that in gathering the fruit, Primitive Man took these substances from the generous hand of his Perfect Provider, and ate of them just as cooked and prepared by Eternal Intelligence.

No ignorant scientist had yet appeared to immunize

man's body against disease. He needed no expert dietetic advice. He knew nothing about calories, vitamins, and mineral salts. He knew less about proteins and carbohydrates.

But in his Natural Wisdom, this man ate food that built a vigorous frame, composed of material so lasting, that he saw the Sun rise and set for almost a thousand years, ere his body sank back into the bosom of that Eternal Mother, from whence he came.

Man was, and is, a frugivorous creature. But many centuries have passed since then, and great changes have occurred. Man has been betrayed by the Sons of Mammon, who suck his blood and seduce his children.

To provide the world with wealth that destroys, man has been taught to raze the beautiful forests, produced by Eternal Intelligence, and to tear with shovel and plow the Bosom of his Mother. By ages of this destructive work, he has developed grass seeds into grains, roots into tubers, and various animals into beasts of burden and victims of slaughter.

These things are the product of that health-destroying and life-shortening labor, which the Sage of old saw, and which constrained the Philosophy of the Ages to say:

"Cursed is the ground for thy sake; in sorrow shalt thou eat of it all the days of thy life; thorns also and thistles shall it bring forth to thee; and thou shalt eat the herb of the field; in the sweat of thy face shalt thou eat."

These things now grace his table, instead of the delicious fruits that he once ate, without labor and without sorrow, and lived free from suffering for hundreds of years.

These things he now eats, in his endeavor to repair the waste and wear of a body, which tells him in every way it can, that he is failing in his conduct, and violating the law of his constitution.

Despite the ages that have passed since man forsook fruit as his food, no appreciable change has occurred in his digestive apparatus. A study of the human anatomy prompts all leading physiologists to proclaim, that man today, from the composition and arrangement of his vital machinery, still is a frugivorous animal.

Ripe fruit, as it comes from trees, vines, and bushes, is still the most delicious and most palatable of all food. It is the most agreeable for child and adult, for the puny and the sturdy, for the healthy and the sickly.

Fruit is the oldest food known to man, and the first mentioned by the Philosophy of the Ages:—

"And out of the ground made the Lord God to grow every tree that is pleasant to the sight, and good for food."

It is evident that fruit, in its natural state, was the principal substance used for food by Primitive Man. We are told that he lived for centuries, and nothing is said to indicate that he ever suffered from disease.

Was this simple diet the cause of such sound health and long life? We know that in this age of disordered bodies, short life-spans, and faith in drugs, little or no fruit is eaten by many people, fruit being regarded as a luxury, more to be admired for its beauty, than to be eaten for its worth.

Is this the practice that has produced the multitude of maladies from which men suffer, and condemned the race to early death?

Not only man's health, but the length of his days, depends upon suitable nourishment. Such nourishment is

found on the "Tree of Life." From the "Tree of Life" comes all the elements that the body needs, and without which it suffers and decays.

The student may ask, Which fruit is the great food? The answer is, There is little if any difference as to this.

The Philosophy of the Ages states that Noah's first act, after the Flood, was to plant a vineyard. The words grape and grapes occur more than forty times, and the words vineyard and vineyards occur more than seventy times, in the Philosophy of the Ages, which says:

"Eat ye every man of his own vine, and every one of his fig tree, and drink ye every one of the waters of his cistern, until I come and take you away to a land like your own land, a land of vineyards."

There must be some profound reason why grapes are given such prominence in these old writings. We find together here, Grapes and Giants, and the Giants live nearly a thousand years. On these statements, which we shall consider facts, we hold that Grapes are man's greatest food.

Alvin F. Harlow calls Grapes the Queen of Fruits. He adds:

"The grape is probably the oldest domestic fruit we have. The fruit and the wine made from it are frequently mentioned in writings reaching back to the dawn of history. Apples are mentioned in the Old Testament, but there is no certainty that the word which King James' experts translated as "apple" meant the apple as we know it.

"The grape has a very high value to the body both as food and medicine. It is mildly laxative, diuretic, and like all other fruits, is anti-scorbutic. It contains one of the four beneficial fruit-acids that are so useful to the body. These acids in the process of digestion release potassium, sodium, and magnesium, which are changed into carbonates and overcome by their alkalinity the acids in the blood.

"The average grape contains nearly 80 per cent water (pure-distilled), and about 13.3-4 per cent sugar; and scientists agree that grape sugar is one of the easiest of all fruit sugars to digest and assimilate.

"The grape also contains (organic) iron, which helps to build up the red corpuscles of the blood."—Correct Eating.

As to the remarkable value of grapes for food, Dr. Holbrook writes:

"The physiological effects of grapes are significant They increase nutrition, promote secretion, improve the action of the liver, kidneys, and bowels, and add to the health.

"The sugar of the grape, which may often be as high as 30 per cent, requires no digestion, but is taken almost at once into the blood, where it renders up its energy as required; so also of the water.

"The dextrin of the grape promotes the secretion of pepsin, and this favors digestion The phosphoric acid, of which there is considerable, acts most favorably on all the bodily functions, and especially on the brain."—Eating for Strength, p. 134.

Observe the advantages accruing to the body from a diet of grapes: (1) They increase nutrition, (2) promote secretion, (3) improve the action of the liver, kidneys, and bowels. (4) The sugar of the grape requires no digestion, but is appropriated, absorbed, and assimilated by the system with no expenditure of vital energy. (5) The liquid of the grape, with which it abounds, and which, perchance, is the only natural drink of man, is rich in organic acids and minerals, supplying the blood with the proper elements of nutrition and growth, and promoting the excretory function of the organism. (6) The phosphoric acid acts most favorably on all the bodily functions, and especially on the brain.

The Health Messenger, January, 1927, of grapes said:

"Grape seeds have been found in the refuse around stone-age villages. They are not scattered singly, as though used for eating, but in compact masses, showing that they had been pressed for making wine.

"The earliest of all writings, the Sanscrit, gives the name of *vona* for wine. This word, slightly varied, still runs through most of the languages of the world. (The Filipinos call wine *Vino—Clements*.)

"Science has shown that not only was wine-making one of the earliest forms of human activity, but antagonism to it is not new. Prohibition was ordered by an imperial edict in China in 1116 B. C.

"The history of the grape itself is one of the most complete in all science. Every link in its evolution has been found, from the world-old grapes down to the varieties that are now cultivated.

"The ancestors of the modern grape have been found as fossils in paleozoic and tertiary geological strata. These have been found in widely separated parts of the world, from Iceland to Japan, and in central Europe."

Otto Carque has given the food problem much study. He is the author of several books on diet. Of grapes he observes:

"In Europe the so-called grape-cure, during the harvest season, has become very popular. It is used in many health resorts in Southern Europe, where people live exclusively on grapes from four to six weeks, increasing the quantity from three to six pounds daily, according to age and constitution.

"The grape-cure is especially helpful in diseases of the respiratory organs and kidneys, also in anemic conditions. The beneficial effect of this cure is chiefly due to the simplicity of the diet, which furnishes the protein and carbohydrates in the most assimilable form, while the larger proportion of the alkaline salts, such as potash, lime, magnesia and iron, reduces the acidity of the blood."—*Safe Way to Health*, p. 112.

As to the value of grapes, the News Chronicle correspondent recently observed:

"Eminent doctors (of Italy) declared that grapes cured melancholy and spleen, obesity and indigestion, liver complaints and Bright's disease, gout and rheumatism, dyspepsia and biliousness, gastritis and anemia, and almost every disease treated in hospitals and clinics—that it made old men young and improved the complexion of women."

Grapes grow well in practically every country. We remember the Valley of Grapes in Canaan. Some of these big bunches of grapes are being shipped to the United States. The press recently said:

"Fall River, Mass., Feb. 14 (1931).—The biggest bunch of grapes ever brought into the United States arrived here recently aboard the Red Star liner *Westernland* from Brussels. "The cluster weighed 39 pounds, was 41 inches long and 24 inches in diameter, and insured for \$500."

Ripley, Believe it or Not, in the press of November 6, 1930, told of The Great Grapevine of Hampton Court Palace Gardens, England. It was planted in 1768 from a slip off a vine at Valentines, in the parish of Ilford, Essex, England, which was also a vine of great proportions.

The stem of the Great Grapevine is six feet eight and one-half inches around, and one branch is 114 feet long. The grapes are of the black Hamburg variety, the average yearly yield from the vine being over 650 bunches of from one to two and a half pounds each. It has been known to produce 2,000 bunches in one year.

Let us consider the wonderful orange next. In Florida it is possible to have oranges for ten months of the twelve.

They begin to ripen in October, and the latest varieties will hang on the trees until the middle of August. They are rich in the various solids and fluids that the body needs.

John Oliver, veteran Premier of British Columbia, stated in 1926 that he eats a dozen oranges a day, and never felt better in his life, although being well along in years. He observes:

"I keep a box of oranges in my office all the time. I just help myself during the day. No specific intervals; I eat an orange whenever I feel like I want one, and I usually average a dozen a day."

He says that oranges mark his third attempt to discover the ideal diet. First he tried goat's milk, then apples, and then oranges.

Of the orange, Carque says:

"The orange, the most important of our citrus or subtropical fruits, is one of Nature's medicinal foods because of its large calcium and iron content, and also its vitamins, B and C.

"Fresh, sweet orange juice is an excellent food for children. . . . Altho the orange contains over 1 per cent of citric acid, the juice, on account of its large amount of potash, is decidedly alkaline in its reaction.

"Ripe oranges contain as much as 10 per cent of fruit sugar, which is ready for immediate assimilation."—*Safe Way to Health*, p. 114.

Orange juice is rich in mineral salts, containing on the average, according to Carque, 18.62 per cent of potassium, 0.95 per cent of sodium, 8.65 per cent of calcium, 2.03 per cent of magnesium, 0.38 per cent of iron, 4.70 per cent of phosphorus, 2.00 per cent of sulphur, 0.25 per cent of silicon, and 0.29 per cent of chlorine.

Calcium and iron are salts that are important to the growing child, and these, in their natural state, are found in both oranges and grapes in quantities abundantly sufficient for the body's needs.

In Italy, orange groves over 500 years old are still producing prolific yields.

Apples are usually given prominent notice by writers on fruit as food. They are excellent. They contain malic acid, and are rich in potassium, sodium, and calcium salts. They have a cleansing effect on the body, and aid in expelling morbid matter. They help to neutralize stomach acids, promote kidney excretions, tone up the liver, and correct acidosis and its accompanying disorders, as gout, rheumatism, neuralgia, diabetes, biliousness, anemia, etc.

But cases have come to our attention where apples appear to generate gas in the bowels. This constrains us to believe that they should not be eaten so freely by some people as some of the other fruits and berries.

Then there are peaches, plums, pears, apricots, cherries, and, in warmer climates, grapefruit, figs, dates, etc. These are all splendid foods. Next come the berries.

Strawberries contain considerable sugar and a slight amount of salicylic acid. They are powerful body cleansers and blood purifiers. Their effect often induces the blood to throw out a rash on the skin. This is a purifying process. Medical men, observing the condition, and believing that the rash comes from the berries, forbid certain persons to eat them on this account. The truth is, they are the ones who should eat them most freely. The rash will disappear when the blood is purified. Without a surplus of poison in the blood, there will be no rash.

Linnaeus, the famous Swedish botanist, who made the first scientific classification of plants, held cherries in especially high esteem. He relates that when suffering from a

grave bowel trouble which resisted all remedies, he cured himself by eating freely of cherries for some days in succession, taking little or no other food. Fernie tells us that:

"According to Pliny, cherries were first brought to Rome by Lucullus after his great victory over Mithridates, 89 B.C. The cultivated cherry disappeared in this country (England) during the Saxon period, and was not re-introduced until the reign of Henry the Eighth.

"Cherry stones have been found in the primitive lake dwellings of Western Switzerland. There is a tradition that Christ gave a cherry to St. Peter, admonishing him not to despise little things.

"In France, soup made from cherries and taken with bread, is the common sustenance of the wood-cutters and charcoal burners of the forest during the winter."—Good Health.

Fruit consists largely of wonderful, thirst-quenching water, distilled by a marvelous process unknown to man. The student should observe the importance of this, when he remembers that water forms about three-fourths of the weight of the body, and that the blood is approximately 80 per cent water.

If man ate as and what he should, he would have no desire for plain water. His natural food contains both solids and liquids in practically the same proportion as required by the body. Grapes contain about 80 per cent distilled water; the blood of man is about 80 per cent water. This appears to be perfection.

Some authors contend that man is not a drinking animal. He can drink only with difficulty, unless he has some contrivance, invented by himself, to convey water to his mouth. Some men have gone for fifty and sixty years without drinking any water.

The press of February, 1928, carried the following item:

"Water and worry kill people, according to Mrs. Françoise Levapresto, of Grant City, Staten Island. She celebrated her 106th birthday recently, and declares that she has never touched a drop of water in her life. She came from France in a sailing vessel 74 years ago. It took 48 days to make the trip. She drinks a little wine with each meal."

The sugar (glucose) found in fruits, and the various salts, are fully prepared for the body by the ripening process in the sunshine, the *cook-stove of the earth*. These require only absorption to make them available for the body's use.

Due to this fact, fruit may be eaten at any time without taxing the digestive organs.

How different is this from the common diet of civilized man, which tries and wearies his digestive machinery by a long, laborious process, and in the end renders up but a small quantity of nourishment of questionable quality.

Because of the acids occurring in certain fruits, the less learned medical men caution patients, if suffering from acidosis, against eating them. They claim that it aggravates the condition. They would know better had they studied fruits and foods more, and drugs and serums less.

Acidosis results from eating cooked and denatured foods. The condition is quickly corrected by eating only of ripe, unfired fruits.

In commenting upon this, Dudley D'Auvergne Wright, F. R. C. S., (London) observes:

"It is often said that eating fruit makes the blood too acid. This, again, is a fallacy. Fruits do indeed contain much acid, but they also have an abundance of potash and other alkalis which, to some extent, counteract the acidity. Besides this, the fruit acids, while in the digestive tract, unite with the alkalis there, to form neutral salts, which pass directly into the blood, and become carbonates of potash, soda, and lime, and render the blood alkaline.

"This power of fruit acids to unite with lime is very important, and may be taken advantage of in cases of calcification of the arteries (arterio-sclerosis), a common disorder in all civilized communities

"Further, these fruit acids are now recognized by the great doctors as being able to dissolve out the urates of soda, which is deposited in gouty joints, and to assist the system in getting rid of the uric acid in the blood."—Health Culture.

The acids of fruits are oxidized in the body, and hence are beneficial foods. They are changed into carbonates in the blood, and tend to render it more alkaline than it ordinarily is on a diet of modern food.

Since all facts and experiments indicate that unfired fruit is the ideal food of man, it is logical that such a diet is splendid in all chronic disorders, and especially when the stomach, bowels, and liver are affected. The fact that unfired fruit is beneficial in such instances, is cumulative evidence to prove that unfired fruit is the perfect food of man.

More important to many, is the fact that fruit acids have a special affinity for lime, and dissolve solid deposits in the tissues.

Eat of the unfired fruit and the Process of Sclerosis cannot occur. If the body is already growing stiffened and hardened, then eat of the unfired fruits and their acids will dissolve the sclerous deposits and they will be cast out of the body.

Chapter No. 92

SCIENCE OF THREPSOLOGY—COOKING.

"*Man has degenerated—this degeneration is due solely to his diet.*"—Charles W. de Lacy Evans, M. D., M. R. C. S. E., (London), in *How To Prolong Life*.

In his work, *The Law of Life & Human Health*, Dr. Clements calls Cooking "The Fatal Process." The use of fire in reducing substances to a deteriorated state for consumption as food, is indeed a fatal process.

This practice was unknown to Primitive Man. Scientists are in agreement that man made his advent upon the planet in a tropical climate; and that he was without tools and without fire for many ages.

How long man existed before he discovered fire, we shall never know. The first information related by the Philosopher of the Ages to indicate the existence of fire, reads:

"And it came to pass, that when the sun went down, it was dark, behold a smoking furnace, and a burning lamp that passed between those pieces."—Gen. 15:17.

In Mythology, Prometheus is said to have stolen fire from heaven in a hollow tube, and taught mortals all useful arts.

Hesiod states that before the time of Prometheus, mankind were exempt from suffering, enjoying a vigorous youth; and, when death did come, it was without pain, and the eyes were gently closed, as in sleep.

Horace, in alluding to the theft of Prometheus, observes:

"Thus, from the Sun's ethereal beam,
When bold Prometheus stole the enlivening flame,
Of fevers dire a ghastly brood
(Till then unknown) the unhappy fraud pursued;
On earth their horrors baleful spread;
And the pale monarch of the dead,
Till then slow moving to his prey,
Precipitately rapid swept his way."

Newton gives the following interpretation of this fable, in which Prometheus is thought to represent the human race:

"Making allowance for such transposition of the events of the allegory as time might produce, after the important truths were forgotten which this portion of the ancient mythology was intended to transmit, the drift of the fable seems to be this:

"Man, at his creation, was endowed with the gift of Perpetual Youth; that is, he was formed not to be a sickly, suffering creature, as we now see him; but to enjoy health, and to sink by slow degrees into the bosom of his parent earth, without disease or pain.

"Prometheus first taught the use of animal food and of fire, with which he rendered it more digestible and pleasing to the taste. Jupiter, and the rest of the gods, foreseeing the consequences of these inventions, were amused or irritated at the short-sighted devices of the newly-formed creature, and left him to experience the sad effects of them.

"Thirst, the necessary concomitant of a flesh diet, perhaps of all diet vitiated by culinary preparations, ensued; water was resorted to, and man forfeited the inestimable gift of health which he had received from Heaven; he became diseased—the partaker of a precarious existence; and no longer descended slowly to his grave."

To produce fire is not an act particularly difficult or supernatural. It is accomplished by striking two pieces of mineral matter against each other, or by rubbing two pieces of wood together. It can be obtained more simply by picking up a splinter set in flames by lightning, or by the eruption of a volcano, and using this flame to light dry grass and wooden sticks, thus keeping it alive.

The acts as that by which man obtained fire are not beyond the capacity of the higher animals. The monkey every day performs more complicated conduct. To break a nut by means of a stone is no simpler than causing sparks to fly from the same stone.

The lizard and the bear that bury the bodies of their prey, to dig them up again, several days later when hungry, the beaver that builds a house and turns aside the course of a stream, the otter that organizes a system of ventilation in its underground dwelling and constructs subterranean chambers above the level of the highest floods, the squirrel that lays aside provisions for winter, the bee that makes honey—these exhibit a foresight at least as great, and as well thought out, as the act of throwing dried leaves on the fire when it threatens to die.

But man is the only creature that has thought of using fire. The first man of the race that thought of this idea, was one of the greatest geniuses that ever lived.

This prehistoric man had seen a luminous and smoking stream flowing down the mountain side. Before it the most ferocious animals slunk away; and until then he himself had not dared to approach it.

As he sought refuge in the evening in his cave, where his females and his young trembled with terror at the sight of the terrible beasts that prowled around at night, seeking to devour them, a new thought struck him as suddenly as though the flame that burned in the mountain's deep recesses, had thrown its light into the darkest depths of his brain.

Frightened by what he is about to do, but sustained by hope, he crawls to the torrent of flames, and plunges a dry branch into it. Brandishing this glowing torch, whose sparks whirl about him, he returns to his cave and closes its entrance by a wall of flame, which the most dangerous beast will never dare to cross.

From that day, man became the master of his environment. In certain respects, he rose superior to all animals and conditions. They have remained stationary, without being

able to change the conditions of their existence by their own will. Man became the master of his destiny.

It is erroneous to believe, as has been asserted by science, that man's intelligence has grown with the centuries. This may be judged by what we know of the past. The greatest thinkers of today are not more intelligent than were Plato, Pythagoras, Archimedes, or Aristotle. These intellectual giants, in their turn, possessed brains no better endowed than those of the early ancestor who discovered fire.

With the discovery of fire, there must have come a vast change in man's habits of living. In the tropical climes, the perpetual warmth, the same in January as in July, supplied all things suitable and necessary for his comfort, convenience, and happiness. For the warming influence of fire, he had no use.

In these warm regions the habitat of man must have remained, until centuries later, when fire was discovered. Then by the aid of its thermal power, he was enabled to migrate into colder climates, where before his progress had been barred by the blasts of wintry winds.

With the discovery of fire, there also came a change in man's diet. Shem found that certain substances, by heating over fire, were given somewhat different flavors; and that things till then inedible, now became edible by being heated.

So it came to pass, that from the comparatively limited list of foods, consisting of countless kinds of fruits, berries, nuts, tender shoots, etc., which for centuries had formed the dietary of man, he now found himself freed and equipped to eat, by and with the aid of heating and seasoning, everything in the wide world, from the berry of the bush to the beasts of the earth, the fishes of the sea, and the fowls of the air.

We wonder whether this was the beginning of that reign of gluttony and drunkenness, that inflamed the passions of men and clouded their reason in the days of Noah.

The blazing ball of fire, floating in the firmament, is our great central station of light and heat. Without it, the earth would be eternally shrouded in a mantle of impenetrable darkness, and its surface be as barren as the desolate sands of the desert.

The heating, penetrating rays of the brilliant sunlight, supply a condition that enables Vital Force to bring forth the sustaining substances of all living things. These substances grow, mature, and ripen after a law that knows no change.

The marvelous power that greens the grasses, tints the fruits, and browns the nuts, produces the only suitable food for man, and prepares it for sustaining his body without further attention or preparation.

Which of you by taking thought can add one cubit unto his stature? Which of you by any procedure can add one jot or tittle to the law? Which of you by any process can add one single element to any substance of natural food that will benefit the body?

Which of you can say, with any degree of exactness, how great is the damage done to natural food, by submitting it to just one of the many processes, which the food of civilized man undergoes before it is eaten?

There are approximately 700,000 species of animals on the earth. This vast horde, with the single exception of man, lives and thrives, in a natural state, on unfired food, spontaneously produced by Eternal Intelligence.

How sound and sane is the doctrine, advanced by the weight of authority in matters of health, that man, made to subsist on unfired food, as do all other animals, has endeavored here, as he has in practically all his other activities, to subvert the law governing his food and his body.

What result can flow from such flagrant transgression? The primary result is frequent epidemics of sickness. The secondary result is frantic efforts of "scientists" to discover a remedy that will immunize man against, and cure him of, the inevitable consequences of his conduct, and thus enable him to live in harmony with his environment while violating the law of his being. The ultimate result is scores of ailments, multitudes of suffering invalids, and millions of premature deaths.

There is a mysterious element in a potato which, when the potato is planted, causes it to grow, mature, and supply conditions under which Vital Force produces more potatoes.

That mysterious element, which science cannot explain nor find with the microscope, exists in all plants and vegetables, filling every part and flowing thru every fiber.

When a potato is heated and cooked, that mysterious element disappears from the potato, and thereafter the potato is dead. No man knows how many more elements in food, fully as vital as this one, are destroyed by The Fatal Process.

God formed man of the "Dust of the ground." Everything on earth has come from the dust of the ground. There is more mystery in one clod of clay, than ten million scientists can explain in ten million years.

Of the phosphorus, sulphur, carbon, calcium, silicon, and all the other inorganic elements in the dust of the ground, is the body of man made and composed.

The vegetal kingdom subsists on the mineral, and the animal on the vegetal. Thus, these minerals, found in the human body, are transformed by growing trees and plants, from crude, inorganic substances occurring in the dust of the ground, into highly organized forms, called mineral salts, ready for use by the body, and designed by Eternal Intelligence to sustain the body in a healthy state. How this transformation takes place, science cannot tell.

These organic minerals are the health-promoting elements of food. In the inorganic state, they are poisonous to the body. If they be introduced into the body in the inorganic form, as the iron tonic given by medical doctors, they clog the delicate cells and tubes, and degenerate the body. Yet most of the great remedies of the medical world are composed of these poisonous, inorganic minerals.

Heating or cooking reduces articles of food from their natural, organic state, to a dead, inorganic substance. From health-promoting foods, they are transformed by fire into disease-producing poisons.

The natural chemistry of food is deranged by fire. The mineral salts, contained in the right proportion and correct form in all unfired foods, are largely leached out and destroyed by fire.

Without these natural salts, which some are trying to find in the "yeast-cure" fad, and in other concoctions made to sell, the body's energy slowly ebbs, the pink glow leaves the cheek, the teeth decay, and degeneration increases.

Cereals, vegetables of the tuber type, dried beans and peas, contain large percentages of starch. It is quite impracticable to eat these substances without cooking. For that reason, man has formed the habit of cooking them in order to render them palatable and edible. This habit leads many to think that before the discovery of fire, such substances were not used for food, or were used sparingly. Today they form the bulk of man's diet.

The cooking of starch makes it soluble. Things soluble will dissolve in water, as sugar and salt. Things dissolvable in water are absorbed from the digestive tract directly into the blood.

Before starch can be utilized by the body, it must be changed by the process of digestion, first into dextrose, and

then into glucose. But soluble starch enters the blood without passing thru the process of digestion.

The body is unable to utilize undigested starch. Also, there is no natural channels of elimination for it. What happens now? The blood becomes surcharged with soluble starch, and this creates a condition of danger to the body.

Eternal Intelligence always comes to the rescue to save man from his sins. So the body institutes a purging process, which, if not hampered by a doctor who cures disease, expels the dangerous material as mucus, into which the heat and function of the body have changed the soluble starch.

In ejecting the substance, some of it is eliminated thru the mucous membrane, causing an excessive flow of mucus, most noticeable, in its early stages, by a discharge from the nose, and in the form of phlegm from the lungs, expelled thru the process of coughing and spitting.

This process, if simple, is called a cold. If more severe, it is influenza or pneumonia. When it becomes chronic it is called hay fever and asthma. This is explained in Lesson No. 13, Elementary Orthopathy.

Things made of flour, as bread and cakes, and cereals, in the form of breakfast foods, are substances on which children largely subsist. These are composed chiefly of starch. The cooked starch is assimilated, but is not utilized by the body. When more of it has accumulated than can be eliminated thru the regular channels, other means of elimination must be employed. These come in a long list of so-called children's complaints, ranging from whooping cough to diphtheria.

The running noses, from which children so universally suffer, is principally the result of wise parents cooking and preparing for them, the food that is completely prepared by Eternal Intelligence.

Bee owners discovered that heated honey kills bees; so they learned better than to feed their bees on heated or cooked honey. Men cook cane and beet juice until these substances form sugar, syrup, molasses, candy, etc., feed these to children, then become puzzled that the children get sick and die.

Cooking breaks up into fine particles, many insoluble and fibrillous elements, which, under certain conditions, seep into the blood, there at a later time to clog pores and ducts of the excretory membranes and the absorbent glands.

Also, cooking produces solutions in foods, at 200 degrees F., or above, which cease to be solutions when their temperature falls to that of the body. These artificial solutions are absorbed, undigested, into the blood. They subsequently crystallize and solidify, and form calcareous deposits in the cells, tissues, muscles, joints, and walls of blood vessels, whenever the temperature of the artificial solution falls below the crystallization point; or, if a complex solution, whenever it reaches the precipitation point.

From this source comes also the Process of Sclerosis, with gravel in the kidneys, liver, bladder, pancreas.

Artificial solutions, produced by heat, tend to combine with one another, or with body excretions, forming in the tissues, especially in the digestive tract, insoluble substances or agglutinating materials, which stiffen and harden the cells and tissues, irritating the nerves, and agglutinating certain precipitations into stones, accretions, deposits, and tumorous growths.

Heating vegetable oils and animal fats tends to form a tenacious glue, which prevents free movement of the bowel contents, thus conducing to constipation. This glue has the peculiar property of adhering to wet surfaces, and of displacing water in the tissues.

By the law of chemical reaction, the calcium salts (lime) in food, wholesome and assimilable in the natural state, becomes unassimilable in proportion to the degree of disorgan-

ization caused by cooking. Then these salts are precipitated in the circulatory system, causing hardened blood-vessels, stiff muscles and joints, and forms of rheumatism.

The calcium salts of toasted bread, toasted cereals, etc., combined with the casein of pasteurized or boiled milk, forms a strong cement, insoluble in water, and hardening to the blood-vessels.

The uric acid of cooked flesh crystallizes in the blood and cells, forming deposits that harden, increasing blood pressure and causing rheumatic pains.

Cooked foods are making man a toothless race. Investigation among the Indians on the northwest coast showed that less than four out of 100 ever had a decayed tooth. Today 98 civilized persons out of every 100, suffer from tooth decay or pyorrhea, generally at an early age. The Indians were found to live largely on unfired food.

Elmer Lee, M. D., of New York, now over 80 years old, and Editor of *Health Culture*, says:

"You were misled by your parents, by your teachers, and by your doctors. They taught you to feed on cookery: cookery that kills the food you eat; and as your foods are killed by your cookery, in like manner your cooked foods kill you by causing disease in your body."

The unheated, uncooked mineral salts are the valuable ingredients of which the digestive juices are composed. These salts supply the various digestive organs with their required fluids and colloids.

Herodotus, the early historian, relates that the Egyptians were the best informed of all men with whom he had intercourse, and that they were the most healthy of all people of whom he had knowledge.

The Egyptians are of the Arian race, migrating to Africa from southern Asia thousands of years before the time of Christ Jesus. They are the first people that we have record of who tilled the soil, and all ancient writers agree that they were the most civilized and advanced of all races of that time.

Herodotus states that they subsisted on fruits and vegetables, which they ate raw. This statement is confirmed by Plinius, another early historian; while Origenes, an early writer, declares that "the Egyptians would prefer to die, rather than become guilty of the crime of eating any kind of flesh."

Plutarch wrote:

"Health is to them (Egyptians) no less respected than devotion. For they think it would be an unseemingly thing to wait upon the Nature that is pure and in every way unblemished and untouched with crazy and diseased minds and bodies."

The Egyptians were particular about cleanliness. They bathed their bodies twice every day, according to Herodotus, who adds:

"They wear linen garments, constantly freshly washed, and they pay particular attention to it."

They believed in the unity of disease, resulting from a unity of cause—bad habits—and in instances of illness, they resorted only to the best drugless methods, such as fasting, proper feeding, and cleansing the colon with the enema.

Some people complain that if they eat uncooked fruits and berries, they soon feel some adverse effects. For this reason, many medical men advise persons not to eat unfired

fruits and berries, saying that these cause vomiting, diarrhea, headache, biliousness, fever, skin eruptions, rheumatism, and so on.

This is true to a certain extent. It is true because the juices of unfired fruits and berries are a powerful solvent of poisonous chemical compounds, frequently found deposited in the cells, tissues, and joints of the average individual.

As these compounds are dissolved by the juices of unfired fruit and berries, they are thrown back into the blood and lymph, carried to the channels of elimination, and cast from the body.

This powerful purging process causes a certain amount of irritation, somewhat similar to that experienced when the patient came down with his last "attack" of bilious fever, typhoid fever, malarial fever, smallpox, measles, rheumatism, and so on, and was "cured" of his malady by the paralyzing drugs of the medical doctor, which checked the purging process, thus allowing these compounds to remain in the body, there to precipitate and accumulate in cells, tissues, and joints, and later on cause greater trouble.

Most people have gone thru this process, and so have deposited in their cells, tissues, and joints a certain amount of morbid matter. The dangerous material originally entered the body with the foul air man breathes, the faulty liquids he drinks, and the foodless foods he eats.

As these deposits accumulate and increase, they endanger the existence of the body. The body strives to purge itself of these deposits thru various phases of conduct which give man discomfort. The symptoms arising from this have long been studied and treated by medical therapy as the evidence of dangerous diseases, which must be combatted, checked, and suppressed. This is the foundation of all therapeutics. It is a sad and dangerous error.

The entire therapeutic procedure of "curing" disease — of suppressing symptoms—does its work by a method of irritation and paralyzation of the brain, nerves and nerveplexuses that govern the body's function.

When an apparently healthy person begins to eat of unfired fruits and berries, and develops a feeling of discomfort, in his ignorance he may think that these disagree with him, and discontinue eating them.

That is wrong. The right course is to continue the diet until the juices have had ample time to do their purging work. When this has been accomplished, the feeling of discomfort, the symptoms of so-called disease to be more explicit, will vanish.

A continuous diet of unfired fruits and berries, but particularly of grapes, oranges, grapefruit, and apples, will in time serve to remove tumors, ulcers, cancers, abscesses, rheumatism, diabetes and other chronic ailments. These conditions are built by poisoned blood; and what builds them, keeps them alive and growing.

As the blood becomes normalized, these abnormal conditions will subside and finally disappear. They cannot continue when their nutrition is cut off. They die for want of nourishment.

When you see a person whose face and skin are covered with pimples, rash, blotches, you may know that his body harbors quantities of festering filth. When you see a person with hands twisted out of shape, joints enlarged and knotty, you may know the reason is waste deposits. When you smell the obnoxious odor that emanates from the body and breath of most people, apparently in health, you may know that their cells are saturated with decaying matter. What they need is a fast, followed by a diet of unfired fruits and berries.

Lesson No. 32, Chapter No. 93

SCIENCE OF THREPSOLOGY—Digestion.

In the process of digestion, absorption, and assimilation of nutrition, appears further evidence that sweet fruits and nuts are the true food of man.

Sweet fruits are composed of a large proportion of glucose, with a fair proportion of nitrogen. The student saw that nitrogen is well up in the list of substances composing the body.

The sugar of grapes, and the glucose of sweet fruits, impart their health-promoting elements to the body, the same as starchy cereals, but with this startling difference:

The glucose, acids, and juices of sweet fruits are all ready prepared by ripening process in the Sunshine for absorption and assimilation as soon as eaten, requiring no cooking, and, more important, no labor of the digestive organs, to make them available for use.

When first entering the stomach, the nitrogenous portions of fruits are unassimilable, but as they meet and mix with the gastric juice, they are readily converted into substances that immediately become soluble and assimilable by the body, without further labor.

The chief elements of nourishment in nuts of tropical climes, are the nitrogenous portions, and fixed or free oils. The nitrogenous portions, like the similar elements in sweet fruits, are made soluble and assimilable by the gastric juice of the main stomach, with no undue labor on its part. The oil is conveyed to the small, second stomach (duodenum), where it meets and mixes with the pancreatic juice and bile, and is then and there readily converted into an emulsion that renders it assimilable.

Thus, without heating, or cooking, or any preparing whatever, sweet fruits and nuts may be eaten, and they readily impart to the body their perfect, health-promoting nutriment, without wear of the digestive organs.

The same cannot be said of the principal substances used for food by modern man.

The cereals and starchy vegetables, developed and produced by man's strenuous toil, in the sweat of his face, and eaten in the sorrow of his home, form by far the greater portion of his present food. These substances are composed chiefly of starch.

Starch is insoluble and unassimilable, and cannot be utilized by the body, until it becomes soluble and assimilable by a chemical change, which converts it from starch into dextrine, and then into glucose. In the last-named state it is ready for absorption into the blood and assimilation by the cells.

To bring the starch of cereals to this condition, three distinct changes must be made in it. One by the process of cooking, and two by the process of digestion. These three changes finally reduce the starch to glucose; whereas, glucose is the starting point and principal part of sweet fruits, all completely prepared by Eternal Intelligence, and ready for absorption and assimilation by the body as soon as eaten.

Hence, by the eating of sweet fruits, the only labor imposed upon the digestive organs, to speak of, is that of separating the nutritious parts from the fibrous waste, passing the waste thru the bowels, and excreting it from the body.

There is still another important factor to consider. The chemical change that converts starch into glucose, cannot occur in the body except in an alkaline medium. This alkaline medium exists in the saliva of the mouth, and in the intestinal juice of the small, second stomach, but not in the acid juices of the main stomach.

As soon as starch, undergoing digestion by its admixture

with the saliva, enters the main stomach, the normally acid quality of the gastric juice there, stops at once and prevents further change of the starch into glucose.

So the starch must lie in the main stomach, undergoing all the mechanical processes of the digestive and churning movements, but making no chemical changes except that of harmful fermentation. It is then passed on to the small, second stomach, to undergo there a second process before it is chemically changed into glucose and made assimilable.

When this fact is known, it shows that modern man is consuming far more starch than the body needs. The digestion of such quantities of starch, composing the major portion of the modern diet, by an organ so small as the second stomach is; while the main stomach performs all the labor of the digestive process, but accomplishes practically no results, means wasted work and exhausted organs. The defective material that results from the process, supplies a poor quality of nourishment.

It has been the teaching of physiologists, that starchy foods are largely digested in the mouth—a result insured by thorough mastication and insalivation. Experimental tests prove that this is erroneous.

The mouth is not an organ of digestion, but an organ of mastication. Consequently, only an insignificant portion of starchy foods, averaging probably less than two per cent of the whole, is converted into glucose by the chemical action of the saliva, even when mastication and insalivation are performed in a thorough manner. The remaining 98 per cent or more, altho lying in the main stomach until the nitrogenous portion is digested, must be passed on to the second stomach, where it meets and mixes with the pancreatic and intestinal juices, before complete digestion occurs.

When it is recollected that most people gulp down their food with a minimum amount of mastication, and that large portions of starchy foods are served in the form of porridges and puddings, so saturated with water that there is little if any excitement of the salivary glands, inducing only a minimum flow of saliva—when these facts are weighed and considered, it is evident that the principal portion of the starch is not digested when it reaches the main stomach, but must remain there, undigested, until passed on to the second stomach.

We are now confronted with another amazing discovery. Assuming that fruits and nuts are the natural food of man, it follows that by far the larger proportion of the nutritive elements of man's natural food is digested in the main stomach, as it should be.

It is true that in most nuts, and in some fruits, there is a small percentage of starch; that nuts are rich in oil; and that while the ptyaline of the saliva converts a small fraction of the starch into glucose, as has been said, still the oil and most all the starch must be digested in the second stomach (duodenum).

But this relatively small portion of starch and oil of fruits and nuts, requiring digestion in the second stomach, is much more in proportion to the relative size of the two organs, than is the case when modern food, mostly starch, is eaten.

Hence, if we accept as the ideal food of man, fruits, nuts, and similar substances that are naturally adapted to the human digestive organs, then the adjustment of the relative sizes of the two stomachs is quite in harmony with the amount of food required to be digested by each, when natural food, consisting chiefly of fruits, is eaten.

The Philosophy of the Ages speaks here, saying:

"God hath made man upright; but they have sought out many inventions."—Eccles. 7:29.

By invention, artifice, and agriculture, man has developed and employs as the basis of his diet, foods composed chiefly of starch. He has accordingly reversed what plainly appears as the natural order of things. He now subsists on food, the greater proportion of which, altho lying in the main stomach to await digestion, still remains undigested, except as to its nitrogenous portions, and must be passed on to the small, second stomach, before digestion occurs.

Consequently, the main stomach, designed to perform the principal part of digestion, performs the labor of digestion, but accomplishes only a fractional part of the intended results. And the second stomach, altho in point of size a relatively insignificant organ, designed to digest a relatively small part of the food, is required to digest the major portion of the food, thus taxing it many times beyond its normal capacity.

The theory is advanced, that since the second stomach is provided with a digestive ferment adapted to the digestion of starchy foods and oleaginous substances, this fact should be construed as proof that in the formation of the human body, such digestion was designed.

A satisfactory answer to this is found in the fact, that as man's natural food contains a small portion of oil, also a *small* quantity of starch, there is the best of evidence as to why man's small second stomach was provided with a digestive fluid adapted to such digestion.

But since in man's natural food, the starch and oleaginous elements constitute but a *small* fraction of the same, it is reasonable to expect that a *smaller* sized organ would be found adapted to their digestion. Such are the facts in the case, both as to the (1) relative capacity of the two stomachs, and (2) their digestive ferments.

The theory is also advanced, that the thousands of years during which man has made cereals and starchy vegetables the basis of his diet, have obviously modified his anatomy and physiology by evolutionary changes, and that whatever might have been his original diet and physical conformation, these many centuries have converted him into a natural starch-eating animal.

A conclusive refutation of this theory lies in the fact, that the orang-outang and several species of apes, which apparently since the dawn of living creatures, have fed upon fruits and nuts, to the exclusion of cereals and starchy vegetables, at this day have the same organic arrangement of the digestive apparatus, and in substantially the same proportion of parts, as man, notwithstanding his ages of starch-eating.

This evidence is irrefutable proof that the human digestive machinery has suffered no essential modification or alteration, due to the influence of centuries of the use of unnatural food.

Further confirmation of the soundness of this position is found in the fact, that persons suffering from illness, especially if from the digestive organs, are invariably benefited by being fed an exclusively non-starch diet.

If the organs have undergone the modification suggested, then starchy foods should now be logically those best suited to man's digestive organs. But if, as Orthopathy holds, the race has, during all these ages, been perpetually straining, overworking, and abusing the powers of the small second stomach, thus deranging the digestive machinery, and if man is shown to be immediately benefited by a discontinuation of that harmful diet, this evidence tends to confirm the opinion that the use of a non-starch diet is in conformity with man's physiological structure and requirements.

An interesting fact as to diet is in order in this connection. Invalids are universally given bread in the form of

toast. The layman is ignorant as to why this is done, and most physicians do not know.

It is because the toasting of bread until it becomes brown, converts most of the starch into dextrine; and, so far as the brown portion is concerned, one process of digestion is accomplished before the bread enters the stomach.

Accordingly, the thinner the slices and the more thoroughly toasted, the easier digestion will be. When all portions of the bread are toasted to a deep brown, but not burnt, it is still more easily digested than is ordinary toast.

Sweet fruits are removed one step beyond thoroughly toasted bread; for, as has been said, the principal part of them is already glucose, converted into such by the natural process of ripening in the rays of the Sun. Whereas, the dextrine into which bread is converted by the most thorough toasting, must still be converted by the digestive organs from (1) dextrine into (2) glucose (a) before the body can use it, and (b) before it reaches the natural state of sweet fruits.

The ease and readiness with which the nutritious, health-promoting elements of fruits are digested, and the difficulty attending the digestion of the same elements in starchy foods, is only part of the problem.

Constipation is a concomitant of illness, and constipation is the bane of civilization. Cooked starchy foods are largely responsible for constipation. Health is impossible without natural, free bowel movements.

Upon examination of these two classes of foods, we observe that starchy foods are of a dry nature. They rapidly absorb the fluids of the body. This leads to (1) constipation, and (2) excessive drinking of water and other fluids.

Sweet fruits are not only juicy, but they contain specific acids that are aperient. These acids purify the blood, promote activity of liver and kidneys, and induce a natural flow of intestinal and rectal fluids, by the presence of which bowel movements are greatly and naturally assisted.

A different condition arises when one's food consists mostly of bread, cereals, and starchy vegetables. The dry nature of these causes them rapidly to absorb the body and bowel excretions. These excretions thus become insufficient to meet the body's normal needs. There is then a craving for water.

From this course comes the habit and necessity of man's drinking much more water than primitive man drank, if he drank any at all. It has led many to the practice of "flushing the bowels," to aid their movements, both by the use of the enema, and by the practice of drinking copious quantities of water upon arising in the morning.

The matter of decomposition and fermentation must also be noticed. The first law of the animal economy is to provide for nutrition. Upon adequate nutrition depends health and the existence of the body.

If food is not easily digested, it remains unusually long in the stomach before digestion occurs. The body, during the delay, is not in any degree nourished by the undigested food. When the time comes that this undigested food is carried on to the second stomach and then rendered soluble and assimilable, the organism must still have time in which to absorb from this food, the needed nourishment.

In obedience to the law of nutrition, the body, in dealing with starch, and all other foods that require considerable time in which to prepare them for absorption and assimilation, has a tendency to retain them for a greater length of time than is natural or healthful, to the end that the requisite nourishment may be obtained.

The nutritious elements of fruits are already prepared for absorption and assimilation by the natural process of

ripening, as we have said, and are readily and quickly made assimilable in the main stomach, yielding up their nutritive elements in a remarkably short time, and the waste is promptly excreted from the body thru the bowels.

The cooking of foods means disintegration. Disintegration is the first step of decay. In fact, thoroughly cooked foods, which fall apart when a fork is stuck into them, are actually rotten. The rotting process continues with great rapidity when such foods are eaten.

Uncooked cereals and starchy vegetables will remain wholesome for weeks, months, and years. After being cooked, they quickly decompose and ferment.

This material, in the first stages of decay, and thoroughly mixed with various condiments (which make it more harmful), reaches the main stomach, and there undergoes the regular process of digestion, but without any appreciable conversion of the starches into dextrine. In the presence of the heat and moisture of the stomach, the process of fermentation begins almost at once, and progresses rapidly.

When starch is combined with protein, as in the case of bread and meat or crackers and cheese, eaten together at the same meal, the starch lies in the main stomach, undigested, for three or four hours, while the protein is undergoing the first stages of digestion. During this time, there occurs a high degree of fermentation of the starch in the stomach, resulting in the generation of alcohol, carbonic acid gas, and other poisonous substances.

Here is one cause of sour stomach and gas in the digestive tract. By the time this food is ready for absorption, it is as sour as swill, and fit only for hog-slop. But the body must use it to repair its tissue waste and wear.

The organism is an automatic structure. When continually nourished by foods that are slow of digestion, a habit is formed by the body of retaining these foods for a considerable period of time. This is not only conducive to constipation, but it compels the body to repair and rebuild its worn and wasted parts from decomposing and fermenting material, which should have been used several hours before.

However, the body endeavors to avoid all unhealthful conditions. But nutrition being of the primary consequence, the body must at all hazards be provided for, even though constipation is entailed and decomposing and fermenting substances be absorbed and assimilated.

Many persons, guided by no direct principle, except that they do not believe in the practice of eating flesh, have become so-called vegetarians. Cereals and starchy vegetables, well cooked and well seasoned, form the basis of their diet. We have shown some of the results of subsisting on such substances.

By the continued use of these cooked and seasoned starchy substances, the vegetarian weakens his digestive organs and degenerates his cells. That is why he has health no better, and lives no longer, than those around him who are not vegetarians.

Without The Fatal Process of cooking, all flesh, dried cereals and most starchy tubers would promptly pass from human use as substances unfit for food. Without the degenerative influence arising from the use of fire, man would rapidly rise above the low level which his unnatural dietetic habits have reduced him, and would return again to that grander and happier life, thus depicted by the Poet:

"The golden age was first, when man, yet new,
No rule but uncorrupted reason knew;
And, with a native bent, did good pursue.

Unforced by punishment, unawed by fear,
His words were simple and his soul sincere.
Needless was written law, where none oppressed;
The law of man was written in his breast.
No suppliant crowds before the judge appeared;
No court erected yet, nor cause was heard;
But all was safe; for conscience was their guard.

"The teeming earth, yet guiltless of the plough,
And unprovoked, did fruitful stores allow:
Content with food which Nature freely bred,
On wildings and on strawberries they fed;
Cornels and bramble-berries gave the rest,
And falling acorns furnished out a feast.

"The nerves that joined their limbs were firm and strong;
Their life was healthy, and their days were long;
Returning years still saw them in their prime;
They wearied e'en the wings of Measuring Time:
No colds nor heats, no strong diseases wait,
And tell sad news of coming hasty fate;
Nature not yet grown weak, not yet began
To shrink into an inch the larger span."

It will be perceived by the Philosophical Mind, that the crowning heights of man's moral nature are attained thru suffering. If it be granted that his subsisting on wrong food is the fundamental cause which degenerates his body and decreases his days, which induces suffering and premature death, it is not difficult to understand that this very discipline will lead him to discover the true Highway to Health and Happiness.

We do know, that however instinctive and mechanical man may have originally been, it is evident that he was not to remain in that primitive state. He was to evolve and develop into a rational and accountable being.

Yet, in order for him to rise to that plane, where he could—

"become as one of us, to know good and evil,"

it was necessary for him first to eat—

"of the tree of the knowledge of good and evil."

By a long and laborious journey, man must stray from the strait and narrow path of virtue and morality, into the wilderness of ignorance and error, in order to learn to respect and reverence the infallibility of Eternal Intelligence. He must unwittingly endure much painful experience, in order to acquire some useful knowledge; and he must patiently suffer from the evils of his wrongs, in order to appreciate the value of obedience.

Chapter No. 94 FOOD COMBINATION

The Eternal Law of Diet was laid down in Elementary Orthopathy, Lesson No. 21, as follows:

1. *Uncooked food is the only natural food;*
2. *Unmixed food is the only natural food;*
3. *Unseasoned food is the only natural food.*

In the same course, Lesson No. 12, Food Classification and Food Combination are discussed by Shelton. But we shall observe the subject again because of its vast importance.

The chemist knows that combinations of substances produce certain and positive changes in the constitution of the difference substances. These changes involve reactions distinctly different, both in structure and character, from the original substances themselves. This is true, whether the substances are organic or inorganic, and whether in the chemical laboratory, or in the body laboratory.

In organic chemistry, the student realizes the danger attending the mixture of elements, which in themselves are in-

offensive. Sulphur, hydrogen, and oxygen, while unmixed with one another, are not only harmless, but are body-sustaining elements. When combined in certain ratio, they produce a corrosive poison.

Glycerine, nitrogen, and sulphur, as separate substances, can be handled without harm. But when brought together under certain chemical conditions, they evolve highly dangerous explosives—nitro-glycerine and dynamite.

Gasoline is harmless in itself; but a dangerous explosion occurs if a lighted match is applied to it. The same with gunpowder.

Explosions within the body are produced in accordance with the same laws and conditions as obtained in chemical explosions without the body. But the effect of the former is not in so immediate evidence.

A substance which, in appearance and character resembles dynamite, occurs in cane and beet sugar. This substance, being extracted from its parent compounds, enters the stomach under the strain of unsatisfied affinities, and by the force of cellular vacuum, disintegrates in the digestive process with a violence of a veritable chemical explosive.

When sugar is mixed with food, the law of chemical affinity comes into operation. Hence, sugar on breakfast foods, syrup on hot cakes, jam on biscuits, bring about reactions of various acids which, in turn, result in fresh departures of degeneracy in accordance with the additional foods indulged at the same time. For it is logical that in a vessel seething with chemical reactions, each additional substance precipitated into the mass is caught in the general disintegration.

If milk, meat, cheese, eggs, are added to the sugared mush, fresh reactions will occur in terms of fatty acids, butyric acids, carbonic acids, oxalic acids, ammonia, and low grade alcohol—each ingredient constituting a health-destroying substance.

One prolific source of poisonous acids in the body is fermentation. This state results from mixing at a meal, such substances as sugars, starches, and proteins.

Cereals and cereal products, including flours made of various grains, are composed chiefly of starch. These, with various kinds of meat, milk, eggs, and cheese, are the staple articles of modern diet.

The digestive tract of him who feeds in this fashion, is similar in its condition, to the malt vat of a brewery, or the mash tub of a distillery, filled with sour, fermenting grain.

Grain alcohol and carbonic acid gas, generated by fermentation in a brewery vat, is produced by a process similar to that performed by and in the human digestive machinery. Consequently, those who feed freely on a mixed diet of sugar, starches, and proteins, do in this way convert their bodies into human distilleries, bringing the devout prohibitionist, who feeds in this manner, down to a level with the drunkard of the saloon, so far as the internal state of the body is concerned.

Excessive starch and sugar consumers, which includes the eating of candies, are continually in a semi-intoxicated state, although they may not know it, and may be loathed to believe it. They have an abnormal craving for sweets and starchy foods, which shows a perverted condition of the organism.

Such persons may well be classed with the drunkard who must have his daily dram, or experience what he terms nervousness, often accompanied with headache and constipation. The chief difference here is, the drunkard gets his alcohol from a bottle, while the starch-sugar eater generates the alcohol within his body by a process of intestinal fermentation—from which rises not only a semi-intoxicated state, but the

serious irritation of the mucous lining of the digestive tract, that leads in time to rhinitis, tonsillitis, bronchitis, gastritis, appendicitis, and all other "itises" listed in medical books.

Sour stomach and gas in the bowels are due to the alcohol and carbonic acid gas produced by fermentation.

The production of acids in this way, may continue day after day for years, depending upon the eating habits of the person. It is a continuous process, like that of a brewery running day and night.

This is the state of the body of a man that weighs 170 when he should weigh 130. His body is bloated by constipation, by accumulated waste, by excess liquids, excreted in the intercellular spaces of the body to allay irritation and protect the cells from the injurious effects of acids.

When these patients fast, and follow the fasting with a diet of uncooked fruits, berries, and green vegetables, the bloated condition gradually disappears, as the waste and excess liquids are eliminated, and the patient has a considerable loss of weight. For this treatment and diet relieve the constipation and restore the normal alkalinity of the blood and body. The water with which the body was bloated, being required no longer to dilute and weaken the harmful acids, is thrown off.

The decrease of weight under this kind of care frightens uninformed patients. They observe their weight decreasing, and not knowing that it means health improvement, they lose courage and return to the old acid-building, constipating diet.

Such patients need advice from Orthopathic doctors who understand health building measures. Such doctors are not found in the ranks of the medical profession—and we regret to admit that many of our drugless doctors, not being taught these things in their schools, have failed to educate themselves along these lines by reading health journals that are devoted to this character of work.

Oysters, eggs, cheese, meats and flesh of all kinds, including fish and fowl, are serious offenders of the acid-forming foods. This fact in itself is evidence that they are not foods for man, but poisons. Cereals, breakfast foods, and breads are also acid-forming substances.

But the acid fruits, such as oranges, grapefruit, tangerines, grapes and apples, and the acid vegetables, including tomatoes, when eaten uncooked, favorably increase the alkalinity of the blood. The citric and malic acids of the fruits mentioned, combine with such alkaline substances as sodium and potassium, and when consumed uncooked, they have an alkaline reaction that is beneficial to the body. For this reason, the eating of oranges, grapefruit, grapes, and apples will rapidly change the urine from an acid to a basic reaction.

In general, all uncooked vegetables, nuts, berries and fruits, with the exception of prunes, plums, and cranberries, are alkaline in their final reaction within the body. The acid of prunes, plums, and cranberries is inconsequential, except in certain serious disorders.

Also, the fresh juices of oranges, grapefruit, or grapes, are excellent to dissolve acid crystals lodged in the body. Use distilled water if these fresh juices cannot be had.

When a person turns over a new leaf, changes his mode of living, and begins to feed on unfired foods, he should not grow alarmed because his weight begins to fall, or because he appears to lose some energy.

The decreasing weight indicates the elimination of waste, and of liquids no longer needed to dilute harmful acids in the body. The apparent loss of energy results from the diminishing irritation of the acids, which the body has accustomed itself to tolerate.

For the same reason, the smoker or drinker feels weak

and nervous when his tobacco or his liquor is taken from him. But if he will persist in his good resolution, he will receive his reward, for he will observe a favorable change in his condition. His health will improve, his old headache, lassitude, weakness, nausea, and sleeplessness will disappear, and renewed energy, that buoyant energy that he has not felt for years, will begin to creep into his frame, throb thru his form, and permeate every fiber of his being.

The same happy results will reward the work of him who subsists on unfired food and drinks only water—the only natural food and drink of man.

Lesson No. 33, Chapter No. 95

FOOD COMBINATION (Continued)

Sugar and starch should not be combined at the same meal. Starch, when digested, is transformed into a kind of sugar. The digestive process requires quite a period of time. But sugar is dissolved in the digestive tract and passed into the blood in eight to ten minutes. Some sugars show in the blood within three minutes after being ingested.

When sugar and starch are mixed at a meal, the starch is seldom used, as the needs of the body for sugar are supplied by the sugar eaten, leaving the starch unused. The unused starch ferments and produces harmful acids.

Acid fruits and acid vegetables should not be eaten with starches, for this delays stomach digestion and induces fermentation.

The oxalic acid of the tomato will delay stomach digestion of starch more than 200 per cent. The malic acid of a moderately sweet apple will delay stomach digestion of starch even longer.

But acid fruits and acid vegetables are valuable foods. They should be eaten separately, or eaten with proteins. They should never be mixed with starches.

Below we list four groups of food:

No. 1—Fruits

Grapes	All berries
Oranges	Plums
Grapefruit	Prunes
Apples	Persimmons
Peaches	Pineapple
Pears	Gooseberries
Apricots	Currants
Cherries	Dates
Figs	Raisins
Lemons	Limes
Melons	Cantaloupes
Tomatoes	Cucumbers

No. 2—Starches

All Flour Products	Cereals
Dried Peas	Potatoes
Dried beans	Turnips
Dried corn	Carrots
Peanuts	Radishes
Bananas	Parsnips
Rice	Macaroni
Sugar	Syrups
Candy	Cereals

No. 3—Non-Starches

Asparagus	Lettuce
Cabbage	Celery
Green Onions	Endive
Green peppers	Spinach
Green beans	Parsley
Green peas	Swiss Chard
Cauliflower	Honey
Sorghum	All greens

No. 4—Proteins

All meats	Eggs
Milk	Cheese
Fish	Nuts
Fowl	Oysters

Those who insist on mixing their foods, should not mix Starches with Proteins. But Non-starches may be mixed with either Starches or Proteins.

In mixing foods, digestive troubles increase. Two different articles of diet double the digestive problem; three articles present six problems; four articles present twenty-four.

The combination of foods furnishes one prolific source for the prevalence of stomach, bowel, and digestive troubles, followed by all phases of ailments.

Chapter No. 96

EXCESSIVE EATING

Excessive eating is a habit that brings man unmeasured misery.

When too much food is eaten, too much is absorbed into the blood, provided the nutritive processes are active. Hence, the blood becomes charged with surplus food that the body cannot use. This surplus is either excreted as waste, or stored away in the body as deposits, some of which forms fat and tumors.

If the storing occurs in the joints, the result may be rheumatism or gout, and at times even a complete locking (ankylosis) of the joints may occur. If the storing takes place in the walls of blood-vessels, they become thick and inelastic.

No matter where the deposits occur, some of them will be found in the walls of blood-vessels. One result of overeating is premature ageing by a stiffening of joints and tissues, and a hardening of blood-vessels. In this state of the body, degeneration increases and progresses at a rapid rate.

In the past, medical institutions have measured the amount of food that man could coax down his throat, and this they have termed the normal amount that man should eat.

The truth is the average individual eats three or four times as much as his body needs, or can digest, assimilate and use. Many eat five to six times too much.

It is the general belief that the more men eat, the better. Medical institutions teach that it is necessary to eat heartily when well, to retain health and strength. When ill, it is necessary to consume much food to regain lost health and strength.

"Eat all you can of nourishing food," is a common prescription of the physician. It sounds reasonable to the unthinking masses. The physician is not to blame for this belief. He is taught this in his school; and few physicians ever do any original thinking.

Dr. Samuel G. Willan, a prominent medical man, wrote:

"All the most prevalent and fatal maladies now afflicting the human race are either directly or indirectly traceable to a dietetic origin. . . .

"Shall we turn to the medical doctor for dietetic advice? Such a course would be absurd; for while the laity usually looks to the doctor, the doctor is usually a dietetic dunce, who knows not how to feed himself, who sheds his teeth, his hair, and his healthy color quite as young as any of his patients, and who is a confirmed and incurable dyspeptic at thirty-five."—Health Culture.

Dr. M. Hinhede, Commissioner of Health for Denmark, in his address at the Third Race Betterment Conference, Bat-

tle Creek, Mich., January 2-6, 1928, made the following remarkable observation:

"English statistics show the different death rates for 98 different trades and professions. Examining the causes of death most closely related to the nutrition, we notice that the very poorest of the classes shown, the farm laborers, working for two to five shillings per day, and whose diet consists chiefly of cereals, potatoes, oleomargarine, milk and a small amount of pork, have by far the lowest death-rate due to nutritional diseases.

"On the other hand, the physicians and the butchers, who no doubt eat considerable meat, have about three times the death rate due to these causes.

"It is not easily overlooked that out of 98 occupations listed, there is not one that shows as high a death-rate, due to diseases of digestion, as is shown for the medical profession."—*Good Health, March, 1928, p. 34.*

Thomas Parr lived to be 152 years old. Even at that age his death was not due to old age, but to a sudden and drastic change in his habits of eating. All his days he had lived on simple and frugal fare; but the fame of his age reaching the King, he was invited to London, and there he feasted so lavishly that he died of it.

According to Xenophon, King Cyrus of Persia accustomed his people and himself to subsist on one meal a day.

Chapter No. 97 WHAT FOOD TO EAT

Meat, milk, eggs, bread, potatoes, coffee, and tea are the staple articles of diet in the United States. Medical institutions raise no voice of protest against this menu. On the contrary, they teach that this is the ideal diet; that the food must be well-cooked, and be eaten in ample quantities by all who crave vim, vigor, and vitality.

They forget that the horse, elephant, and ox live and thrive all the days of their life on a diet of grass and green leaves.

They forget that the camel, rhinoceros, and hippopotamus never eat bread, meat, eggs, potatoes, and coffee.

They forget that the dinosaur, megalosour, megatherium, and mammoth, the mightiest beasts that ever roamed the earth, were herbivorous animals.

They forget that Milo the Greek, perhaps the strongest man of history, was a disciple of Pythagoras, and a strict vegetarian and fruitarian.

They forget that the giant gorilla feeds on fruits and herbs, and is so powerful that no animal of the wild dares attack him.

Willan further observes:

"Where do ye find such muscles of steel and rubber as are those of the agile antelope and the equally agile deer that run with the wind for a day and a night without tiring?"

"Or where equally keen senses of sight, hearing, and smell; where such sleepless sharpness of instinct, such tenacity of life, such graceful and perfect physical development?"

"The huge elephant, with the strength of a steam engine, and an intellect that lacks only the faculty of speech to make him a talking philosopher, lives half a dozen centuries, practically on grass."—*Health Culture, May, 1928.*

The renowned wrestler, George Hackenschmidt, known as the Russian Lion, weighing 220 pounds of bone and muscle, toured the world, wrestling all comers, and throwing the huge Greek and Turk without difficulty. Of his diet, Bernard remarks:

"His breakfast consists of fresh lettuce and five or six

Brazil nuts. The Brazil nuts and some sweet fruit are the only really heavy food he eats. All his other meals are composed of fresh fruits and fresh vegetables, eaten raw."—*Life and Health.*

An average sized ape can pull four times as much as a man of the same weight. The ape lives on fruits, berries, and tender shoots. A gorilla is ten times stronger than a man of the same weight; and it subsists on food similar to that of the ape.

Notto Fipp, a Norwegian vegetarian, recently walked 250 miles, averaging over 50 miles a day. His diet consisted entirely of bananas and milk. His stamina and endurance increased as he put the miles behind him, and the end of his walk found him in excellent condition. Experience shows that even better results would have been obtained, had distilled water taken the place of the milk.

Carl Mann walked from Dresden to Berlin, 123 miles, in less than 24 hours. He ate nuts, fruit, lettuce, and other green vegetables.

Ripley, in his *Believe It or Not*, of February 19, 1931, says that a Benares Hindu, who has been a vegetarian for forty years, lifted 960 pounds while lying on his back.

Randal investigated the residence of 1,280 persons who lived upward to 100 years, and found that all except 65 lived in semi-tropical zones, and were eaters of fruits and vegetables.

The shortest lived people are the Eskimos, living in the cold north, and eating largely of animal flesh.

Roddis found that in the tropics, the blood-pressure of northern whites was from 10 to 15 mm. lower than in the temperate zones.

Mukherjee found that the basal metabolism was lower in the tropics than in Europe.

Twice as many people past the age of 60 years, die in January in the temperate climates as in July. The four colder months yield half the deaths of the entire year.

These investigations furnish more evidence that the tropics and semi-tropics are the natural home of man, and that unfired fruits and berries are his natural food.

THE WILD HUMAN

The press of December 7, 1930, reports an incident that is of profound interest to prove what is man's perfect food.

A Negro woman in South Africa went to the field one day to hoe corn. She took her baby with her, and fixed a place for it near the edge of the field, where it would be easy to see the child, as she glanced up occasionally.

The woman was working diligently when a noise attracted her attention. As she turned to look in the direction of the child, she saw a large baboon seize the infant and scamper off into the jungles.

Hunting parties were organized to search for the child. They returned empty-handed.

Thirteen years passed. One day a party of hunters came upon a band of baboons. They hastily fled, with the exception of one, which could not move so swiftly as the rest. It finally turned aside and with remarkable agility climbed to the top of a tall tree.

This "baboon" was captured alive and uninjured. It proved to be a Negro boy about 14 or 15 years old.

The boy was taken back to town, and after due inquiry, someone remembered the woman who lost her child. They located her and she claimed the boy.

The boy when captured could not talk, nor walk upright, like a human. Instead, he walked on all fours, like a four-footed beast. The account states:

"The mother cared for the queer creature, teaching him to walk like a man, talk a little, wear clothing on important

occasions, and to drink out of a cup, instead of sticking his face in the stream, baboon-fashion.

"But she has never been able to make him eat cooked food. He lives on raw vegetables and fruits, raw fish and eggs, and such flies and bugs as he catches and eats alive."

This is the way in which this human eats now, after being restored to his mother for six years. The boy lived on unfired and unseasoned food for thirteen or fourteen years, and the habit has become so firmly fixed, that the mother has not been able to change it.

It is also said that the boy is "tremendously powerful." He can use a 14-pound sledge hammer in the blacksmith shop and turn a heavy lathe all day, without showing the slightest signs of fatigue.

But the ways of civilization will finally break down his wonderful constitution.

Chapter No. 98

MONISM AND DUALISM

Dualism, as used in Philosophy, is the doctrine that recognizes two radically independent elements as underlying all known phenomena. In Theology, it is the recognition of two radically different principles in operation, one good (God), the other bad (Satan).

In Lesson No. 8, Chapter 23, the student is taught the Eternal Unity of all things. From this fact it is observed that the Doctrine of Orthopathy is the Doctrine of Monism.

The student is cautioned not to misunderstand or confuse this term. The Monism of Orthopathy is not the Idealistic Monism of Christian Science, nor the materialistic Monism of physical science. The former recognizes the existence of Mind only. The latter recognizes the existence of Matter only.

Orthopathy does not, like these schools, accept and consider only *one main aspect of the Whole, and ignore the rest*. Those systems that do so, are groping in the dark. They are always striving to correct their observations and harmonize their conclusions.

The school of Dualism recognizes force and matter, deity and devil, heaven and hell, good and bad, hot and cold, positive and negative, health and disease.

Orthopathy holds that these are only dualistic phases of one and the same thing—not unlike right and left, front and rear, up and down, wet and dry, which qualities are determined entirely by the view-point of the observer.

The Monism of Orthopathy is unqualified by any adjectives. Orthopathy reasons from an Absolute Unity of all that is; from an Unconditioned Reality, which is all that the Universe is.

The Unconditioned Reality of Orthopathy is not a remote being of unlimited power, directing the operations of the world at long range, from afar. It includes all that is; it is immanent in all things, all substances, all forms, manifesting in monkey and man, and constructing them into individual centers of consciousness, in pursuance with certain Principles of Existence, as Vital Force, Gravity, Polarity.

The Unconditioned Reality is the source of all phenomena, of all existence, of all formation and function, and is recognized by Orthopathy as constituted in the Eternal Trinity of Intelligence (Law), Force, and Matter.

The exponents of Dualism believe in the fossilized doctrine that God has a rival in Satan; Good, a rival in Bad; and Health, a rival in Disease. Since they have Satan striving with God for honor and power, so they have Disease

striving with Health for to gain the mastery of the Living Organism.

Since Satan is considered by this ancient belief as a destructive entity, so also is Disease considered as a destructive entity; and Doctors of Medicine have striven as diligently to conquer Disease, the destructive entity in their field, as have Doctors of Divinity to conquer Satan, the destructive entity in their field.

In both instances, the "learned" Doctors have always prosecuted a losing battle. But they have never thought it worth while to pause and seek for the reason why, by a study of fundamental principles. This grave omission is explained by realizing that these Doctors are only human, working for gain, and satisfied so long as their labor produces profits, prestige, and power.

If these Doctors should seek as eagerly to solve the reason for failure, as they have to solve the result, they would make the discovery of their lives; for they would discover that down thru the ages they have been waging a war against entities that have no existence beyond the range of their fertile imagination.

Orthopathy holds that there are no anti-thetical deities nor entities. There is no such entity as Disease, any more than there is such an entity as the Devil. The decadent condition of man, the multitudes of invalids, the premature deaths of professors and preachers, the overflowing hospitals—these cry out in protest against the preposterous practice to which the race has been led by the false doctrine of Dualism.

Deity and Devil, Good and Bad, Heaven and Hell, Hot and Cold, Health and Disease, represent two phases of the same thing, flowing from the operation of one law, and producing results in harmony with the conditions supplied.

Good Health results from sowing the seeds of Health. Bad health results from sowing the seeds of Bad Health.

Universal Law, like all parts of Existence, manifests polarity. It has its positive and negative, its constructive and destructive aspects. It works both good and evil, as determined by the conditions supplied.

The constructive aspect of the Law is invoked by supplying favorable conditions. As to the living organism, such action results in normal physiology, which produces and maintains a healthy state, and leads to long life.

The destructive phase of the Law is invoked by supplying unfavorable conditions. As to the living organism, such action results in abnormal physiology, which produces and maintains an unhealthy state, and leads to early death.

The destructive process, flowing from the destructive phase of the Law, may be halted and stayed only by correcting the conditions responsible. That is the beginning and end of all treatment and cure. When that has been done, it invokes the operation of the constructive phase of the Law. For this there is no substitute.

To try to stop the degenerative process by the use of drugs, vaccines, serums, treatment, or by the employment of prophylactic or therapeutic measures, without changing the conditions responsible, is no more effective than trying to stop the ceaseless motion of the surging billows of the briny deep by blowing one's breath upon them.

Chapter No. 99

UNITY OF CAUSE

Hippocrates, a famous Greek physician, born in the island of Cos, 460 B. C., and called the "Father of Medicine," taught the Unity of Disease in these words:

"All diseases resemble each other in their invasion, march,

and decline . . . The type of all diseases is one and the same."

Thomas Sydenham, a famous English physician, born at Wynford Eagle, in Dorset, England, 1624 A. D., called the English Hippocrates, agreed with his great predecessor in the Unity of Disease.

Sydenham believed not that disease is a destructive entity, as taught by modern medical institutions. In 1666 he published his work, "Methodus curandi Febres," which opens with the almost Hippocratic phrase—

"Disease, in my opinion, how prejudicial soever its causes may be to the body, is no more than a vigorous effort of Nature to throw off the morbid matter and thus recover the patient."

Medical institutions have been reared on the foundation of anatomy, physiology, and pharmacy. But all the anatomy, physiology and pharmacy in the world will not aid the practitioner, who is ignorant of the natural history of human ailments.

This is the great truth that was firmly seized by Sydenham. The natural history of disease was a subject that he pursued with lifelong devotion, with unflinching and almost fanatical zeal. His discovery was that "disease" is a purifying process, by the means of which the body recovers its equilibrium, if and when not prevented by the treatment of the physician.

Primarily and fundamentally, all disorders go back to the blood for their origin and sustenance, as explained in Lesson No. 27, Chapter No. 82.

As surely as every word must go back to the alphabet for its letter-element, that surely must every disorder go back to the blood for its origin and nourishing-element.

The symptoms manifested by the body in so-called disease, are not due to the *action* of internal poisons, or germs that are trying to destroy the organism. They are due to the reaction of the body, and rise as a result of a regenerative process occurring in the body. When the doctor treats these symptoms, he is trying to counteract and suppress the outward signs of the body's regenerative process.

The nature and locality of the symptoms are what determine the jaw-breaking names given them by medical institutions, as they attempt, for their gain, to awe and mystify a deceived people.

The student who has grasped the fundamentals of Orthopathy, observes that all illness comes from the Unity of Cause at the Center, regardless of the names given to the innumerable Variety of Appearance at the Surface. He knows how futile it is to search for symptoms (symptomatology), how fruitless it is to name these symptoms (diagnosis), and how useless it is to treat and suppress these symptoms (therapeutics).

When we study Effects, we think from the eye. When we study Cause, we must necessarily think from the understanding, since all causes are invisible. But medical men study effects, and think from the eye. Of such people Swedenborg observes:

"They think from the eye, and are not able to think from the understanding. Thought from the eye closes the understanding, but thought from the understanding opens the eye."

The Orthopathy is taught to think from the Understanding (cause at the center), and not from the eye (appearance at the surface). Consequently, he directs his remedial efforts to the Unity of Cause at the Center (blood), and not to the Variety of Appearance at the Surface (Symptoms).

When the Unity of Cause at the Center (blood) grows

normal, the Infinite Variety of Appearance at the Surface will wither and die, as do plants in a field after their roots are cut in sunder. These plants may be wheat, corn, oats, grass, weeds, or trees; but when their roots have been severed, they wither and die, regardless of their names.

The surface symptoms of sickness may be diagnosed as mumps, measles, catarrh, cancer, asthma, smallpox, and so on, but they cannot live and thrive when the blood has been purified.

QUESTIONS FOR LESSONS NOS. 29, 30, 31, 32, 33.

1. (a) State the difference between a young and an old body. (b) What agencies are active in producing this difference? (c) How is man to overcome the work of these agencies?

2. (a) What element composes the largest part of the body? (b) Give the source of its supply. (c) Is good health and long life possible to a man who spends his days in a large city? (d) To a person who works in a place where the air is foul?

3. (a) Why does Dr. Clements live in a small town instead of in a large city? (b) What happened to him in December, 1929, when giving lectures in Cincinnati? (c) State why his lungs are so sensitive to foul gases while other men live for years in Cincinnati and appear to suffer no ill effect. (d) How should man's home be heated?

4. (a) After air, which is man's next greatest food? (b) Name the kind of water that man should drink. (c) Name one cause for stones in kidneys and bladder. (d) How may this condition be prevented?

5. (a) Was it intended that, in order to produce food from the soil, man should labor as he does under civilized conditions? (b) Is such toil conducive to good health and long life? (c) Could the necessity for such toil be obviated if man returned to his original food?

6. (a) Name the substances that man should eat. (b) Which of these do you consider the great food? (c) Give your second choice.

7. (a) Does it require much labor to produce the natural food of man? (b) Would it be necessary for man to drink water if he ate natural food? (c) Why do medical doctors warn people not to eat so-called acid fruits? (d) When these acids fruits are eaten, what is the reaction during digestion?

8. (a) Did primitive man eat cooked food? (b) Name some destructive changes that occur by heating and cooking food. (c) Name some destructive changes that occur in the body by eating cooked food.

9. (a) Is cooked food easier to digest than uncooked food? (b) Does man's natural food contain much starch? (c) Is it well to eat freely of nuts?

10. (a) Why should starches and proteins not be eaten together? (b) Does it retard digestion to eat these two kinds of food together? (c) Do starchy foods help to produce constipation?

11. (a) Give the Eternal Law of Diet. (b) Give some reasons why all food combinations are harmful. (c) Give some causes of sour stomach and gas in bowels. (d) Name some acid-forming foods.

12. (a) Do acid fruits and acid vegetables, if eaten uncooked, produce acidosis or correct it? (b) Why does man appear to lose energy when he first changes to uncooked foods? (c) Should sugar and starch be eaten at the same meal?

13. (a) Should starches and proteins be combined at a meal? (b) What occurs in the body if man overeats?

14. (a) How have medical institutions determined the amount of food man should eat? (b) Has good or harm resulted from such determination? (c) Do medical doctors know anything about diet?

15. (a) In England what profession has the highest death-rate from digestive disorders? (b) Which is most harmful, overeating or under-eating? Give reasons for your answer.

16. (a) Give the diet recommended by medical institutions. (b) Give the diet that produces good health and long life. (c) If man eats only fresh fruits, will his body get the amount of starch and protein it needs?

17. (a) Where is man's true home, according to in-

vestigations made? (b) Are tropical countries large enough to hold all the people now on earth? (c) If man grew up on unfired food, would he have a desire for fired food?

18. (a) State the doctrine of Dualism. (b) Of Monism. (c) State the difference between the Monism of Orthopathy and the Monism of Christian Science. (d) Of Physical Science.

19. (a) State how the doctrine of Dualism has furnished profitable employment for Doctors and enslaved the masses. (b) State why the Doctors oppose the Monism of Orthopathy. (c) If the Monism of Orthopathy were accepted by the world, give some of the chief results that would follow.

THE MAGIC WAND



The modern world knows little about the real symbolism of **The Magic Wand** (Ancient Caduceus). Encyclopedias tell almost nothing that is true about it. This was the Ancient Symbol of Redemption, concealing the secret of the Serpentine Fire, the Fiery Serpent of Moses, the evil Serpent that coaxed Eve to eat of the Forbidden Fruit. This Mystic Fire symbolizes the Vital Force generated in the Sacral Plexus. When not consumed in procreation, it flows up the Spinal Cord to the Brain, flooding the Mind with Mental Light by activating the Pineal Gland in the Brain, called the Single Eye in the Bible. This was symbolized as the Marriage of the Lamb, the Bride being the Pituitary Gland of the Brain.

The Book With Seven Seals described in the Bible is man's body, with its Seven Control Centers, extending from Brain to Spinal Base, and called Seals because in the average body they are semidormant, and Consciousness functions on a very low level. When the rising Serpentine Fire activates these glands, it floods the Mind with Mental Light, causing an increase in Consciousness that makes the Sage. No work like this, written in simple language;

"I've read the **Magic Wand** and learned from it more than all my years in 'Mystery Schools'. It would be wonderful if more people would seek the real facts of Life."—**Dr. A. M. Jenkins**.

"A Reader sent me **Mystery Man Of The Bible** By Professor Hilton Hotema. For over 40 years my belief has been along the lines of this work, which I regard as the greatest literary masterpiece of all time. He who has read the Bible is missing the most important part of his education if he fails to read this work, and I most highly recommend it to friends and foes alike."—**A. D. Barber, Barber Scientific Foundation, Washington, D.C.**

In the Bible Astral Projection is called "In The Spirit." The scribe of Revelation said he "was the Spirit." Who was he? A profound mystery solved by Hotema in his marvelous work, **Son Of Perfection**... Revelation was compiled from a Hindu Scroll by the great Philosopher of the First Century A. D. It had been written thousands of years before that time, and dealt, in baffling symbolism, with the Astral Body, analyzing the sensations of the Neophyte as he went thru the Ritual of Initiation in the Ancient Mysteries, and was taught how to attain Astral Consciousness by blacking-out physical Consciousness. (**Son of Perfection** Volume One **Son of Perfection — Volume Two**)

Prof. Hotema has acquired much more vital knowledge relative to Creation, Life and Man since writing this course in 1930 and it is presented in his works published by **Health Research, Mokelumne Hill, California** — since the year 1956...



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Lessons Nos. 34, 35, 36, 37

Lesson No. 34, Chapter No. 100

UNITY OF PROCESS

The student was informed in Lesson No. 1, Elementary Orthopathy, that Orthopathy, the name of our Science, was coined by Isaac Jennings, M. D., of Oberlin, Ohio.

Robert Walter, M. D., a shrewd physician and able practitioner, said of him:

"Dr. Jennings was a regular practitioner of the old school who located at Oberlin in its early days. He had a remarkable experience; was twenty years a regular practitioner; twenty years a practitioner with bread pills and colored water, and twenty years he practiced with no medicine or any other treatment than simple nursing, and claimed to enjoy wonderful success in the later years.

"In these years he sought to establish a system that he called Orthopathy. His leading thought was, 'Disease is right action.'—Exact Science of Health, p. 238, Vol. 1, 1903.

In his work, Medical Reform, published in 1847, Jennings makes this statement:

"Human Life consists in or results from the union of a principle, denominated the vital or living principal, with matter curiously and wonderfully wrought into a system of organs. . . .

"This principle, and this alone, produces, sustains and controls all vital action in man, whether perfect or imperfect. No other principle, power or force can supply its place, and perform living action in its stead. . . .

"This vital principle, which generates the living fibre, and produces and controls its action, is itself under law—a law which is as fixed and uniform in its operation as the law of light or heat, or the law of gravitation, or any physical law. The tendency of all its motions is in one direction, towards the point of perfect health, and that too with all its force."—pp. 43, 46.

In his work, Philosophy of Human Life, published in 1852, Jennings said:

"The shortest definition that can be given of disease Orthopathically is, negation of or impaired health; feeble vitality. The orthopathic standpoint is, that life is a unit, that healthy action and healthy condition flow as naturally and as easily from the presence and unobstructed exercise of

vitality, as that rain or snow descends from the clouds, or vapors ascend, or as that any other phenomena in nature occurs by the operation of natural law."—p. 98.

On page 149 he states:

"If the Orthopathic view or theory of disease is correct, it follows conclusively that what is commonly called disease, is merely a revelation of the condition of the system; that the phenomena or external manifestations of disease are indicators of the state of vitality in the part or parts in which the developments are being made; that the symptoms denoting 'a change from the natural condition of the function or structure of the body,' do not constitute the difficulty, as is generally supposed, but serve to point out the seat and nature of it, and in some measure, its extent."

Walter says that "the force of disease is the patient's Life Force." He adds:

"Vital force is one of the trinity of forces, and the source of all phenomena of life. In the first place, it produced the organism by a process of reproduction of the cell, which process is always going forward, developing, producing, repairing, every organ of every organism.

"The force that does all this is Vital Force. When it does it easily, comfortably and even pleasurably, the process is called health; but when for any reason the work becomes labored and perhaps painful, the same process is known as disease."—Exact Science of Health, p. 114.

On page 171 Walter observes:

"The ordinary work of Vital Force consists in building up the vital organism, as a house in which to dwell and a machinery through which to work. This involves a process of repair, which, as every one knows, is always being carried forward. For work always means wear and tear, and these always involve repair if the work shall continue.

"As long as these processes are carried forward easily, they are those of health. It is only when extraordinary processes of repair are required, or when the power of repair has for some reason become insufficient to the work, that laborious and even painful operations follow."

We have quoted these eminent physicians as fully agreeing with us, that in the Living Organism there is but one Process.

This process rises from the presence and power of the Life Principle, operating in the machine through which it works. In its operation, it manifests polarity. It has its positive and negative, its constructive and destructive aspects. It works both good and evil, *but these states are determined always by the conditions supplied.*

When the conditions of Health are supplied, the process rising from the operation of Vital Force, flows silently, smoothly, and unnoticed, as deep water. But it becomes rough and boisterous when these harmonious conditions are changed, as where the peaceful stream meets the rough, rocky rapids. This state is what the world calls disease.

As to the stream, it is not the nature of the water that changes. The change comes from the condition of the bed over which the water flows. The bed, now being rough and rocky, causes the hitherto silent stream to leap and bound and foam and roar.

Likewise, in the operation of Vital Force thru the organism, it is not the Process of Life that changes when the state of discomfort, called "disease," ensues. It is the road over which Life travels, the condition under which Life operates.

The Process of Life, when undisturbed, is passively existent, flowing smoothly and silently, preserving things as they are. But like the placid stream, it is ever ready to respond to changed conditions.

The changed conditions involve all things that threaten the continuous and harmonious existence of the Organism. Then the Process of Life, gliding smoothly and silently, quickly institutes the process called disease—leaping, bounding, foaming, roaring—in response to the first Law of Life—the Law of Self-Preservation.

When the Process of Life institutes the process of "disease," it indicates the waging of a battle against the degenerative state occurring within the body.

The resultant leaping, bounding, foaming, roaring of the battle at the Center, shows at the Surface in various symptoms, such as vomiting, diarrhea, chills, fever, skin eruptions, etc.

To these various signs of disturbance within the body, medical institutions have attributed much mystery and attached numerous names. They term them "diseases"; declare them to be due to many causes, most of which are said to be unknown; and claim that they can be "cured" with drugs, poisons, extracts of animal glands, knives, etc.

Accordingly, with these things and substances the medical doctors proceed to interfere with the perfect plan of Eternal Intelligence to protect and preserve the Living Organism, just as tho' Eternal Intelligence were a blind idiot and a fool.

With the Principles of Orthopathy in mind, the student knows that within the body are the sole and sufficient remedies for the correction of its disorders. He inclines to the opinion that the initial impulse and substantial action within the living organism is always superior to and sovereign over any reactions induced from without. He exalts the internal, constitutive and formative powers of the body, and makes them primary and paramount.

The Orthopath regards the living organism as the supreme mechanical masterpiece, in which alone are superintended and supplied the processes and products, in the exact quantity and quality which the body needs, and by which the vital functions of digestion, absorption, assimilation, growth, repair, and health are maintained. He knows that a clean thing cannot come out of an unclean, and that in order to have a substantial and lasting edifice, sound and suitable material must be supplied.

Orthopathy maintains that the body not only has, but is,

the final laboratory, in which are conducted the remedial processes by which it recovers from its distempers, by means of its own appliances and powers. These are accounted so great, that the living organism can bring together in mouth, stomach, and intestine, with the assistance of the circulatory and excretory systems, the materials of its subsistence; in such close contact and under such marvelous conditions of heat, solution and reaction; can infuse their elements with such affinities and make these affinities so operative; can exert such influences, that forthwith some new substance is wrought into its own being, with power and energies the most subtle or the most tremendous. It may be death to anything or everything inimical to the body, or it may exercise on the organism the most blessed virtue, restoring the wasted cells, and carrying into the most secret recesses of the living organism, the potent influences of health.

All this is done in the blood, under control of the brain and nerves, which have all the necessary characteristics of a mechanism constructed for a purpose, as chiropractic shows and proves.

The nerve system, unexhausted and apparently unexhaustible in the complexity and subtlety of its structure and function, with its marvelous ramifications and specialized tissue, permeating every portion of the body, constituting the very essence of every special organ, some of which are the channels of all receptive, and others the channels of all reactive powers, embraces the marvelous of all structures. This wonderful mechanism is designed to receive and use the necessary force to manufacture, maintain, and manage every chemical requisite to every function of the body.

The very essence of living existence, whether in a developing or a developed organism, consists in responses to the stimulations of its environment. Receptivity, however, is superior to stimulation, and initiation to reaction.

Receptivity involves the interpretation of stimulus, and initiation of movement is in order to the adjustment of the organism to nutrient materials. Adjustment is followed by assimilation of the materials presented.

The mechanism of adjustment marks the degree of development in the organism, and in the human body it is practically perfect, as we saw in Lesson No. 20, Chapter No. 56

Eternal Intelligence has made the pathway of living existence amply wide, so that man may have sufficient space within which to travel in safety. When the margin is crossed, man is warned of the approaching danger. He takes the first smoke, and becomes seriously sick. He takes another, and another, and continues until Eternal Intelligence, trying to preserve the integrity of the body, adjusts the balance-wheel; and so the habit is formed.

The Law of Adjustment is invoked by the Law of Self-Preservation, which adjusts the body to an inimical environment that it cannot control nor destroy.

Were it not for the marvelous adaptability of the body to its environment, a few smokes of tobacco would fatally finish the fight. Consequently, regardless of the danger due to the indulgence, thru the mechanism of adjustment, the organism is enabled to tolerate, often for a considerable time, a habit so destructive as the use of tobacco is proven to be.

If the harmful use is exceedingly mild and moderate, it may be indulged for years, perhaps, before the appearance of death, or paralysis, or serious organic derangement. A user of tobacco may live and die at a comparatively old age, as we understand that term. But old age once reached almost to the thousand-year mark.

Because a habit does not appear to be immediately de-

structive, is no proof that it is not detrimental. The one who uses tobacco all his life and dies at 80, most certainly would have survived to a greater age had he not used the poisonous weed.

This is positive, for the body cannot safely nor beneficially be immunized against any poison, much less one so deadly as nicotine. Nor should we be so deceived by appearances.

In order to preserve its existence, the body is able to adjust itself to many injurious conditions and circumstances. But by inches and degrees its integrity is slowly impaired, and its ultimate destruction, by the very substance that it seems to crave, is as certain as the shining of the Sun.

So-called immunization is chronic poisoning. It is established by the continual use of any poisonous substance, as tea, coffee, soft-drinks, intoxicants, tobacco, drugs, serums, vaccines.

By virtue of its power of adjustment to habitual misuse and abuse, a limited toleration by the body of various poisons is thus created.

How is this accomplished? By decreasing the power of the body's vital resistance—its power of self-defense, its ability to fight against dangers. When the body is thus weakened, complete immunity has been established, say medical institutions.

Let us illustrate: We make a man helpless by binding his hands and feet with cords, and allege, because he is unable to resist our insults, that he is immunized to our misuse and abuse. The body, in like manner, becomes immunized to poisons, misuse, and abuse.

It is not the primary effect, but the final effect upon the body, by which the good or bad effect of a practice must be judged. In the use of tobacco, or any poison, it is not the first effect, but the final effect that leaves its everlasting mark upon its victim.

Furthermore, the gravity of the final effect may be well judged by the gravity of the first effect. The premature death, paralysis, defective heart, liver, kidneys, brain, and general ill health, following the continuous use of tobacco, or the indulgence in any other destructive practice, illustrates the ultimate consequences which Eternal Intelligence provisioned in the beginning, and tried to prevent by the vigorous reaction instituted in the organism when the first chew of tobacco was taken.

Now, if "disease" is considered as mal-adjustment to environment, due to defective action and reaction in the living organism, then "cure" would be in order, and would necessitate a detection and correction of the defects in the power of adjustment, by the use of drugs, medicines, and various treatment.

But this is not the cause of "disease." The cause lies in the wrong use of the things supplied by Eternal Intelligence. The effect (disease) can be removed (cured) only by a rigid discontinuation of the harmful habits; and not by the introduction into the delicate organism of supplementary supplies made by artifice, such as drugs and medicines.

The body is not a finished product, with variant and definite limitations, but a living process with established and almost infinite possibilities. There is a prevision and a provision within the living organism, by which it may rise superior even to heredity, as well as to environment, until it meets and masters the conditions of a progressive or an established achievement.

The Prevision is the power to visualize and realize the ultimate effect of the unnatural use of any substance or thing, and guard against the effect by vigorous reactions, yielding to

the inimical influence thru the Law of Adjustment only when the primary reaction is disregarded.

The Provision is the power of selective adaptation, which is operative not alone in the voluntary, but also in the involuntary regions of the organism.

Adaptation involves selection, and the power of selection places the organism on the plane of mentality (mind). The ultimate act of the mentality is the appropriation or rejection of the presented materials of supply. Appropriation is in order to assimilation, and implies elements of intelligence, feeling, and volition. Rejection is in order to self-preservation, and implies the same elements.

Hence, the living organism is self-conserving in the highest sense. There is reason and purpose in all its structures and functions. These are designed to accomplish specific results.

Orthopathy opines that all organized bodies exist as such by virtue of a final cause; that purpose alone rules supreme as a law governing all facts in the Organic Realm; that in organized bodies nothing is in vain.

Not to know the purpose of the law, does not subvert the facts, nor make necessary or legitimate any procedure contrary to the facts.

The Orthopath, in caring for the sick, supplies conditions, both as to materials and methods, that lead to harmony as between the organism and its environment. He postulates Life as the basal principal, out of which all organization, structure, and function proceed.

There are certain inner actions of the body that are predominant over all reactions, and constitute the essential impulse and initial conditions of all growth, repair, and recovery from illness. These inner actions appertain to the functions of Vital Force, while the adjustment of these actions constitute the form of the functions. Neither of these can be supplied ab extra to the body. They are inherent in the body, and are sufficient for all ordinary and extraordinary conditions.

The old postulate upon which the theory of drugs and medicines is based: that life is a struggle because it proceeds from a poverty of resources, and that, consequently, only the fit may survive before the insurgent pressure of an inimical environment, is set aside by Orthopathy; and a new principle, discovered from an investigation of the Life Process, is enthroned in its place.

Orthopathy advances the doctrine that Living Organisms are a progress, due to a plentitude of resources; and that the unfit do survive, even in dreadful "diseases," without supplementary artificial aid, when simply made free to act in possession of their own constitutional endowments, in relation to any habitable environment.

This is the essential law of the living body, and of all progressive evolution.

An organic body is in no sense the equivalent of organic chemistry. One is not the equal of the other. All chemical analysis destroys animation, although the Animating Principle uses chemical methods; but not mere chemical products, in its own upbuilding processes.

If a structure is made and endowed to do a special work, and this structure may be known as capable of doing that work, if it has ever done that work under any conditions, and it does not do it under a change of conditions, and these conditions are known, and the degree of defection from its proposed work may be ascertained, the only question remains, Can the structure be made to do the work it was formed to do, and may the conditions marking its failure be changed and controlled, to the end of restoring the original and specific functions?

Any one of common sense and rational judgment knows, that this question cannot be settled by a formula of chemistry, nor by a prescriptive jurisdiction over the body from without, and foreign to its essential well-being, such as the use of drugs, medicines, vaccines, and serums.

No power is competent to make a law alien to the body's constitution, and enforce that law upon the organism contrary to its own spontaneity, however pliant and plastic the body may appear in a crippled condition.

But rational and scientific procedure may dictate, that the law, already there, be revived and set into operation by methods that are in harmony with the requirements of the law, and not by the arbitrary use of drugs, medicines, etc.

For this reason, if for no other, chemical medicine, its principles, pharmacopeia, and practice, are foreign to the body, contrary to its constitution, and antagonistic to its essential processes and well-being.

All the Processes of Life are absolutely inimitable. The most advanced laboratory experimentalist cannot even understand, must less approach, these processes. Neither chemistry nor physics, in their most advanced claims, can synthesize the elements so as to induce of themselves vital phenomena.

Much may be claimed for organic chemistry, which may mean either the chemistry that living organs make, or the chemistry that makes living organs.

There is no chemist that can make living organs, or parts of them, or correct their defects and deficiencies. Accordingly, there is nothing in the chemistry of drugs and medicines, vaccines and serums, that can initiate, imitate, supplement, or supplant, aid, keep, or rightly stimulate, the vital force of the body, or any of the vital processes

Such chemistry is dead. It not only cannot cure, but it is contrary to the law of cure.

This fact is confessed in the formula of both Allopathy and Homeopathy. The *contraria contrariis curantur* of the Allopath means, give a poison to excite conditions contrary to the physiological condition of the body. The *similia similibus curantur* of the Homeopath means, give a poison to excite conditions similar to the physiological condition of the body.

Both are contrary to the constitution of the body; both are wrong, and both have been proven to be wrong by generations of experience.

All illness (disease) is produced within the cycle of the natural function of the body. It must be reduced in the same cycle, and by exactly the same forces that produced it. All that is required is a change of conditions.

There is unity of substance and force both in health and in "disease." This is the Unity of Eternal Formation. So relief must be effected by that which is natural to all things involved.

The same steam that drives the engine backward, will drive it forward, on a reversal of the lever. No added material is needed in the boiler to make the engine go forward, when going backward.

The same force that drives the body into "disease," will drive it into health, upon a reversal of the lever (conditions). No added material is needed in the body to make it go forward to health, when going backward to "disease."

Drugs and medicines, vaccines and serums, have no essential living principle. These substances cannot act on a dead body. Action in drug- and serum-therapy is not the action of the drugs and serums. It is the action of the living body.

The great question in therapeutics, is not between an allo-

pathic or a homeopathic dose. It is not a question of dose at all.

The question is not what the drugs and serums do for or to the body; but what does the body do with the drugs and serum? It promptly and invariably acts to get rid of all them; and, action and reaction being equal but opposite, all so-called drug and serum action is succeeded by reaction, which leads to deterioration.

The fundamental function of the body is the circulation of its fluids. Everything in the body moves or may be moved.

The body is like a river, which lies upon the landscape with size, length, breadth, depth, and seeming solidity. It remains the same throughout the centuries, fixed, immovable, unchanging; and yet it is fluent, moving, changing. At no time is it exactly the same as at some preceding or succeeding time.

Even so is the body. It is as fluent as a stream. It is moving, changing, quickening, retarding its flow, building up and tearing down, taking in and throwing out materials of supply. Yet, thru it all, it remains the same.

The flow of a river may be hastened or retarded by regulating its channel; but that does not change the nature of the water.

The Process of Life is either health or "disease," depending upon the road it travels, or the conditions under which it works—and not upon any change in the nature of things that would render substances beneficial in illness, which are known to be positively detrimental to the body in health.

We do not deny that certain, definite effects follow the administration of drugs and medicines, vaccines and serum, to the sick. But we hold that these effects are always destructive, and never restorative.

There is a certain molecular constitution of all cells, that permits poisons to penetrate between the inter-molecular spaces, and by outright antagonism to the body's existence, to stir up activity—a defensive activity.

The cells are aroused to fight for existence, either by combining in warfare against the drugs and serums, or by withdrawing their axis-cylinders and retracting within themselves, and lapsing into quietude until the intruding poison has been absorbed or neutralized.

After the shock of the effect of the drugs and serums, if there remains sufficient vitality to re-establish the body's function, there may be new conditions instituted that may be interpreted as improvement. But it is always at the expense of danger to the body, and in spite of the drugs and serums; never because of them.

Scientifically, drug- and serum-therapy is chemolysis, which means a breaking up by poison of the animate cell-combinations of the organism. Chemolysis is biolysis, or the destruction of living combinations, leading to death.

In a word, drugs and medicines, vaccines and serums, "cure disease" by destroying the organism.

Lesson No. 35, Chapter No. 101

PROCESS OF TREATMENT

The same steam that drives the engine backward, will drive it forward upon a reversal of the lever. No added material is needed in the boiler to make the engine go forward, when going backward.

The same force that drives the body into "disease," will drive it into health, upon a reversal of the lever (conditions).

No added material is needed in the body to make it go forward to health, when it is going backward to "disease."

The state rising from the Process of Life is either (1) Health, or (2) Disease, depending upon the conditions supplied. The agency used by the Process of Life in producing these states, is the Transportation System (blood-stream).

If the blood is abnormal, from it will be built abnormal cells. From abnormal cells rises abnormal function, called "disease." To remedy the condition is merely a matter of normalizing the blood.

It has been found by wide experience, that normalization or purification of the blood is accomplished most rapidly by Physiological Rest, better known as the Fast.

As the blood is normalized by fasting, the process of degeneration comes to a pause, just as does a motor car that is traveling backward, before it can start forward. Then, under the normalizing condition, the process of regeneration grows active; and in due time the patient is raised from the sick-bed and brought back to health.

Fasting is the Great Remedial Measure. It is a natural method of halting the degenerative process and instituting the regenerative process.

By instinct, every animal, except man, refuses food when ill. Primitive man possessed as fully the same instinct. Traces of this fact appear in history. The words Fast, Fasted, and Fasting, occur in the Bible more than sixty times.

Fasting appears as a common custom carefully observed in early Bible times. The Pharisee said that he fasted "twice in the week" (Luke 18:12). In Genesis 50:10, and in 1 Samuel 31:13, we learn that it was a custom of those mourning for their deceased relatives, to fast seven days.

The Philosophy of the Ages states that Moses, Elijah and Jesus each fasted forty days and forty nights. In those days, fasts were often proclaimed throughout the land by the leaders and rulers. The people of Nineveh proclaimed a fast (Jonah 3:5). And it is written:

*"Jehospat . . . proclaimed a fast throughout all Judah."
(II Chron 20:3.)*

We shall not assume that the removal of disease was the purpose of every fast mentioned in the Philosophy of the Ages. But it must be that some great good was the object, or else fasting had not been indulged in so frequently, nor so much prominence given to the practice.

Fasting is the safest, surest, and quickest way to restore health to the sick. Fasting is the only way to restore vitality to the weak and infirm. Fasting is the only way to rejuvenate the body. Seek ye not for any other method.

1. When the body is ill, what it most needs is rest. The digestion, absorption, and assimilation of food are in themselves a great tax on the powers of the body. This work imposes increased burdens upon all the organs, which are already overworked, as indicated by the illness.

To free the internal organs from labor, the sick must fast. Fasting affords the most complete rest to these organs, and enables them to turn to the other work of purging and purifying. From this process normal blood soon succeeds the previous abnormal blood that caused the illness, and health returns.

2. Internal waste and clogging filth are the conditions of all illness. When there is no encumbering filth in the body, no morbid matter in the cells, no perversion or decomposition of the fluids, there can never be acute or chronic disease.

3. A sick body does not need food. In instances of the slightest fever, food is not properly digested, for the diges-

tive enzymes do not act, the digestive glands cease excreting, the mouth becomes dry, the throat parched, and there is a general deficiency in the excretions of all the digestive fluids. The function of the body is directed to the process of elimination.

It is dangerous to feed a patient with fever, with dry mouth, dry tongue, parched throat, and with stomach and small intestine inactive, so far as excreting digestive fluids is concerned. At such times it is easy to kill a patient; yet stuff the sick with food whether there is any natural desire for it or not, using the big bowel for that purpose when the stomach cannot be so utilized, in order to keep up the patient's strength, has been the teaching of medical institutions from the dawn of medical history.

Commenting upon the folly of feeding the sick, J. H. Tilden, M. D., observes:

"I have seen the temperature of a convalescent run up from normal to 103 degrees, and the pulse go from 80 to 120, within an hour after an imprudent meal that caused acidity."

The dangerous symptoms arising in consequence of the dangerous practice of feeding the sick, are due to *the progress of the disease*, say medical institutions. The truth is, they are due to the ptomaines and ferments of rotting food lying in the stomach and small intestine. These flow into and foul the "river of life." Millions of graves have thus been, and are now being, prematurely filled, while sorrowing friends are assured that "disease" killed the patient.

Dr. W. A. Finley, a Chiropractor of De Land, Florida, had a patient come to him after all sorts of medical treatments had failed. The patient was suffering from so-called rheumatism; knees badly swollen, sharp pains extending up into the thighs, and he could not be moved without the aid of three attendants!

The patient was put on a fast. Within 36 hours marked improvement was noticeable.

Five days after the fast began, the patient commenced to vomit. Up came an egg that he had eaten six days before. The egg had lain in the stomach, undigested. When the patient's condition was improved to the point where the body could act more acutely, it cast out the undigested and putrefying egg.

The medical theory is, that patients must eat to keep up their strength. The egg was eaten under the orders of the medical doctor who had been attending the patient. By the method of feeding, medical doctors have killed multitudes that would otherwise have recovered.

Commenting on this case, Finley observes:

"I have handled cases where food passed from the bowels four months after it was consumed, but never before have I had this experience."

Food lying in the sick stomach under a temperature of 100 degrees F and above, not acted upon by normal digestive fluids, quickly decomposes. Such substances, decomposing in the disordered body, are no less poisonous than when festering in the garbage-can under the heat of the summer sun.

The poisonous end-products if this decomposition add more fuel to the fire, and the "disease" appears to progress.

When man's appetite in illness leaves him, contemplate how hard he fights against it. He tries to eat this and that. Kind friends, alarmed by the lack of appetite, urge him to eat.

Every sick-room generally has a table filled with fruits, cakes, custards, and other tasty things, tempting the ill to

eat—working against the guidance of Eternal Intelligence, as it strives to set into operation the Process of Regeneration.

It is often a matter of life and death for patients to eat during illness. Many well-meaning friends urge the sick to eat certain foods, because they have heard it said that such foods are good for this or that disorder.

No food of any kind supplies one iota of healing power. All healing power lies in the function of the body, or the Process of Life. Food furnishes building material only, to supply tissue waste resulting from the wear and tear of physical activity.

But the patient, because of weakness, goes to bed to avoid physical activity. This act avoids the demand for food. Reducing physical activity, reduces the wear and tear on the tissues. That is a part of the plan of Eternal Intelligence, as it attempts to set into operation the Process of Regeneration.

There is no healing virtue in foods, drinks, drugs, vaccines, serums. The use of these hinders the Process of Regeneration.

When a person becomes ill, it appears that Eternal Intelligence withdraws the patient's strength, and marshals it for the regenerative process soon to be instituted. This causes him to feel weak; so he goes to bed to rest. Then Eternal Intelligence, if unhampered in its work, proceeds with a free hand to purify the organism.

The body begins briskly to purge itself by forcing a catharsis of the cells, causing increased elimination of katabolic (disintegrated) material. The body may be compared to a sponge, which absorbs the elements of nutrition. But during a fast, the process is reversed: the sponge is being squeezed and gives off the impurities contained in it.

In Lesson No. 10, Elementary Orthopathy, our co-worker Shelton devoted considerable space to Fasting. This the student should read with care. It covers many phases that we shall not touch here, to avoid repetition.

A person who has had no experience with the Process of Fasting, cannot be expected to know how to conduct a fast. He knows not what symptoms will rise in the body of the fasting patient, how long the fast should continue, when it should terminate, how it should be terminated. There are many books on Fasting, but few of them cover this phase of the matter sufficiently to guide the inexperienced.

Fasting is regarded by some as such an extraordinary process, that there is a belief that the patient should prepare for it by some special regimen, such as eating oranges for five days before beginning the fast. This is unnecessary.

There are some who put a patient on nothing but oranges for fifteen or sixteen days, and call this an orange fast. It is an orange diet, and does not allow the body to institute a single symptom that is instituted during an absolute fast.

Then there is the short fast, in which the patient fasts three or four days, then eats oranges three or four days, then fasts again, then eats again, and so on. This course does not enable the body to institute the purging process that it institutes during an absolute fast of longer duration.

For our purpose here, the terms Fast and Fasting shall mean absolute abstinence from all food, with the exceptions of (1) air, and (2) water. Thus, during an absolute fast, the student observes that the patient still has for the maintenance of his body man's two greatest foods.

The symptoms rising from the Fasting Process are. For the first day or two the patient will experience a feeling of hunger. This usually disappears by the third or fourth day. With the disappearance of the hunger sensation, there begins the active purifying process.

The beginning of the purifying process is first indicated

by (1) coating of tongue, and (2) bad taste in mouth. These symptoms appear about the third, fourth, or fifth day. They may be somewhat delayed, but as the fast progresses, they are certain to come.

As the fast continues, these symptoms usually increase. The coating on the tongue will extend back into the esophagus, and finally reach the stomach. This may be about the fifth, sixth, or seventh day. Then the patient will grow nauseated, with a desire to vomit. The desire may be fulfilled, and the patient may vomit several days. He should take nothing but plain water, no more and no less than is sufficient to satisfy the demands of the body.

The patient may also develop diarrhea. This, along with vomiting, it is an active purging process, by the aid of which the body, during a fast, proceeds to purify itself of encumbering filth.

As the patient begins to vomit, he may drink freely of water to aid in washing out the stomach. If diarrhea appears, he may use the enema to cleanse the colon.

The urine of the patient is now growing dark and foul. It may appear almost as dark as liquid coffee. The breath is also becoming foul. About the eighth or tenth day the body will begin to emit such a terrible odor, that the doctor will think his patient's body is surely decaying.

These are symptoms of active elimination. These are indications of what is occurring within the body. All the filth, lodged and packed in cells and tissues, is being loosened up and thrown out. The filth leaves the body in three forms, (1) as visible liquid thru the bladder, (2) as invisible vapor through the skin and lungs, and (3) as invisible gases through the skin and lungs.

Also, into the stomach and bowels foul liquids and gases are thrown by the body, as the purging process proceeds. The liver grows active, and pours much bile into the bowels; the pancreas grows active, and pours foul fluids into the bowels. The fluid parts of the gastric, liver, and pancreas excretions will be absorbed from the bowels by the blood, passed around in the circulation, and be eliminated as liquids and insensible gas and vapor. The solids of these excretions will pass thru the bowels and be excreted as feces.

We must now refer to the use of the enema. Some authorities are against its use, holding that the body does not need this aid, that the body is able to protect itself without this help, that there is scarcely any absorption of filth from the colon, that the use of water irritates the big bowel.

As to the extent and scope of the effects of constipation, Dr. Cummins is quoted in lesson No. 26, Chapter No. 76, as saying:

"When a man is constipated, he is constipated all over. All the tubes, tissues, and organs of his body are involved. His brain is sluggish, his circulation is deranged, and all his powers are greatly diminished. It may go so far as to produce insanity, as every insane person is constipated. In every disease there is more or less constipation. In every death, the bowels are found in a constipated state."

For the sake of argument, we shall grant that the use of the enema is not natural, and that the use of plain water in this way is somewhat irritating to the bowel. But shall these slight objections deter us from using plain water to cleanse a colon that is clogged with festering filth? A colon that has a lining of morbid matter on its walls as hard, in some instances, as wood? A colon that contains live maggots, diligently working in the sewer of the system?

Which is most irritating to the bowel, these pernicious poisons and animals, or plain water? Shall we leave the

bowel in this terrible condition, or shall we cleanse it with plain water?

Reason alone, when the facts are known, should dictate the course to pursue. That course should be, to take plain water and wash out the colon.

In every disorder there is more or less constipation. It is the accumulation of filth in the body that makes a man ill, as a rule. The Law of Health demands that the body be clean. Cleansing the sick body is the very purpose and object of the fast. The process is aided by a judicious use of the enema.

We have had patients who had developed the enema habit, and were using the enema two, three, and four times each day, when they came to us for help. These, of course, are exceptional cases. They are cases where the use of the enema may not be indicated, and should be avoided.

But when a patient is fasting, as a general rule, it is better to use the enema, unless its use is found to cause the patient considerable irritation. We would not ordinarily recommend its use each day, but perhaps each alternate day, or every three or four days, depending upon the particular patient and his condition.

In every disorder there is more or less constipation, with the colon clogged with festering filth. Plain water injected into the bowel has the benign effect of softening, dissolving, and carrying off the dangerous accumulation.

Thus, with purifying water the stagnant sewer of the system is emptied and cleansed of its poisonous contents. The water dissolves and washes away the hardened mass adhering to the folds and walls of the colon. This strikes at the tap-root of the source of human ailments.

Directions for giving the enema: Use an ordinary syringe. Fill the container with clean, plain water, about the temperature of the body. Hang the container on the wall, about four or five feet high. Insert the tube into the anus, after applying grease or vaseline to the tube. Inject a quart or so of water into the bowel. Pause and hold the water a while. Now expel the water, and after being satisfied that the water injected has passed off, if there is reason to believe that more filth remains in the colon, use a second injection of about three pints. Pause as before, retain the water awhile, then expel it.

Sometimes even the second injection fails to wash out the filth, making a third injection necessary.

A matter of importance is the posture assumed while injecting the water. Fluids flow downward. Water should flow downward when entering the colon.

Put a rug on the floor, and have the patient get down on it, assuming the knee-chest position. Get down on the knees, keeping the hips high, while lowering head and shoulders to the rug, touching the rug with one shoulder and one side of the face.

Patients too weak to assume this posture, may lie on the back, with hips raised eight or ten inches higher than the back of the shoulders.

Do not force water upward into the colon. The effect is unduly to stretch the walls of the organ.

Three or four pints for an adult, may be injected at one time without discomfort. Filling the colon at the second and third injection is essential, in order to cleanse it. As a rule, when the third injection is being used, the colon will have been so well cleansed, that the water will flow to the caecum, at the bottom of the ascending colon, at the right groin.

Most cases of appendicitis are the result of constipation. The waste in the colon, during constipation, putrefies and

poisons the appendix. Without constipation there would be no appendicitis.

A fasting person, altho not ill when the fast begins, will grow ill as the fast progresses. He will feel dizzy and achy, he may have diarrhea and vomit, as we have said. If the person is fleshy, all uncomfortable symptoms arising from the fast, or from the purging process, will be more severe. A very fat man may think he is going to die.

Lowered blood-pressure is another symptom of fasting. It should cause no alarm. Fasting reduces high blood pressure, and is the best treatment for this disorder. During a prolonged fast, blood-pressure generally becomes low, and heart action much slackened in speed—usually to a rate of about 60, but sometimes it may drop to 46 or 48 beats per minute. There is nothing in this to cause alarm.

A man would live longer if his heart rate was slower. It would be slower if he lived more naturally.

Rapid pulse and rapid respiration are symptoms of a body, filled with filth, trying to meet and master a dangerous condition. As the body, during a fast, becomes purified, the labor of all the organs is lessened, allowing them to function more easily and normally.

Some authorities advocate the drinking of copious quantities of water while fasting. There is no particular advantage that will inure to the body's welfare by drinking more water than natural thirst demands. Natural thirst, the infallible guide, will regulate the amount of water for the body's requirements. Drink when thirsty, and drink as much as you want—but no more.

During the fast, one will observe that the brain becomes clearer, and all the senses grow keener. As the fast progresses and the body becomes cleansed, its functions grow more normal, and all its powers grow better and stronger.

When should a patient fast? For every ailment, regardless of its name or nature. Put every patient on a fast. Well persons would avoid sickness by eating less and fasting occasionally.

How long should a patient fast? That is regulated by each patient's condition. Fat patients must fast longer as a rule than thin ones, and large eaters of modern foods must fast longer as a rule than moderate eaters of natural foods.

When the body and breath lose their terrible odor, when the coating on the tongue has about disappeared, when the bad taste in the mouth has gone, and most important, *when the patient experiences a feeling of real hunger, that is the time to stop the fast.*

This condition may be reached any time after the twelfth or fourteenth day. The purging process does not get started until the four or fifth day. In most ordinary cases of thin patients, it requires eight or ten days after this, for the fast to complete the cleansing work. This makes a total of twelve to fifteen days from the first day of the fast.

In the majority of cases, the fast should run longer. Some authorities hold that for the purpose of Rejuvenation, the patient should fast forty days or more.

The object of the fast is to purge and purify the body of its poisonous waste. When this has been done, the fast should be broken. The fast should not continue so long that healthy tissues of the body begin to be absorbed. This will produce a condition of dangerous weakness, making it unwise to continue the fast under such circumstances.

How should a Fast be terminated, This is important. At this time much damage may be done the patient. In practically every instance where fasting has brought disastrous results, it has come about through improper feeding and treatment following the fasting regime.

Under no circumstances should the care of a patient be turned over to a medical doctor when the fast has been completed. Medical institutions not only discourage the practice of fasting, but have little or no knowledge of its physiological processes. So far as securing actual benefit from a fast, they regard such a proposition as preposterous. They teach that people already fail to eat enough, and urge the feeding of patients freely with good, nourishing food.

The longer the patient has fasted, the greater the caution to be used in its termination. Most authorities recommend the breaking of a fast with some sort of fresh fruit-juice. They appear to believe it is best to pour a glass of orange juice into a stomach that has performed no digestive function for fifteen days or more.

Such procedure may be well in instances of gastric ulcer, when it is better to break the fast with a small quantity of bland fruit-juice, such as the juice of melons, peaches, or berries.

Generally speaking, we consider it better, in breaking a fast, to start the digestive machinery with the proper signal, given to the whole body, that food is coming and must be cared for, than to dump a load of material unexpectedly onto the workers, without giving them a signal to get ready.

The signal that sets into operation the digestive machinery, is the process of mastication. When a person begins to chew something, the glands of the mouth begin excreting their digestive fluids, and the signal is immediately passed on to the stomach and intestines. The stomach and intestines, in turn, make the necessary preparation to receive and care for the food when it arrives.

End the fast late in the afternoon. This will prevent the patient from asking for more food that day. Give the patient half of a small grapefruit, peeled and quartered. Use a small orange if no grapefruit is available.

Have the patient take the fruit in small bites, chewing each bite slowly, and swallowing both juice and pulp. The body needs the juice to make blood, and the bowels need the pulp to wake them up and give them work to do.

The duty of the bowels is to care for the pulp, and all indigestible elements of things eaten. That is what they are for; that is their primary work. But when fruit-juice is given the patient, the bowels are denied a large part of their service in the process.

The next day about 10 A. M., if all has gone well and the patient is hungry, give him the same as you gave him the evening before. Give him the same again late in the afternoon of that day, when the patient is again hungry.

Never urge the patient to eat. Never feed the patient when not hungry. Always be governed by the patient's desire for food.

On the third day, if the patient desires, he may have three small grapefruit, or three oranges, prepared and eaten as above, at 9 A. M., at 1 P. M., and at 6 P. M.

From this time on, if the patient appears to do well, the allowance may be slowly increased. But care must be observed to see that he is not overfed. Any indication of this must lead at once to a reduction per day in the amount eaten.

Never urge the patient to eat, or to eat more. Take the opposite course, and be safe. Let the patient mention the matter of food, and keep him a little underfed. Keep his appetite keen.

Continue the above diet six or seven days. It will be better for the patient if the above diet is continued for twelve or fifteen days. Some patients have subsisted on a diet of oranges and grapefruit for six months, and by so doing, have

recovered from what medical institutions term an "incurable disease," such as chronic catarrh, asthma, diabetes, tuberculosis, cancer.

When such instances occur under Orthopathic methods, it puts medical doctors in an embarrassing position, constraining them to manufacture many excuses and fabricate numerous lies. They had rather see a thousand patients die under their methods, than to see one recover from their so-called incurable diseases under Orthopathic methods.

In order to give the student a concrete example to follow in fasting patients, we shall relate one of our cases.

The patient recently completed a 30-day fast for serious digestive disorders. He was somewhat weak at the end of the fast, but still able to get about and go to the toilet.

We broke the fast as follows: At 6:00 P. M. we gave the patient half of a small grapefruit, which he ate slowly, chewing well, and swallowing all the pulp, which is needed to sweep out the bowels. The Maker put the pulp in the fruit to be eaten, and put the bowels in the body to take care of the pulp. Fail to swallow the pulp, and the work of Eternal Formation is interfered with.

Each day we increased the amount of grapefruit given the patient during the day; but each time we gave him none until he expressed a real sensation of hunger. Never, at any time, overfeed a person, and especially a patient.

We increased the amount of grapefruit until the patient was getting a small grapefruit at 9:00 A. M., at 1:00 P. M., and at 6:00 P. M.

We continued the grapefruit for seven days, then changed the diet as follows: At 8:00 A. M., juice of one lemon in a glass of warm water. At 9:00 A. M., one medium-sized grapefruit. At 11:30 A. M., two medium-sized apples. At 2:00 P. M., two medium-sized oranges. At 6:00 P. M., two medium-sized oranges.

This course was continued until the patient's condition returned to where he ate in the regular way—but he felt so happy about what the diet had done for him, that he insisted on adhering to the unfired fruit regime.

Very generally, the student may safely follow this regimen. There may be cases where some variation will be better. The student must be guided by the condition of the patient. Stop at once the use of anything that causes the patient discomfort.

In the press of 1924 occurred the account below of a case of fasting by a medical doctor to ward off typhoid fever:

"NEW YORK, N. Y., Dec. 18—Dr. Wm. Z. Kumler, age 65, who began a fast on Nov. 26, rested at the end of a ten-mile walk, the 20th day since he had eaten, to tell of his theory of preventing typhoid fever by abstention from food.

"Dr. Kumler asserted that his senses were becoming more acute with each day of his fast, and he attributed this to the fact that the various organs of his body, freed from much of their abnormal burden, were able now to react to outside stimulus with more vigor.

"Cold winds do not chill him as much as they did when he was on a full diet, he declared, and although he was losing weight at an average of half a pound a day, he pronounced himself more physically fit than at the beginning of the fast."

Here is an interesting account of fasting:

"CAPE TOWN, South Africa, Jan. 31 (1931).—Authentic reports from Salisbury, South Rhodesia, state that Mrs. A. G. Walter, a noted Rhodesian singer, has been fasting 101 days, during which time she has consumed only two to three pints of cold and hot water daily.

"Last October Mrs. Walker weighed 232 pounds, so she decided to fast. She has lost 63 pounds. She says that she

is in perfect health, goes out to parties, and carries on with her public singing."

Bernarr Macfadden reports a case where he fasted a man for 90 days. He says:

"The man lost 75 pounds during this period. He weighed 300 pounds when he began this particular fast, and 225 when he completed the fast."

Macfadden continues:

"If a bear can fast all winter, there is no reason why a man could not do the same thing, provided he had the same amount of flesh to live on."

No therapeutic nor hygienic measure known, will so surely, safely, and so speedily normalize a deranged body, as will fasting. It is the most natural and powerful of all remedial procedures. It stops at once the introduction into the body of all new material, except air and water, thus releasing the vital organs from the labor imposed by eating, and giving them the needed opportunity to purge the body of the accumulated poisons responsible for the illness.

The sick body is invigorated and clarified, and the blood purified, by fasting as by no other mode of treatment.

When the great defensive organs of the body have been freed from depressing burdens, as occurs during a fast, their powers of resistance are so great that they are able to defend the body against the most deadly poisons.

A striking example of this is presented in the famous Snake Dance of the American Indians of Arizona and New Mexico.

Many persons have heard vague stories of these strange ceremonies among the Indians. It is said that Rattle Snakes are used in the dances, and that while the Indian Dancers are frequently bitten during the course of the performance, no fatalities ever occur.

In preparing material for a certain article, we desired the most reliable information obtainable on this point, and shall give it below from a letter dated February 5, 1929, received from Mr. Edgar K. Miller, U. S. Superintendent of the Hopi Indian Agency in Arizona. He says:

I do not know much about this dance, and cannot pose as an authority. I have seen and studied it since 1906, and I'm very willing to tell you what little information I have concerning it.

The dancers fast for sixteen days before the Snake Dance, which is the last feature of a sixteen-day ceremony propitiating the Water Gods—a long prayer for rain, it might be said.

The snakes are gathered in the district of the Snake Clan holding the dance near the first of the ceremony, and taken to the kiva and herded, washed, and used in the ritualistic work.

These snakes are rattle snakes, bull snakes, blue racers, whip snakes, and side winders, a snake quicker than the rattle snake and more deadly in its strike.

They seem to use local snakes only, and do not, or will not, use any snake given to them or handled first by a white or an Indian outside of their clan or priesthood.

The dancers are bitten by the snakes, and I have seen them bitten by rattle snakes and side winders, talking to them afterward about it. They evidently take some internal concoction of their own to offset these bites and the poison of the snakes.

After the dance they vomit and clear their stomachs before

eating. I have seen them do this. I have never heard of any such dancer or priest being incapacitated or killed by such bites.

The fangs of the snakes are not removed. The snakes are handled a great deal before the "snake dance" part of their ceremony—the only part of the ceremony witnessed by the whites. They seem very kind and considerate in the handling of these snakes at all times, but seem unafraid of their striking at any time.

Of course, after the ceremony they take the snakes out on the desert and turn them loose. In no dance have I ever seen a snake that I thought was doped.

Here is a wonderful example of the marvelous virtues of fasting. Cleanse the body well by fasting, thus freeing it from deadly toxin and releasing the protective forces for other work, and observe how efficiently these forces can cope with the deadly venom of poisonous snakes.

Fearful to allow himself to believe that the body is able to accomplish such amazing results without some sort of outside aid, Mr. Miller lets himself believe, without tangible evidence, that the Dancers "take some internal concoction of their own, to offset these bites and the poison of the snakes."

Dr. Moody remarks:

Very few Indian tribes have any suggestion of a remedy for rattlesnake poison. The Moquis probably have, though if so no white man has ever been able to extract the secret from them. It is known that during the Moqui Snake Dance many Indians are bitten and none of them die. It might be inferred then that they do possess an effective antidote (Backwoods Surgery and Medicine.)

On April 28, 1929, Paul Urban, a German world war veteran and professional nurse, ended a 64-day fast, during which he took a pint and a half of pure water a day. He weighed 165 pounds and dropped to 113. He stated that fasting will rejuvenate the body and make a man live longer. He was 46 years old.

In the public press of July 19, 1929, appeared an announcement of cancer being "cured" by fasting, with a picture of the patient and his nurse, under which was this:

"Albert Schaal, age 58, known as the flax king of Manitoba, Canada, after a fast of 49 days under the direction of Dr. Harry C. Bond of San Francisco, is said by the physician to be cured of cancer. Schaal lost 60 pounds, but slept well and did not lose consciousness."

Fasting is a large subject. To cover it well and show more fully what it will do, requires far more space than we have at our disposal. We refer the student to any of the many works along this line.

In the remote ages of antiquity, health and healing appear to have been a subject of religion. The priest and the physician were one and the same person. He acquired a knowledge of how to care for the sick, and among other legacies handed down to us by these priests, that of Fasting as a hygienic measure occupies a large space.

Fasting was followed not only to suit the ceremonial religious rites of those ancient days, but also as a potent factor in promoting the health of the people, and in helping the sick.

In the days of the early Jewish prophets, and at a later date, there existed a large body of earnest men, or priests, who lived a life of rigid discipline, coupled with devotion for the welfare of the race.

These were the Essenes. The more modern Japanese Samuri were a class of similar type. Cleanliness of body,

frugality of diet, and systematic fasting were distinguishing features of their work.

Relics of the Fasting Practice are still found in most of the religious orders of the day. Among others, these comprise fasting in Lent, Ember, and Vigil days, abstinence from flesh on Fridays, Ash Wednesday, Holy Week, and the Sacraments.

Partial fasts of this character were commonly practiced among our ancestors. To a great extent, they formed part of their religious life.

During the last century, degenerative habits markedly increased, and fasting had fallen largely into disuse. Within the last decade the practice has been revived, chiefly by the persistent work of the Nature Cure School. It is rapidly coming into its own again, and is astonishing the world by its effective alleviation of the many intractable disorders of the human body.

Lesson No. 36, Chapter No. 102

LAW OF MOTION

Man is made for a career of service. He was appointed to work, even in his paradisiac home—"And the Lord God took the man, and put him into the Garden of Eden to dress it and to keep it."

Labor is the price demanded by Eternal Intelligence for all things worth while. Nothing of value can be procured without work, and nothing can successfully be substituted for work.

Food, raiment, riches, honor, and, greatest of all, health, are the reward of toil of the hands and sweat of the brow. The body could not live without labor, and even health itself depends upon toil.

The order of Eternal Existence is one of constant activity. In the whole framework of existence, including the body of man, Vital Force is incessantly at work, tearing down the worn-out tissues, and rebuilding them again of new material. Health declines as the process decreases in speed, and death ensues when the process stops.

The process of disintegration, called katabolism, involves the production of much waste to be disposed of; and the process of reintegration, called anabolism, means much new material needed to replace the worn-out parts.

These functions combined are termed metabolism. They form the basis of physical existence, and depend, in a large measure, upon the flow of the body fluids.

In health, normal circulation supplies enough new material to replace the worn-out parts, and also collects and carries off the waste material. This material is poured into the various channels provided for its elimination, and from which it is promptly expelled by the natural process of excretion.

If the "river of life" is slow and sluggish, all the processes of animation are slow and sluggish. The billions of body cells suffer from lack of nutrition, the vigor of the body decreases, and vitality wanes.

The extent of the damage does not end here. The sluggish circulation fails to carry off promptly the accumulating waste material, and the organism becomes clogged with the retained waste.

A clogged body is a sick body. As the clogging material further decomposes, the sicker grows the body. As the doctor if the old man did these things, he would go to his dining the sicker it becomes, with death often ending the work.

The weaker the body, the more it commands. The stronger the body, the more it obeys. A glutton's body is a weak body; and he is unable to control his appetite. A smoker's

body is a weak body, and he is unable to control his desire for tobacco.

As the speed of the "river of life" slackens, and the accumulating waste causes the tissues to stiffen, man obviously becomes less active. He begins to age. He has headache, backache, constipation, indigestion, insomnia, rheumatism.

What is the remedy? Man has been educated to believe, for the sake of profit and gain, that the remedy lies in drugs and serums. So as health declines he forms the destructive habit of substituting stimulants, tonics, purgatives and laxatives for natural methods:

Health cannot be purchased in the form of pills and powders. Vitality does not come corked up in black bottles. It must be earned by conditions which none can evade. Emerson has truly said:

"Life invests itself with inevitable conditions, which the unwise seek to dodge."

And Craik shrewdly observes.

"The secret of life is not to do what one likes, but to try to like what one has to do."

All remedies, to be helpful, must be natural. The natural way to quicken a sluggish blood-stream is by means of proper activity. If the patient be too weak to exercise, there is another method by which to quicken a sluggish blood-stream, and that is by the application of heat to the body, as we shall later explain.

Eternal Intelligence does everything by the process of motion. The stability of the planetary system depends upon the concerted motion of its parts.

Motion is a fundamental principle in the living organism. It is the essence of every vital function.

The remedial influence of motion, transmitted either manually or mechanically, is founded upon rational and physiological principles.

The living organism is the arena of various forms of motions, both of fluids and solids. Animation is a process of motion, and health depends upon certain physiological movements.

The body is built for motion. Its foundation is on the basis of an active mechanism, which is to pulsate and vibrate with energy; and its machinery must be kept in constant motion in order to be kept in good order.

Health consists in normal, functional activity. Health-building institutes, knowing this, make some sort of bodily activity a prominent part of their regular course in the treatment of practically all disorders.

The vitalizing effect of the harmonious use of the entire musculature of the body is, in many disorders, a powerful remedial measure. Muscular movement is the natural method of accelerating the circulation, and of expelling from the body the clogging waste material.

Just as the motion of water makes the difference between the sparkling brook and the slimy pool, so the motion of the body makes the difference between an active and a sluggish circulation.

Activity quickens all functions of the body. It makes the heart beat faster. It makes the blood flow freely. This enables it to convey more of the needed nourishment, principally oxygen and water, to all parts of the body, and to carry off more rapidly the clogging waste.

In the almost unceasing activity of all young animals, we behold the manifestations of natural methods of keeping the body supple, serviceable, and strong.

As men advance in years, they assume more dignity, and

their silly pride pops up to prevent their doing the very things that Eternal Intelligence intends that all animals must do, to have health and strength. But men of dignity refrain from proper exercise, and reap their just harvest in ill-health and short-life.

What would people say to see us or hear of our exercising and turning handsprings, just for healthful purposes? So we leave this absurd practice to children and cranks, while we take to the easy chair.

By that one act we sap our vitality and shorten our days. For as our activity diminishes, the body's functions slacken, and our vim and vigor begin to leave us, departing more rapidly as we exercise less.

Moderate, persistent, daily exercise of all the body's muscles, is the natural remedy for sluggish circulation. It will revitalize the organism, revive the flabby muscles, and halt the encroachment of injurious fat.

Exercise acts as a tonic and stimulant to the body. It accelerates the circulation, improves the digestion, quickens the elimination, and helps to keep the cells and tissues cleansed of clogging waste.

Exercise benefits the brain and nerves. They depend upon the blood for their feeding and cleansing.

If the circulation is deficient and stagnant, the nerve and brain suffer with the rest of the body. That is one reason why elderly people forget so easily and are slow thinkers, as a rule.

Pliny said:

"It is wonderful how much the mind is enlivened by the motion and exercise of the body."

Cicero observed:

"It is exercise alone that supports the spirit and keeps the mind in vigor."

The Philosophy of the Ages speaks, saying:

"By much slothfulness the building decayeth, and through idleness of the hands the house droppeth through"—Ecc. 10:18.

After a person is convinced that exercise will improve his health, his first question is, What sort of exercise shall I take?

Exercises prescribed for improving one's health, have little to do with building big muscles. It is nice and often useful to possess great muscular strength; yet, we should not indulge in such exercise as will give us the muscles of an ox, but a hypertrophied heart. Men of great brawn, gained by strenuous exercise, never live long enough to grow very old.

A healthy body is one in which ALL the muscles, because of constant use, perform their normal functions. The most beneficial exercise is that which puts into play the little-used and the non-used muscles.

As man lives under modern conditions, certain muscles are specifically used in his daily work, while others are not used. These little-used and non-used muscles gradually waste and weaken.

Walking has been widely recommended as an exercise to improve man's health. There is not a doubt that if people would do more walking, they would get more happiness out of their earthly career in the form of better health and longer life.

Dancing, golf-playing, horseback-riding have great value so far as they go. But none of these touch the heart of the health problem. They do not properly exercise the very muscles that are most neglected.

Powerful arm and leg muscles alone, do not greatly aid the organism in throwing off its waste material. There are no vital organs in the limbs to receive benefit from exercising them.

The vital organs are situated in the trunk. The musculature of the trunk encases the vital machinery within. When this muscular structure is strengthened, the internal organs share in the improvement.

The most neglected muscles of the entire anatomy are those of the trunk. These are the muscles that aid the vital organs, and they are the first to grow flabby and weak from lack of exercise.

It is marvelous how soon after reaching maturity it is, that men, and especially women, lose the desire or inclination to bend or stoop.

Caged wild animals and domesticated cats and dogs are constantly bending, turning, twisting, swaying, and stretching their supple bodies. Thus in their captive or domesticated state they are always nearly as lithe and vigorous as were their wild ancestors.

Eternal Intelligence has implanted deeply into the fiber of all animals the instinct to exercise and use the muscles of the body. But modern living conditions have constrained man alone, of all the animal kingdom, to abandon many of the movements that serve to keep him healthy and strong.

Most men will be pleasingly surprised with the improvement of their health, if they will indulge in some simple exercise that will bend, sway, stretch and twist the thorax and abdomen. Any easy movements that do this, will give vim and vigor to the vital organs.

In prescribing exercise to improve one's health, something simple and easy, that can be indulged without much trouble, is more likely to be followed than any other. So we submit the following as suggestions, to which the student may add such other movements as he desires, in order to serve the end in view. These movements may be performed in bed, just before arising in the morning:

1. Lie on the back. Raise right leg as high as possible and lower it. Repeat ten or fifteen times, then rest a moment and indulge in deep breathing. Perform the same movements with the left leg, followed by ten seconds of deep breathing.
2. Now lie on left side and raise the right leg as high as possible and lower it, repeating ten or fifteen times, and followed by about ten seconds deep breathing. Lie on right side and repeat with left leg, followed by deep breathing.
3. Next, lie on the back, put both hands back of the neck, and raise the body to a sitting posture, then bend forward until the forehead touches the bed-clothing. Immediately bend back and lie down, letting the body down slowly so as to tax the muscles. Repeat the movement till tired, and follow by about ten seconds deep breathing.
4. Lie on the back, draw up the feet until the soles rest flatly on the bed. Then slowly raise the abdomen till the trunk and thighs are in a straight line. Remain in this posture about a second, then let the body slowly down, repeating till tired. Follow with deep breathing.
5. Lie on the back, remove pillow so the head and body will be level, and raise both legs together high in the air, then bring them over till the knees touch the chest, if possible. Now let the legs slowly down till they rest on the bed. Repeat till tired, followed by deep breathing, expanding well the lungs.
6. Lie flat on back, place hands on hips, and raise the legs and body straight up until the entire weight of body rests on head, shoulders, and elbows. This aids gravity to pull the stagnant fluids in these parts back to the heart. Remain in

this position ten to fifteen seconds. If unable to keep balanced, then lie on the floor and place the feet against the wall, as high up as one can reach. Do this exercise the last thing at night, when ready for bed.

Ages ago, when man assumed an exclusively upright posture, he brought upon himself several ills. A large class of ailments may be traced to a stagnant condition of the blood in the lower pelvic region. A settling of the fluids here slows up the function of the bowels, and is considered by some as one cause of constipation.

The above movements, and especially the last two, will arouse and force the stagnated fluids out of these parts. As the contents of the blood-vessels are moved onward, fluids outside these vessels pass thru their walls to replace the stagnant blood that has moved onward. Other blood then flows into these parts, and thus normal circulation is induced, so that the parts are nourished and their waste material carried off.

It is difficult for man to realize, because of the great simplicity, that when he inhales a deep breath of pure air, he is aiding the body to purify his blood; and that when he indulges in exercise, he is aiding the body to accelerate the circulation. It is difficult for him to realize these things, because he does them every day, and they are so easy and natural.

It is impossible for a person to enjoy good health without a certain amount of exercise. All men need it more as they grow older; but the average person says, I have no time for such foolishness as exercise for health. Only faddists and fanatics indulge in such nonsense. He later finds that he has lots of time to lie on a sick bed, his body racked with pain, which proper exercise, perhaps, would have prevented.

Rest means rust, and idleness causes the body to grow stiff and weak. Muscles are developed by use; they shrink and weaken through idleness. To get something out of a muscle, we must put something into it. Give, and it shall be given unto you, is the law.

Exercise for health should be sufficiently vigorous to cause deep breathing, to cause some perspiration, and to keep active the billions of skin pores, thru which the body breathes and casts off waste.

If we indulge in vigorous exercise, we unconsciously breathe deeply. This leads to good results; but deep breathing by force, as some teach, without the exercise to cause it, is a waste of time. Good comes from deep breathing when such breathing is the result of any exercise that causes it.

Old people long to be young. They crave the suppleness of a child, but do nothing to acquire that suppleness. If man desires to be young, he must appear young. If he will run and skip and roll and jump, as he did when a child, the years will drop off, and he will feel again the "river of life" flowing thru his frame; as in the days of yore.

If the old man did these things, he would go to his dining table with a feeling of natural hunger, and to his bed with a keen desire to rest and sleep.

Chapter No. 103

HELIO THERAPY

Helios is Greek for Sun. Heliotherapy means the use of Sunlight in the treatment of the sick.

In Lesson No. 25, Elementary Orthopathy, under Sun Myth, the student saw, no doubt with surprise, the tremendous effect the Sun has had in shaping man's religious beliefs.

The word Soul, commonly used to mean the immortal part of man, springs from the Sanskrit "Su," for Sun.

Ancient Philosophers could not resist the thought that the Sun is the Creator, and the source of Life, as stated in Lesson No. 5, Chapter No. 14.

Heraclitus believed that Fire is the essence of all Elements, the nutritive principle, circulating continually in all parts of the Universe. From Fire, he opined, all things had their beginning, and in Fire all things ended. He regarded the body as an inert mass of Matter, animated by a Spark from the Sun, giving to the world that immortal phrase, The Spark of Life.

Heliotherapy, or the use of sunlight in the treatment of the sick, is one of the oldest practices of natural methods. J. H. Kellogg, M. D., observes:

"It has been employed from the earliest times by primitive people, who were doubtless led to its use in sickness by natural instinct. Savages, and also wild animals, resort to the sun-bath for the relief of various forms of illness."—Light Therapeutics, p. 9.

More than 5,000 years ago, the Egyptians erected their first Temple to the God of the Sun. They believed that the Sun is the Creator, the Giver of Life, the Preserver of the World, the Saviour of man. On this theory, they formulated their God, and called him Ra Harachte.

The first temple was erected in a city called On, east of the Nile. The city was later called Heliopolis—City of the Sun.

Here the Egyptians established their priesthood of Ra, mentioned in the Bible as the Priests of On (Gen. 41:45, 50). As the priesthood grew and waxed in power, they became famed for their knowledge of the occult sciences, the practice of medicine, and of astrology.

Antyllos, who lived more than 2,000 years ago, understood the hygienic value of the Sun, and accurately described its effects on the body. He said:

"Many set themselves in the sunlight, partly anointed, partly not; some recline, others sit, many walk or run about.

"Let those who lie, stretch themselves out in the sunlight on a mattress, a skin, in the sand, or in the open sun. The sun's rays, which should be used with caution when not anointed, increase the internal transpiration, evoke perspiration, check increase in girth, strengthen the muscles, and reduce fatness. Thus also the soft swellings of dropsical persons are reduced.

"Breathing is decreased and quickened by the rays, which invigorate the narrow-chested and such as breathe with stiff necks. They are moreover advantageous to those who suffer from constant debility, since they strengthen them and harden them against disease.

"It is necessary first to lighten the body, as the sun's rays are harmful to the head if the bowels are not emptied previously."

Tyndall declared, from his investigation, that Light is not a Force, but a mode of motion. The more slowly moving rays have a rate of motion of about 395 trillion per second, and produce a red light. The more swiftly moving rays have a rate of motion of about 760 trillion per second, and produce a violet light. The remaining colors of the visible spectrum are produced by rates of motion of intermediate velocities.

The Sun is regarded as a potential radiator of electromagnetic waves, the vibratory rate of which is not known. From the effects produced, it is assumed that the wavelengths fall within the commonly known solar spectrum, as measured by science.

It is not known what wave-lengths the Sun actually delivers. The atmosphere surrounding the Earth intersects and absorbs all wave-lengths below a certain measurement. In this way, the atmosphere acts as a screen to prevent the shorter, injurious rays from reaching the Earth.

In discussing the hygienic application of Sunlight, writers divide the rays into three classes. (1) Light or luminous rays. (2) heat or thermic rays, and (3) chemical or actinic rays.

The hygienically-active rays are classed as (a) the actinic rays, viz., blue, visible violet, and ultra-violet; and (b) the thermic rays, viz., red and infra-red.

The thermic rays are not heat rays in the proper sense. As these rays pass from the Sun to the Earth, they encounter the resistance offered by the Earth's atmosphere. From the friction thus occasioned, heat results.

The actinic rays make but slight impression upon the retina of the eye, and are thus invisible to man. But they stimulate the skin in a remarkable manner.

The art of photography depends upon the influence exerted by the actinic rays upon various chemical compounds. The photographer also found that to filter the light thru red glass, will eliminate the actinic rays. He utilizes this knowledge in the construction of his dark-room.

Direct sunlight is necessary for both animals and plants. When plants are removed and kept from the sunlight, they soon grow pale and sickly. This fact is common knowledge to all; but it is only recently that the subject has been studied with sufficient care to place the hygienic utilization of sunlight upon a sound basis. Most important in this field has been the work of Arloing, Geisler, Paul Bert, Du Bois, Garber, and especially Finsen. More recently great work has been done by Hess of New York, Rosenbaum of England, and Windaus of Germany.

Finsen showed that the thermic and actinic rays exert a widely differently influence upon plants. The former enhance the aroma, while the latter supply a condition that enables Vital Force to develop the leaves and flowers of the plant. Plants grown in the dark have abnormally long internodes and leaf-stems, but no leaf surface.

The conduct of Sunflowers and other heliotropic plants in turning their tops toward the Sun, shows the profound influence of sunlight upon the function of plants. Plants also appear to suffer from an excess of the actinic rays, as man often suffers sunstroke from undue exposure to sunlight.

Garber found that an earthworm, which inhabits dark places, when put in a box, one-half of which was covered with red glass and the other with violet glass, immediately sought the protection of the red glass, under which it behaved the same as in its dark home.

The well-being of the body demands that all the rays that reach the Earth, should strike the naked skin. This is prevented by two conditions: (1) Clothing worn by man, and (2) smoke, soot, dust, and gas fumes in the air of large cities.

Commercial concerns have taken advantage of this fact, and flooded the market with various kinds of so-called ultra-violet lamps, and infra-red lamps, which radiate a profuse amount of destructive ultra-violet rays, and a distorted infrared and visible ray spectrum, nothing at all like sunlight.

Commenting upon this, Frank T. Woodbury, M. D., at a meeting of the American Medical Association, observed:

"The so-called therapeutic carbons give spectra predominantly in the actinic region but little in the thermic region. Their effects are violently actinic. It is analogous to adding the juice of ten lemons to a glass of good lemonade."

This statement comes from one of the best-informed prac-

tioners of Heliotherapy. It is most enlightening in that it explains the fallacy of artificially applying ultra-violet rays to the body.

More evidence of the harmful effect of the meddling of man. For the body to receive benefit from the ultra-violet rays, they must be present, and their influence must be balanced, with the rest of the spectral section

Sunlight is absolutely essential to the development of the coloring chlorophyl pigment in plants. When it comes in contact with the naked surface of the body, it increases pigmentation in the skin, showing as a coat of tan, and increases the coloring matter (hemoglobin) of the blood, making the blood a rich red color.

In the structure of plants that are denied sunlight, normal growth may occur, but the plant will be anemic, the tissues weak and brittle, and the plant will present a waxy appearance, due to the substance (etioline) which replaces the chlorophyl, always present in healthy plants.

In the structure of living creatures that are denied sunlight, normal growth may occur, but the body is anemic, the tissues weak, and present a waxy appearance. Anemic people are usually those who shun the sunlight, or those unfortunate ones who live in smoky cities, or whose occupation keeps them indoors from early morn until near sunset.

Animals, when shut away from the direct rays of the sun, in a comparatively short time develop malformation of the legs, and other abnormalities, indicating faulty assimilation of calcium. In rickets, in some cases of hives and in hyperesthetic rhinitis, asthma, and other disorders of similar character, an analysis of the blood disclosed a deficiency of calcium to exist.

How simple, said the medical world. We shall just prescribe a diet rich in calcium, and, presto, a "cure" will be effected. But, alas, things went amiss, as medical theories always do. It later developed that the deficiency was the result, not of a diet low in calcium, but of faulty metabolism.

Animal experimentation has proved, that there exists in the ultra-violet rays, an undefined something that is essential to the body, in order that it may utilize normally the element of calcium.

Exposure of the body to strong sunlight induces profuse perspiration. Kellogg observes:

"It is not necessary that the atmosphere in contact with the body should be of a high temperature. In fact, the temperature of the air about the body may be considerably below the normal body temperature. The stimulation of the perspiratory glands by the light rays excites their activity to a remarkable degree."—Light Therapeutics, p. 29.

Thru the influence of sunlight upon the skin, strong stimulating impressions are being constantly made upon the nerves. Exposure of the nude body to sunlight is an effective method of combatting pain. It relieves spasms, as in colic and muscular cramp, and induces muscular relaxation.

Sunlight is a builder of health. The rays stimulate the tissues and quicken the circulation, aiding the body to oxidize and eliminate the toxins of fatigue and pain. One of the best remedies for wounds, burns and sores, is the exposure of them to sunlight.

Daily sun-baths are effective for all forms of skin disorders. Psoriasis and eczema yield to sunlight treatment. But the best results are obtained only when other health-building habits are observed.

If sunlight is necessary for the healthy to keep them well, it is needed more for the sickly to bring them back to health.

If patients are compelled by weakness to lie in bed, the bed

should be placed in the sunlight, with nothing but the thinnest white covering over the body. For some time each day, the naked body should be exposed to the unadulterated sunlight.

When a person begins taking sun-baths, he should first make them short, so as to avoid sunburn. Each day the time-limit may be lengthened—and the skin will slowly tan, but not burn. Increase the duration to 30 minutes and more as soon as possible.

Sunlight is a great disinfectant. It should be allowed to shine into all rooms, for it is far better to have faded wallpaper and faded carpets, than to have ill-health, with large doctor bills, and early deaths.

The bedding should be placed in the sunlight daily, and the sunlight should shine into the bed all day, to purify and disinfect it.

Medical doctors, always seeking to protect their source of revenue, and make people easy prey by keeping them in ignorance, warn patients that sunlight striking upon the nude body is dangerous, and that caution should be observed in taking sun-baths, or more harm than good will result.

These same doctors, who appear so solicitous of the public health, fail to inform their dupes that polluting the blood with drugs, vaccines, and serums, is more dangerous than an overdose of sunlight. The body never again fully recovers from the injurious effects of the drugs, vaccines, and serums introduced into it.

Martin A. Witt, proprietor of the Solar Food Products Co., Los Angeles, on February 12, 1931, wrote Dr. Clements:

"On account of a smallpox scare near our home, I was vaccinated when I was two years old. After fifty years of struggling, I have about recovered from the effects of it. But it has left its mark, as I have been through tuberculosis, and a hole has been eaten through my palate."

Such is the lasting effect of the work of men, who had rather kill a legion of people with their methods, than to suffer the recovery of one patient under any form of natural methods.

Lesson No. 37, Chapter No. 104

LAW OF HEAT

Physical science shows by its theories that it is hopelessly lost with respect to every phenomenon of the Living Organism.

One of the Leading Lights of the Medical World is the late William Osler. In his monumental work, *Modern Medicine*, this great oracle attempts to explain the presence and production of what is called Animal Heat.

Physical science denies the existence of the Life Principle. It thus becomes necessary to account for all phenomena of the living organism on the basis of physics and chemistry. On this basis, Osler attempts to show how Animal Heat is produced. He holds that it rises from food combustion and metabolism. In his work above-mentioned he states his theory as follows:

"The conception of metabolism as a process in which the body transforms the potential energy of the food in accord with well-known physical and chemical laws, suggests the possibility that different substances might replace one another, as nutrient materials, in proportion to their energy-yielding or fuel value. This would mean that these different materials are of service to the organism in proportion to the heat and work which they can develop, despite any differences in the chemical transformations by which they are metabolized. From this point of view, the content of energy, as expressed in the available heat of combustion, becomes the crucial factor in estimating the importance of any food. . . .

"Renewed investigation has demonstrated that the food-stuffs are strictly isodynamic only within certain narrow limits and under definite conditions. The animal body is by no means a machine so simple that it transforms energy with such indifference toward the kinds of materials metabolized. Whenever transformations go on, the yield of heat is strictly proportional to the energy-content of the materials metabolized. . . .

"We cannot undertake here to review in detail the criticism and changes that the preceding ideas have experienced since they were first promulgated. A difference between the effects of small and large amounts of food was early discovered. Moreover, the work of digestion and assimilation varies widely with different types of food, and introduces a new source of heat. In some cases, the heat thus produced is utilized to warm the body, and less energy is withdrawn from that stored in the tissues. At other times, the excess of heat arising from the work of digestion cannot thus be compensated for."

This is a specimen of real scientific discussion on this prolific subject. From such nonsensical jargon, medical institutions have never been able to deduce anything definite and conclusive respecting Animal Heat. At this moment the Source and Cause of Animal Heat are as much of a mystery to them, as is the origin of the Universe.

In Lesson No. 4, Chapter No. 13, the student saw how science attempts to show that Food is the Source and Cause of Vital Force (Life). In Lesson No. 24, Chapter No. 71, he saw how science attempts to show that Food is the Source and Cause of the body's Energy and Vitality. He now sees how science, in the same way and by the same means, attempts to account for Animal Heat.

Not only is Food the Source and Cause of animal Energy, Vitality, and Heat, but Life itself is regarded by science as being the product of, and dependent upon, FOOD!

So, eat, eat, eat, shouts the medical world; for Food is the Source and Cause of Man's Energy, Vitality, Heat, and Life! We know this is true, for if Man does not eat, he loses these qualities—he dies. Therefore, this is proof that Food is the Source and Cause of Life, Vitality, Energy, Heat.

Could even a clever lawyer conceive of a more convincing argument? Ah, yes; but hold a moment. The argument is convincing only to the unthinking and superficial observer.

The bold Skeptic who thinks for himself, peers beneath the surface and calmly asks, If Food is truly the Source and Cause of these qualities and attributes, from whence come the Life, Vitality, Energy, and Heat of the hibernating bear that sleeps all winter? Or of the man who goes for ninety days without eating? These questions science refuses to answer.

Mrs. Walter of South Africa fasted 101 days, and ended the fast with normal temperature, with Life, Vitality, and Energy. The hibernating bear fasts all winter, and ends the fast with normal temperature, with Life, Vitality, and Energy. This is the regular rule.

If Food is the Source and Cause of Life, Vitality, Energy, and Heat, how shall these facts be explained? Science studiously ignores them, and makes no effort to explain them.

Swedenborg speaks of "vital heat in every man and in every living creature." He says that "its origin is not known," and that "every one speaks of it from conjecture." He observes:

"Vital heat is from the delights of the affections, and from the enjoyment of the perceptions and thoughts."—Divine Providence, p. 238.

Such speaking is pure nonsense, with no foundation in fact.

Concerning the mystery of "animal heat," Isaac Jennings, M. D., observed:

"It is not yet fully settled among physiologists, from what source and in what manner animal heat is produced; but the theory which obtains most, and which appears to be the best sustained by facts, is, that the combustion of carbon, or the union of carbon with oxygen, furnishes the caloric or material of heat, which is carried to every part of the body by the circulating mass of fluids, and evolved and regulated by special vital functions."—*Philosophy of Human Life*, 1852 A. D., p. 61.

Walter comes nearer the truth. He declares that animal "heat is the product of vital activity, just as surely as of chemical action." He adds:

"Fever is an excellent illustration of the character of diseases. Abnormal heat is their chief symptom, and heat, we have seen, is 'a mode of motion,' also called 'molecular motion,' due to the operation of a force.

"Another definition is that it is 'arrest of motion,' as by friction, or when any moving object is brought suddenly to a halt, as a cannon-ball, heat (molecular motion) is developed as the product of the arrest of the molar motion.

"Vital force produces heat just as certainly as does gravity or chemical affinity, and in the same way, through friction, which is 'arrest of motion,' or a 'mode of motion.'

"In disease, there is abnormal and often excessive vital action in some directions, with deficiency in others, and the increasing fever is undoubtedly due to that abnormal action.

"Under normal conditions, the heat of the body is about 98.2-5 degrees, and this temperature is maintained whether we eat little or much. The fact is, the quantity of heat possessed by the body appears to bear little relation to the food eaten, showing that there is some other source of heat in the human body than chemical affinity.

"Heat is the product of vital activity just as surely as of chemical action, and when the heat from this vital activity becomes beyond the power of the organism to dispose of, fever is the result.

"In a word, disease is the expression of vital power, as this is called into operation by occasions or conditions, and often shows itself as fever because of obstructions, as well as because of increased chemical changes."—*Exact Science of Health*, p. 172-3.

Summarizing Walter's remarks, Vital Force produces Heat through Friction, which is arrest of motion, or a mode of motion

We saw that the Earth was formed of a mass of rarefied particles of Matter, and that intense heat resulted from the tremendous friction of the particles, as they were pressed into closer and closer union.

We saw that the Thermic Rays of the Sun are not heat rays. The resultant heat rises from friction occasioned by the resistance offered by the Earth's atmosphere to the passage thru it of these rays.

The nature of Heat has remained a mystery to man until comparatively recent times.

The Greeks believed that Heat was a liquid. When it penetrated into a substance, heat and expansion occurred. When it evaporated from a substance, cold and contraction resulted.

This theory continued into the 18th century. The French Academy of Science, in 1738, offered prizes for essays on Heat. The three prize-winners favored the above theory.

During the days of the Revolutionary War in this country, Benjamin Thompson made a remarkable discovery regarding

Heat. He was commissioned by the British Government to supervise the drilling of cannon barrels.

While engaged in the work, Thompson observed that Heat was generated by the rotation of the drill in the metal. He put a piece of metal in a tank of water, turned a drill into the metal, and enough heat was generated to make the water boil, the same as though a fire were under it.

He opined that the motion of the drill on the metal increased the vibration of the molecules of the metal, resulting in increased friction that generated heat. He concluded that the faster the molecules vibrated, the greater the friction and the greater the heat.

This conclusion was confirmed by the experiments of Sir Humphrey Davy. In 1799 he placed two blocks of ice in a mechanism that rubbed their faces together until the ice began to melt, although the temperature of the place was well below the freezing point. He conducted other experiments, and by the year 1812 became convinced that vibration, resulting in the friction of particles of Matter, generated heat.

In Lesson No. 7, Chapter No. 21, the student saw that a drop of water is composed of millions of molecules, and that the molecules are composed of atoms of hydrogen and oxygen.

In Lesson No. 10, Chapter No. 27, the student saw that every particle of Matter is in constant vibration, with man's knowledge limited to and by the different vibratory rates.

The molecules of which iron is composed, vibrate slowly, giving the appearance of a solid. The molecules of which water is composed, vibrate so swiftly that they elude the sense of sight, making water appear as a clear fluid. The molecules of which gas is composed, vibrate so swiftly that the sense of sight cannot follow them, making gas invisible.

If a piece of iron is put in a fire, the vibration of the molecules of the iron is quickened, and the iron begins to heat and expand. If left in the fire sufficiently long, the vibratory rate of the molecules is still further increased, and the color of the iron changes, first to a dull red, then a cherry red.

If the intensity of the heat is increased, the vibratory rate of the molecules will increase, and the cherry red color of the iron changes to white. If the intensity of the heat is further increased, the iron will be reduced to a liquid state. Greater intensification of the heat will reduce the liquid to invisible vapor—due to the expansion and vibration of the molecules.

Matter exists in three states, viz., (1) solid, (2) liquid, (3) gaseous. The state in which Matter exists depends upon the temperature. All solids, if enough heat is applied to them, may be (1) liquefied, and then (2) gasefied. The change of state results from expansion and vibration, due to the application of heat.

But some substances, like iodine, will change directly from a solid to a gaseous state. When crystals are heated, they change into a purple vapor without any liquid appearing. Ice will gradually evaporate in winter in the same way. This is called sublimation.

Heat is a form of energy. Modern science holds that it rises from certain chemical action and reaction, as elements unite in various compounds. It ignores the fact that chemical elements are inert matter unable to move to the union of one another, in the absence of the impelling power of force.

Heat is a form of energy that results from friction produced by vibration. The vibration may rise from mechanical, chemical, electrical, gravitational, or vital action.

Fires are examples of heat rising from friction produced by vibration caused by mechanical, chemical, electrical, or gravitational action. Vital (animal) heat is an example of

heat rising from friction produced by vibration caused by vital action.

When inert particles of matter, under the influence of Force, are propelled into combination, an intense vibration rises, with great friction which generates heat that radiates in all direction. Heat is always produced in this manner.

The revolution of an axle in its bearing generates heat. The amount of heat thus generated depends upon four cardinal conditions, viz., (1) Kind of material entering into the construction of the axle and its bearing, (2) whether the fit of the axle in the bearing is tight or loose, (3) whether the parts are rough or smooth, and (4) whether the parts are dry or lubricated.

If the axle and bearing are of wood, the same speed of rotation will generate less heat than if they are of metal. And some kinds of metal heat quicker than others. If the fit of the axle in its bearing is tight, the same speed of rotation will generate more heat than if the fit is loose. If the axle and bearing are rough, the same speed of rotation will generate more heat than if they are smooth. If the axle and bearing are well lubricated, the same speed of rotation will generate less heat than if not lubricated.

We have seen flames issuing from the oil-box of a freight-car truck, due to intense friction caused by the rapid rotation of the journal in its bearing. This is an illustration of friction generating heat.

When a lump of coal is thrown upon the fire, it burns and gives off heat. The heat is thought to be inherent in the coal, and released by the process of combustion, due to the union of the carbon of the coal with the oxygen of the air.

This is wrong. The heat that appears at this moment comes neither from the coal, nor from the oxygen. Coal alone could never produce heat, neither alone could oxygen. These two substances are not consumable. They continue to exist, after they meet, in combined form as carbonic acid gas.

Science has assumed that oxygen is the prime element of combustion in the generation of heat. If this theory be true, why not the flinty face of the rocky mountains, composed of fully 45 per cent oxygen, flame forth as a pillar of fire?

In the generation of heat and the production of fire by mechanical and chemical action, there must be the presence and the application of (1) Force to (2) Matter, under the direction of (3) Intelligence (Law). An illustration of this is seen in the striking together of stones, or the rubbing together of sticks.

When Prometheus first struck the flints, and marveled at the sparks, he did not expect the sparks when he struck the flints. The flints might have lain on the Shore of Time until the Day of Doom; but from their hard faces no sparks would ever spring, unless the flints were brought sharply together by the application of Force, which act involves the use of Intelligence (Law).

Science never begins with Primary Principles and Fundamental Facts. It starts by assuming the existence of a Primitive Cell, then by a process of heterogeneous development, falsely termed Evolution, proceeds to populate the Earth with Living Forms. It makes no effort to explain the Origin of the Primitive Cell, which it uses so freely, and without which it would be helpless, and Haeckel and Huxley would have been dumfounded.

Give me Matter, Force, and Law, says the Astronomer, and I can construct the Universe. The Grand Trinity enters into all formation and all production, as explained in Lesson No. 5, Elementary Orthopathy, and in the preceding lessons of this Advanced course.

We reiterate that in producing heat and starting fire, Force

and Matter are always involved. There must also be Intelligence (Law), whether it be Primitive (Eternal) Intelligence, or Individual (Human) Intelligence. When Prometheus first struck the flints, the act involved Force, Matter, and Intelligence (Law).

We do not use flint-rocks today in starting fire. To facilitate the work, Individual Intelligence has invented matches. One end of these is coated with easily and highly combustible substance.

Man rubs the coated end of a match on another substance. From the friction thus produced by this application of Force to Matter, guided by Intelligence (Law), heat of such intensity is generated, that the coated end of the match bursts into flame. This flame is applied to dry material. Great vibration and friction result, generating intense heat, and the dry material, like the match, bursts into flame.

In the beginning of the procedure, regardless of the kind of material used, there is the application of Force to Matter, under a directing rule of Intelligence (Law).

The carbon of which coal is composed, has a powerful affinity for the oxygen of the air. When the molecules of carbon and the molecules of oxygen are made to approach within a certain distance of one another, by the initial application of heat, produced by prior friction, these molecules rush together with inconceivable velocity. The resultant heat rises from intense friction, developed by the precipitate rushing together of the molecules of carbon and the molecules of oxygen.

Heat is produced only by friction. It is a form of energy that results from friction produced by vibration.

Vital Heat is produced in the same way that any other kind of heat is produced. It is the result of friction produced by vibration. The vibration rises, not from steel drills boring in metal; not from electrical force working thru wire. It arises from Vital Force working in and thru Animal Tissues.

The tissues and fluids of the body offer certain, definite resistance to the flow of Vital Force thru them, resulting in molecular motion. From this motion there rises certain vibration, resulting in friction, with the generation of what is called animal heat.

We have seen that the amount of heat produced anywhere, depends upon four chief conditions. The amount of vital heat produced in the animal body depends upon (1) the chemistry of the tissues, (2) the relation of the tissues, (3) the chemistry of the fluids, and (4) the circulation of the fluids.

(1) Normal chemistry of the tissues, (2) normal relation of the tissues, (3) normal chemistry of the fluids, and (4) normal circulation of the fluids, result in normal vibration, normal friction, and normal heat. This state is termed Health.

(1) If the chemistry of the tissues is abnormal, as where poisoned with foul air, foul liquids, bad food, vaccines, serums, medicines, drugs; (2) if the tissues are abnormally related, as in the case of abnormal cells, sprained ligaments and muscles, dislocated joints, broken bones; (3) if the fluids are surcharged with acids; (4) if the circulation is sluggish, the result will be greater resistance to the flow of Vital Force, greater vibration, greater friction, and greater degree of heat. This state is known as Fever.

In health, the temperature of the living body remains constant and regular. It is the same in winter as in summer, in the arctic as in the tropic zone.

In summer, the heat of the body is moderated by means of the perspiration. Under the skin, over the whole surface of the body, but more abundantly on the palms of the hands, the soles of the feet, and the front parts generally, there are

multitudes of little glandular bodies, called the perspiratory glands.

Each gland consists of a slender tube, about 1-400th of an inch in diameter, which penetrates from the surface through the thickness of the skin, and there terminates in a globular coil. The capillary blood vessels distributed to these glands, are interwoven with their coils, covering their surfaces with a fine vascular network. Each one of these coils, when unraveled, is about 1-15th inch in length. The whole number of perspiratory glands in the body is about 2,500,000; and the combined length of their glandular tubing is not less than 153,000 inches, or about two and one-half miles.

Throughout this vast extent of glandular tubes, the blood of the capillaries comes in contact with their tissues, supplying a fluid that is poured into their cavities, and finally discharged upon the surface of the skin. This process is occurring constantly, so that the skin is constantly exuding a watery fluid upon its surface.

Usually, the perspiration does not remain for an instance upon the skin. It is immediately taken up by the atmosphere and dissipated by evaporation. This is called the insensible transpiration of the skin.

The effect of evaporation upon the warmth of the skin is to keep it cool. Evaporation is one of the most effectual means of producing cold. If we moisten the hand with a fluid that evaporates rapidly, we will at once feel the sensation of cold produced. The more rapid the evaporation, the greater the feeling of cold caused by it. Chemists employ this means to produce the freezing of water and other liquids.

In cold weather, the perspiration is in exceedingly small quantity, and is insensible. But in warm weather, the perspiration is more abundant. The skin becomes active under the stimulus of heat, the blood circulates more freely in the perspiratory glands, and a larger quantity of fluid is exuded upon the skin. Then the perspiration becomes visible, because it is excreted faster than it can be carried off by evaporation.

The evaporation of this increased quantity of fluid produces a greater cooling effect. Thus, in the sensibility of the skin and its perspiratory glands, the body possesses a cooling apparatus for regulating its own temperature, notwithstanding the variations of the external atmosphere.

The regulation of the heat of the body by the skin is nearly as important as the production of that heat. For if the blood be actually heated much above its natural temperature, death follows as certainly as though it had been cooled down below its natural temperature. There are but a few degrees of variation above or below the normal temperature within which animation can be maintained.

Whenever the body is subjected to any unusual muscular exertion, it becomes warmer because of the increase in the vibratory rate of its tissues. But at the same time the circulation in the skin is excited, and an abundant flow of perspiration thus prevents the heat from becoming excessive.

The average quantity of fluid discharged by perspiration in twenty-four hours is nearly two pounds. As the watery portions are evaporated, the solid parts remain on the surface of the skin. This fact makes it important to keep the skin cleansed of these accumulations upon it by frequent ablutions.

Not only those parts that are exposed to the contact of external impurities, but the whole surface of the body should be daily washed, to remove the debris of its own excretions.

CHILLS AND FEVERS

We have seen that when the organism presents abnormality in any part, there immediately rises greater resistance to the

flow of Vital Force, with greater vibration, greater friction, and greater degree of heat, manifesting the condition called Fever.

From the dawn of medical history, Fever has been regarded as something strange, mysterious, and dangerous. The theories of Fever, more than any other subject, have taxed the genius of the masters of the medical world. The very names given to the different phases of Fever would fill a volume; yet, at this hour no medical institution is able to advance a generally accepted theory in this field. As Trall so well observes:

"All is now as vague, indefinite, and unsatisfactory as in 'the dark ages'; and the existing opinions of living authors regarding the nature of Fever, are speculations of the most chimerical character."—Hydropathic Encyclopedia, Vol. II.

How is Fever treated by the medical profession? With almost every violent poison known to man! Prof. Martyn Paine remarks:

"Our most violent poisons are our best remedies."

Regarding this statement, Walter says:

"Every disease that ever afflicted a human being is curable by their use, provided they are used in sufficient dose. The power of disease being the patient's vital power, it is evident that the violence of the disease may be reduced by whatever will reduce or destroy the patient's life."—Vital Science, p. 304.

Any substance, given to a patient, that will depress and weaken the body, will reduce Fever. Such substances are those that are poisonous and dangerous. They reduce Fever by their weakening effect upon the nerves and brain.

Of this damaging method of treating the sick, Walter states:

"When the patient dies, it is not known that the result is the legitimate effect of thus curing the disease. We are not the only physicians who have observed that antipyrine, for instance, has too often stopped a fever by stopping the patient's heart-beats."—Ibid.

With the knowledge contained in this course of lessons, the student is freed from the ignorance that binds and blinds the medical world.

Knowledge is power. The freedom of Man rises from Knowledge. But if Knowledge shall not increase sorrow, as Solomon found, it must be based on Truth.

The knowledge of the Medical World respecting Vital Heat has increased sorrow, because that knowledge is based on error.

The knowledge of Orthopathy respecting Vital Heat has decreased sorrow, because that knowledge is based on Truth.

The fundamental difference between Orthopathy and Medicine lies in the fact, that the Philosophy of Orthopathy is based on Eternal Principles, while the Philosophy of Medicine is based on fatal Empiricism. Hence, while the practice and procedure of Orthopathy remain as fixed and stationary as the distant stars, the practice and procedure of Medicine shift and change with the seasons.

When the state of the body is normal, the degree of its temperature will be normal. But when the state of the body is abnormal, the degree of its temperature will be abnormal.

It should be understood that in instances of Chills and Fevers, the whole organism, as a rule, is not involved. In Fever, the increased temperature is generated in some particular part, and the surplus heat of that part is conveyed to other parts by the circulating fluids.

Increased temperature in any part of the body, indicates unusual resistance there to the flow of Vital Force. A Chill is generally the first symptom. There are various causes from which this state arises, but the most general one is an accumulation of waste material, which hinders and retards the course of Vital Force and the flow of Vital Fluids.

The clogging waste offers (1) greater resistance to the flow of Vital Force, with (2) greater vibration, (3) greater friction, and (4) greater heat. From this specific area, the blood carries the excess heat to other parts, presenting what appears as a general Fever of the entire organism.

Decreased temperature in any part of the body, gives the patient a sensation known as Chills. This state is produced by the same agencies that produce Fever, and usually precedes the Fever.

In instances of Chills, the accumulated waste material offers such marked resistance to the flow of Vital Force, as to decrease temporarily the general function of the body, or of some part. There is lessened flow of Force and Fluids to the area involved. This state is soon succeeded by a vigorous reaction of the powers of the body, which sends the blood rushing all thru the organism, to such extent that the resistance of the clogging waste is overcome, and Fever replaces the Chill.

In cases of this kind, the powers of the body are aided by a judicious application of heat, as explained in Lesson No. 38, Chapter No. 105.

Chills are conditions that should be relieved as soon as possible. The lessened and retarded flow of Vital Force and Vital Fluids through the body is serious, and should be corrected by the application of heat.

When certain parts are continually chilly, as cold hands and feet, the condition indicates a general weakness of the nerve-system in and to these parts. It can be remedied only by a general health-building regimen. The length of time required for this is dependent upon such factors as, the age of the patient, the degree of degeneration of the body in general, and the degree of degeneration of the affected parts in particular.

Armed with the information here presented, the student labors no longer in darkness as to the Source and Cause of Animal Heat. The states and stages of Chills and Fevers become to him as an open-book. They are no longer mysteries which puzzle and perplex his intelligence. He knows their Source and their Cause; and he thus becomes their master. Orthopathy has equipped him with the Torch of Truth, and he proceeds to his task with a clear head and a skilful hand.

QUESTIONS FOR LESSONS NOS. 34, 35, 36, 37

- (a) Who is the Father of Orthopathy, and when did he live and labor? (b) State his definition of disease, and give your opinion of the definition. (c) What is the difference between Disease and Health? (d) What is the remedy and how should it be applied?
- (a) What is the difference between Allopathy and Homeopathy, and which is correct, if either? (b) If the body is going down into disease, how would you bring it back to health?
- (a) Name the great remedial measure, and state why it is the only true method to correct disordered bodies. (b) State why it is dangerous to feed the sick. (c) What is meant by Fasting a patient?
- (a) Give the symptoms presented by a patient while fasting. Make your answer brief.
- (a) Which is most harmful, to use the enema, or to leave the colon clogged with putrefying filth? (b) Give directions for using the enema, and state how often it should be used on fasting patients.
- (a) How much water should a fasting patient drink, and what kind? (b) How long should a patient fast? (c) What symptoms indicate when fast should be broken? (d) How should the fast be broken? (e) Give diet for first, second, and third day after the fast is broken. (f) How long should a person fast when the purpose of the fast is to rejuvenate the body?
- (a) Should a person exercise for health, or for big mus-

cles? (b) Do athletes, as a rule, live long? If not, why? (c) What parts of the body suffer most from lack of exercise?

8. (a) Are deep-breathing exercises beneficial? (b) What should a person do to get the greatest good from deep-breathing? (c) Give some harmful effects suffered by man from the constant pull of gravity.

9. (a) Does the Earth receive heat from the Sun? Be careful about your answer. (b) Give the three classes into which health writers divide the sun's rays, and state the properties of each.

10. (a) Why is it dangerous to use therapeutic lights on patients? (b) Give the method by which you would start a patient to taking sun-baths.

11. (a) State the Law of Heat. (b) Do medical institutions know how Animal Heat is produced? Give their theory. (c) How is vital heat produced according to Swedenborg? According to Jennings? According to Walter? (a) Which one is right, if either of them.

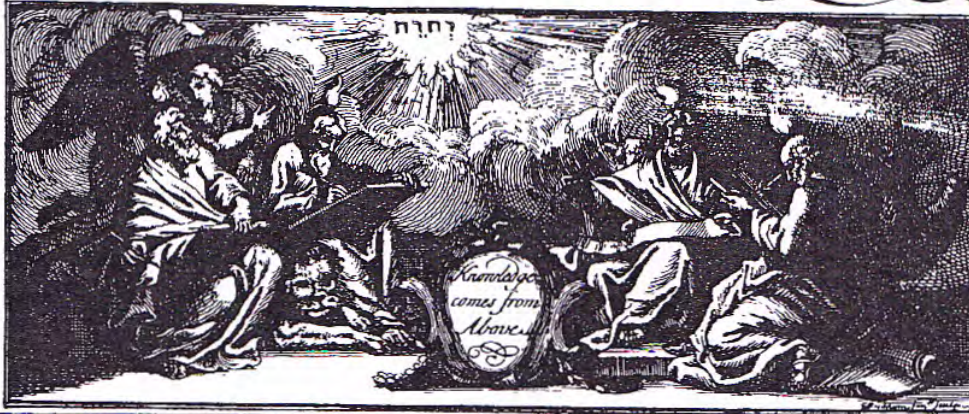
12. (a) Give the Greek theory of heat? (b) State how Benjamin Thompson discovered the true method of heat production. (c) Why does coal burn when thrown into fire?

13. (a) What three elements are involved in producing heat? (b) State how Vital Heat is produced. (c) How is the body's heat regulated?

14. (a) Do medical institutions know the cause of Chills and Fevers? (b) Give the cause of these conditions, and show how to treat them.

In the Bible Astral Projection is called "In The Spirit." The scribe of Revelation said he "was the Spirit." Who was he? A profound mystery solved by Hotema in his marvelous work, **Son Of Perfection** . . . Revelation was compiled from a Hindu Scroll by the great Philosopher of the First Century A. D. It had been written thousands of years before that time, and dealt, in baffling symbolism, with the Astral Body, analyzing the sensations of the Neophyte as he went thru the Ritual of Initiation in the Ancient Mysteries, and was taught how to attain Astral Consciousness by blacking-out physical Consciousness. (**Son of Perfection** Volume One — **Son of Perfection** — Volume Two —

Sacred Wisdom



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LESSONS Nos. 38, 39, 40, 41, 42.

Lesson No. 38, Chapter No. 105

THERMOTHERAPY

Thermotherapy means the treatment of man's disorders by the use of heat.

In this procedure, nothing is superior to unadulterated Sunlight. In the absence of Sunlight, other means may be used advantageously.

Heat plays an important part in the production and maintenance of plants and animals. Indeed, Heraclitus regarded Fire as the essence of all elements; and Herbert Spencer believed the Life of a chick came from the transformation of Heat—as stated in Elementary Orthopathy, Lesson No. 3, p. 10.

So essential is Heat in the formation, production, and existence of animate structures, that no living form could come into being without the presence of a certain degree of heat. No living form could exist long, after it came into being, without the presence of a certain degree of heat.

But Heat is not the CAUSE of the formation, production, and animation of living structures. The student was shown in the above lesson, at the page indicated, that Heat is one of the essential conditions or occasions for the operation of Vital Force in the formation and production of Animate Forms.

"Vital Heat" keeps the normal temperature of the human body around 98 degrees F. So essential is it that this temperature be maintained, that a few degrees of variation, either up or down, is attended with distressing symptoms. The states of chills and fevers result from but slight changes in body's heat.

Every acute disorder is accompanied by a rise of temperature. The more vital the body, the quicker and higher rises the temperature. Old people may be quite ill, but due to the low state of their vitality, their degree of fever may be slight.

Dead bodies exhibit no fever. Half-dead bodies exhibit but little fever. The bodies of old people are too seriously degenerated to exhibit much fever—for such bodies do not receive and express Vital Force at par.

In treating the sick, the Orthopath is in order when he observes the rule of Eternal Intelligence. If the dis-

ordered organism increases its temperature, in an effort to regain its equilibrium, the Orthopath is right when he applies heat to the ailing body.

In acute and chronic disorders, the pale skin of the patient indicates a congestion of the internal organs. When the skin and surface muscles are inactive, are constricted and contracted, there is necessarily a surplus of blood in the viscera.

An inactive muscle contains not more than one-sixth to one-fourth as much blood as an active muscle. The general muscular weakness that accompanies acute and chronic ailments, prevents exercise and muscular activity. Then there occurs a general anemia of the skin and surface muscles, and of the extremities, due to the blood's flowing from these muscles and parts into the more active internal organs. This state leads to a surplus of liquids in the viscera, with resultant congestion and stagnation.

If the congestion of the visceral organs becomes chronic, there occurs a change of structure, with derangement of function. Out of this condition chronic ailments arise.

Congestion or stagnation of blood in any part, necessarily involves diminished oxygenation, with accumulation of carbonic acid gas and other toxic materials. This gives rise to partial asphyxiation and auto-intoxication of the congested organs and areas.

Under the baneful influence of toxins, thus produced and not eliminated, general degeneration of the parts is increased, with the appearance of serious disorders.

The blood vessels of every important internal organ are very directly connected, thru arteries or veins, or both, with the vessels of the skin. This fact makes it possible to produce, by the application of heat to the surface of the body, a general hyperemia of the skin. Such procedure induces collateral anemia of the vascularly related parts.

The application of heat to the skin, dilates the peripheral vessels. This effect may be produced by heat applied to the skin in any manner, as by the means of sunlight, hot baths, etc. When the surface blood-vessels are completely relaxed and fully distended, they are capable of containing one-half to two-thirds of all the blood in the body.

If the supply of blood in the surface vessels, within a comparatively short time, is increased from a small por-

tion of the total blood volume, to one-third or one-half of the entire amount of blood in the body, we know that by

artificial congestion of the surface vessels, we may withdraw quickly from the great vascular system of the viscera, from one-fourth to one-half of their total blood contents. This procedure affords quick relief to a congested liver, or spleen, or kidneys, hyperemic lungs, inflamed stomach, or intestines, and even a pounding heart.

By the application of heat to the surface of the body, followed by the application of cold, the alternate conditions of expansion and contraction may be induced.

Filling the anemic skin and surface vessels with blood, removes the harmful congestion of liver, kidneys, spleen, pancreas, stomach, intestines, and lungs. Normal conditions may be gradually restored by a daily repetition of this procedure. As the sluggish circulation in the skin and surface vessels grows more normal, the congested condition of the visceral organs is reduced, and the body's function, in time, returns to its normal state.

The duration of the application of heat to the body is highly important. *The procedure must not be carried to excess.* The Doctor should understand the work, and the (1) condition of the patient, with the (2) results to be obtained, should serve as his guide.

The duration of the hot bath should be sufficiently long to produce moistening of the skin with sweat. In certain cases, longer baths are necessary. This is true in chronic cases, when the patient shows considerable vitality. If the patient is weak, the bath must at first be short, and be increased in duration as the patient improves.

No one advises a weak man to take the long, tiresome exercises of a well man. But we do advise a weak man to exercise some, and increase the duration and vigor of the exercise as he gains in strength. For exercise improves the strength of both the weak and the well.

When it is not possible nor convenient to use sunlight, an effective means of applying heat to the body, is by the use of the Electric Blanket. The blanket is spread on a bed and covered with another blanket, to protect the electric blanket from the patient's perspiration. The patient lies on the bed, then both blankets are wrapped tightly around his body, and the current is turned on.

This method is more restful for weak patients than is the use of a cabinet bath. It may be used with patients too weak to sit up. Patients grow not so tired in the blanket as when sitting in the cabinet.

In ordinary cases, the patient should be kept in the blanket from fifteen to twenty minutes after sweat begins to appear on the body. In other cases, the duration should be shorter or longer, depending upon the (1) condition of the patient, and the (2) results to be obtained.

When ready to remove the patient from the blanket, the doctor should open the blanket by degrees, taking out first one arm, and rubbing it dry with a towel. The same should be done with the other arm, after which the thorax, abdomen, and legs should be rubbed dry. The patient should now turn over on the abdomen, so the back parts may be dried, by rubbing the skin well with a towel, but not enough to induce uncomfortable irritation. It is also well, at this time, for the doctor to massage the patient's body.

The blood in the veins flows toward the heart, and the flow is slower and less vigorous than in the arteries. Also, the veins are located in many instances near the surface of the body, while the arteries are more deeply imbedded in the flesh. Hence, it is important to add that, in bathing and drying the arms and legs, and at all times

when rubbing these parts, one should begin at the hands and feet, and rub toward the body. This should be done also when massaging these parts. Such course aids the circulation in the arms and legs by forcing the blood onward through the veins toward the heart.

The sweat bath should be given when the patient's stomach is empty, and he should not eat sooner than one to two hours after the bath. He should lie in bed, well covered, and rest and relax.

When shall we use the sweat-bath? In all chronic cases, it is highly beneficial to apply heat to the body, as indicated.

In all disordered conditions of the respiratory system, as colds, influenza, pneumonia, asthma, and hay fever, it is beneficial to apply heat to the body. In some of these disorders, it may be advisable to heat the body twice or thrice in twenty-four hours, to relieve pain and facilitate respiration.

In all acute conditions of an eruptive character, as measles, scarlet fever, smallpox, and so on, the doctor must be cautious in applying heat to the body, or in doing aught to quicken the circulation.

If anything is done to quicken the circulation when the rash is in the process of appearing on the skin, the eliminative function may be quickened to a point where certain surface vessels might rupture, as the eye, for instance, which biology teaches us is simply a continuation and modification of the skin.

Heat is a stimulant. All bodily functions are quickened by its influence. This makes heat highly useful in cases of stagnant circulation and slow metabolism. Heat accelerates the flow of fluids and the processes of cell change.

Since heat is a stimulant, some Nature Cure authorities take exception to its use on patients. They hold that heat, when applied to the sick body, unduly quickens function and weakens the organism. They base their contention on the theory, that the weakness comes from wasted and exhausted Vital Force. The student has seen that Vital Force cannot be wasted nor exhausted.

1. When heat is applied to the sick body, the patient perspires and appears to grow weaker. This procedure is destructive and should be discouraged, say such authorities as base their conclusions on facts of observation.

2. When the brawny athlete indulges in vigorous exercise, as running or wrestling, he perspires and appears to grow weaker. The same authorities declare that this course is beneficial, UNLESS CARRIED TO EXCESS.

As to the patient, these authorities hold that it is detrimental to apply heat to the body and make the patient sweat, because of the weakness that appears to ensue.

As to the athlete, they hold that it is beneficial to exercise the body until it sweats, even though weakness does appear—BUT THE PRACTICE SHOULD NOT BE CARRIED TO EXCESS.

Why this inconsistency? Why this distinction between the two instances? If it is beneficial for the athlete to exercise until the body sweats and appears to weaken, SO LONG AS THE COURSE IS NOT CARRIED TO EXCESS, why is it not beneficial for the sick to be heated until the body sweats and appears to weaken, SO LONG AS THE COURSE IS NOT CARRIED TO EXCESS?

As to a well person, exercise is recommended by every health instructor as a health measure of much value. As to a sick person, some doctors assert that, to heat the patient until he sweats is harmful, for it weakens the body by wasting and exhausting its Vital Force.

The failure of these men to comprehend the Law of

Physiology, is the fact that perverts their reason and prevents their discovery of the untenability of their position.

The beneficial effects following the application of heat to the sick body, has been attributed by some doctors to the eliminative effects thru the profuse perspiration.

This theory led the opponents of the method to collect the perspiration that drips from the sweating bodies of the sick, and analyze it to show that the sweating of patients by the application of heat, does not result in the elimination of much waste material—that by such sweating, the body merely throws off the water in it.

A well man does not exercise with the thought of sweating abnormal quantities of waste out of the body. He exercises to move the muscles, quicken the body's function, hasten the circulation, and increase the metabolic processes—all of which every one admits is beneficial, UNLESS CARRIED TO EXCESS.

Shall we collect the sweat of the well man, who exercises for health, and say to him that he is silly to exercise thus, since our analysis of his sweat shows that his body is merely throwing off water that contains little waste material?

Those who have studied the matter more, found that the principal reason why improvement follows the application of heat to the body, rises from the general influence on the circulation, and not from the elimination of waste and toxic materials.

Quite generally, the circulation of fluids in sick people is sluggish. Blumgart and Weiss, Thorndyke Laboratory, Boston City Hospital, found that it requires from fifteen to twenty seconds for the blood of a normal person to flow from the left arm through the heart and lungs, then back to the heart and out into the right arm; whereas, for a sick person it requires from forty-five to sixty seconds for the blood to travel this distance.

Under the influence of heat, the general circulation is quickened, and the skin and surface muscles are relaxed and filled with fluids. The activity of the sweat-glands is incidental. The perspiration has some value thru its influence upon general metabolism; but the amount of toxic matter thus thrown off thru the skin, at this time, is comparatively small.

When heat is applied to the sick body, and the patient appears to grow weaker, the condition arises not from expended and exhausted Vital Force, as some doctors teach. It arises from vitolytic action in excess of vitosynthetic action.

When the brawny athlete indulges in vigorous exercise, and his body appears to grow weaker, the condition arises not from expended and exhausted Vital Force, as some doctors think. It arises from vitolytic action in excess of vitosynthetic action.

Shall we watch the strong man as he exercises to promote his health, then tell him that he is foolish to exercise thus, since our observation shows that as he labors, his body weakens?

The condition of weakness appears in the sick body in such instances, for the same reason that it appears in the well body, and vice versa.

The sick man is too weak to exercise. When heat is applied to his inactive body, it does for him what exercise does for the well man. As (1) exercise quickens the body's function, hastens the circulation, and increases the metabolic processes, so (2) heat, applied judiciously to the sick body, quickens its function, hastens the circulation, and increases the metabolic processes.

The doctors who decry the use of all stimulants for

the sick, freely and carefully recommend the use of sunlight and sun-baths as being beneficial for both the healthy and the sickly. But they condemn the use of heat for the sick man, claiming that it is an enervating and a vitality-wasting stimulant.

A statement of the proposition reveals the inconsistency and absurdity of their position. There is no kind of heat that is more enervating and stimulating to both plants and animals, than are the direct rays of the Sun.

Finsen showed that the actinic rays of sunlight are a powerful stimulant. It is common knowledge that both plants and animals will suffer from an excess of these rays.

Undue exposure to sunlight will produce giddiness, headache, nausea, vomiting, diarrhea, fever, and sunstroke, with death sometimes resulting. This fact affords a striking example of the stimulating influence of sunlight upon man's body, brain, and nerves.

For these reasons, shall we condemn the use of sunlight for the well and the ill? Most certainly not; but we must be consistent in our teaching, that to stimulate the body is always harmful.

We have related the evils of stimulating poisons, and said in Lesson No. 25, chapter No. 73, that the sick body does not need such stimulants.

In Lesson No. 20, Chapter No. 57, we observed that exercise, within certain limits, is the only safe form of stimulation.

We must inform the student now, that a great gulf lies between the effect on the body of drug stimulants and tonics, all of which are poisons, and of (1) exercise, (2) sunlight, and (3) heat, which are not poisons, but which are a form of stimulation.

Drug stimulants and tonics quicken function by their poisonous effect on the cells. The powers of the organism are aroused in defensive action, with accelerated function resulting, the purpose of which is to rush out of the body the poisonous stimulants and tonics.

From these drug stimulants and tonics, the body derives no benefit. They do not become an integral part of the body's structure. They impart nothing of value to the body. Their effect is always of a destructive, degenerative character.

But (1) exercise, (2) sunlight, and (3) heat, as stimulating influences, do not come in this class, UNLESS CARRIED TO EXCESS. Eating the best of food, WHEN CARRIED TO EXCESS, transforms a body-sustaining measure into a degenerative process.

Exercise quickens bodily function, not by poisoning the cells, but by bringing into motion the muscles of the organism. The resultant activity demands building material to replace the cells, worn-out by use. The material is hurried forward by the blood-stream, which also collects and carries off the waste and toxic materials resulting from the worn-out cells. This course is a health-promoting procedure, WHEN NOT CARRIED TO EXCESS.

Heat quickens bodily function by relaxing the muscles and tissues. The relaxed structures aid in and allow for the expansion of the tiny capillaries—blood-tubes so small that they cannot be seen with the best unaided eye.

As the capillaries expand, under the benign influence of sunlight and heat, the stagnant fluids, found in all disordered bodies, begin to flow more freely and swiftly onward, carrying with them the clogging waste material that is (1) obstructing the Life Channels, (2) retarding the normal flow of Vital Force, and (3) poisoning the body.

This procedure may be regarded as stimulation, and

such it is, just as (1) Sunlight and (2) Exercise are forms of stimulation. BUT WITHIN CERTAIN LIMITS, IT IS A KIND OF STIMULATION THAT IS HIGHLY CONSTRUCTIVE, FOR—

1. It relaxes constricted muscles and tissues, bringing relief to a body that is suffering from (a) stagnated fluids, (b) congested viscera, (c) accumulated toxins, (d) auto-intoxication, (e) diminished oxygenation, (f) defective elimination, (g) deficient nutrition.

2. It promotes reparation of cells by quickening the flow of the forces and fluids, that they may exert more power in clearing the body of clogging waste material, and supplying nutrition to the suffering cells.

3. It produces a healthful demand for fresh building material by promoting the requisite depuration and elimination of disintegrating structures.

Chapter No. 106

CAUSE OF OLD AGE

More interesting information comes to us as we write, showing the marvelous power, stamina, and ability of the human body.

Ripley tells us in the press of April 8, 1931, of a certain John L. Sullivan, who, at the age of 53, won the five-mile pastime race twelve times in thirteen starts. He also relates the case of Anthony McKinley, who, at the age of 79, put up a four-pound dumb-bell at arm's length above his head, 10,000 times in one hour, six and three-fourths minutes.

Mrs. Anna Van Skike, Santa Monica, Calif., on August 9, 1930, celebrated her 70th birthday by swimming 20 miles in the Pacific ocean, covering the distance in 12 hours, 10 minutes.

According to the press of April 9, 1931, Mrs. N. L. Mitchell, Dallas, Texas, at the age of 83, discovered that she was the possessor of a new tooth. A few days later another appeared, and it was said that she expected to cut a full set of new teeth. This statement was based on the fact that her uncle, when he was past 80, cut his third set of teeth.

In the press of April 21, 1931, Ripley relates the case of Christian Mentzellius, who grew a complete new set of teeth when he was 120 years old. This incident is famous in dental circles, and is known as the Memel case. It is attested to by Dr. Schengreen, who was well acquainted with the circumstances surrounding it, according to Ripley.

Ripley also states that Mrs. Katherine Reimers grew three sets of teeth, the third set appearing in the year 1926, when the old lady was 92.

F. W. Ryan, Holdenville, Okla., on February 14, 1931, celebrated his 108th birthday. He lives in a little log-cabin near the South Canadian River. In 1930 he farmed 35 acres of land. He chews his food with his own teeth.

Ben Hodge, of Poplar Bluff, Mo., was born in 1812, and is still active and vigorous, at the age of 119. He attributes his health and long life to his plain living habits.

Tom Kemp, of the same place, on October 4, 1930, at the age of 118, won first prize at the "old fiddlers' contest" at the county fair that year.

Ripley states in the press of February 7, 1931, that J. D. Cameron, Augusta, Maine, at the age of 100, could shoulder a barrel of potatoes. In the press of February 19, 1931, he stated that a Benares Hindu, who has been a Vegetarian for 40 years, lifted 960 pounds while lying on his back.

In the press of September 29, 1931, Ripley mentioned

the case of Ramon Gomez who, at the age of 116 years, had a perfect set of teeth.

The press of September 1, 1931, states that J. F. Winans, Oklahoma City, Okla., is 90 years old, and that one of his habits is "to run around the block every morning."

The report continues:

"Winans is a vegetarian, and eats but two meals a day. He takes plenty of exercise often walking to and from the downtown district to his home."

On August 27, 1931, Mrs. David Valverde, of Sacramento, Calif., died at the age of 123. She married her last husband at the age of 120.

Ripley further says that John Haynes, a private under Gen. George Washington, died at the age of 132, and that Kabenah Giveyence, an Indian of Minnesota, died at the age of 151.

On September 16, 1931, an Indian named Andre, who claimed to be 140 years old, died in his thatched cottage near Eunice, Louisiana. He said that he remembered the war of 1812, and that his people, the Choctaws, built the mounds around Baton Rouge to escape the Mississippi river floods.

The press of July 24, 1921, said that Jose Calvario died at Tuxpan, Mexico, at the age of 185. His age was fully established by church records, showing that he was born in 1727. He was active up to the time of death, the account stated.

K. L. Coe, writing in *Correct Eating and Strength* for March, 1931, includes some splendid information about people who live long. He observes:

"Numerous instances of longevity are reported from various quarters proving that man can under certain circumstances live to a much greater age than is customary.

"Perhaps the most striking of these in recent times is furnished by Dr. Rober McCarrison, formerly of the British Army Medical Service, who reports that in a colony in the Himalayan region he found natives who were so old that it would be hard to believe their records correct, yet he was not able to detect possible error in their way of keeping these records.

"Ages up and well beyond two hundred and fifty were common. He found men of well attested age up to 150 years recently married and raising families of healthy children.

"Men said to be well over two hundred years of age were working in the fields with younger men and doing as much work and in fact looking so like the younger men that he was not able to distinguish the old from the young.

"These people were restricted by religious dogma to the outgrowth of the ground for food, no animal foods of any kind beyond a small amount of milk or cheese, which were considered luxuries, being permitted.

"The rest of the food was grain in its natural state, nuts, vegetable and fruit and most of these were eaten raw.

"He reported that these people were never sick; they had none of the usual diseases of the civilized countries as they could not afford to cause these.

"There were during his nine years residence in this post no cases of indigestion, constipation, appendicitis, etc., in fact no sickness of any sort. He might as well have not been there except for the illness and surgery within the post itself.

"It is certainly possible that these people live so long

and are so free from disease, because they live almost entirely on natural foods."

Most of our beef-eating Americans do not know that the eating of flesh is unknown among the people of the Himalayan region. This may be due to "religious dogma," as Coe says, but the result is highly beneficial to the health of these people.

To the average American, a cow is simply something to be eaten, but to the Hindus it is a sacred animal, and one for which they will fight.

In the early part of this year wild disorder followed the killing of a cow by Mohammedans at Rawalpindi, India.

It appears some Hindus learned that at a certain boarding house a Mohammedan teacher was cooking a cut of the above cow, and they reprimanded him, whereupon he summoned Moslems from adjoining villages to his aid.

His call was answered by several hundred infuriated Mohammedans, who looted the village, set fire to 15 shops, and threw all the beef they could find into the Hindu temple.

This stirred up terrific strife, which ended with the burning alive of the Sikh jamadar, or native army lieutenant. The trouble was not quelled until a deputy commissioner and a police superintendent took a large force into the village.

The slaughtering of cattle has always been a source of trouble between Moslems and Hindus, and was regarded even by the recent round-table Indian conference as one of the most serious obstacles in solving the delicate communal question.

When Moslems throw parts of a murdered cow into a Hindu temple, it is as certain a way to start trouble as for Hindus to cast the body of a dog into a Mohammedan mosque.

The Indian army mutiny of 1857 occurred after the British had introduced a new rifle which required the use of greased cartridges.

Reports spread among the Indian soldiers that the cartridges had been greased with beef fat, and for two months numerous regiments mutinied in at least twenty-one garrison points, massacring hundreds of Europeans.

With these few examples of long life before us, of many that could be compiled, what can be said as to the reason why the race is degenerating, with the expectation of life after the ages of 45 to 50 steadily declining?

James Empringham, M.D., of New York, explains it thus:

"All creatures automatically poison themselves . . . Not time, but these toxic products produce these senile changes that we call old age."

Dr. David Starr Jordan, chancellor-emeritus of Stanford University and dean of American University Presidents, died at his home on September 19, 1931, at the age of 80.

The press report stated:

"The kindly old educator had never regained consciousness after a stroke of paralysis yesterday. He had suffered for some time from a complication of maladies due mainly to his advanced age."

A great doctor lives to be 80 years old, and dies of disease. Again we say, all men, including all Doctors, who have died, reach their end because of disease.

All disease is the evidence of decay. Decay is degeneration. It does not arise as the result of the coming and going of the years.

We have declared that there is no principle of decay in either Vital Force or Primal Matter. From the conduct of man alone springs decay of his organs and death of his body.

Man's body is an automatic machine. Of its work and needs he has little knowledge. He misuses and abuses his body when he thinks he is giving it good care. Then he is puzzled by its decay, which he believes results from the passing years, as expressed above:

"He had suffered for some time from a complication of maladies, due mainly to his advanced age."

Maladies do not come to the body because of "advanced age." They come because they are invited. They grow from seeds sown by the care-taker of the body.

The revolution of the Earth on its axis has no effect on the condition of the body. The passing of the Sun from East to West does not degenerate the body.

A flowing stream will wash great gaps in its rocky bed, in time. But Time is not the factor that produces the gaps. The cause that produces the gaps is the wearing-effect of the water.

Without the wearing-effect of the water, as where a stream dries up, the years might roll into centuries, but the rocky bed would remain as changeless as the sky of blue.

As man grows older, he finds that his body cannot resist the effect of his conduct as in his younger years. He thinks the reason of this is his advancing age. He says he is growing old and cannot stand what he used to.

This condition does not arise from the effect of time on the body. It arises from the degenerative effect of man's conduct on his body. As the years roll by, his body gradually weakens under the abnormal strain which he imposes upon it.

As time passes, man's bones become harder and his tissues stiffen. These degenerative changes, while occurring in time and place, are not due to either time or place.

The hardening of the bones and the stiffening of the tissues is a degenerative change, resulting not from the passage of time, but from the conduct of the care-taker of the body. It may occur in comparatively young people, or it may not occur until a comparatively late day.

Metchnikoff said it was plain that amongst the lower and higher plants, there are instances where natural death does not exist. Theoretically, life-expression through various forms would have unlimited duration, subject to the continuous replacement of the substance of the organism in the regular process of normal metabolism.

Metchnikoff stated that the death of man cannot be regarded as due to exhaustion from reproduction, or from inanition. He held that it is more likely due to auto-intoxication of the organism. The close analogy between death and sleep, he said, supports this view.

Metchnikoff was jeered by his medical contemporaries when he declared that deterioration of bodily structures, such as hardening of arteries, obliterated blood-vessels, atrophy of glandular and other cells of special function, increase of connective tissue in such organs as heart, liver, kidneys, pancreas, spleen, were due to minute quantities of poisonous substances in the blood.

However, his investigations furnished the first sensible explanation of the degenerative changes that occur in the body; and his findings have been confirmed by numerous research workers, including the eminent Dr. Carrel, biologist of the Rockefeller Institute, who says:

"The cell is immortal. It is merely the fluid in which it floats that degenerates. Renew this fluid at intervals, give the cell something upon which to feed, and, so far as we now know, the pulsation of life may go on forever.

"Quickly, involuntarily, the thought comes: Why not with man? Why not purge the body of the worn-out fluids, develop a similar technic for renewing them—and so win immortality?"

This brings us back once more to the "river of life." From the blood-stream the body receives its death-blow.

It has long been known that toxemia (poison in the blood) is the cause of all disease.

The CAUSE of all disease is the Root of Degeneration.

"Renew this fluid at intervals, give the cell something upon which to feed, and, so far as we now know, the pulsation of life may go on forever," declares Carrel.

In every living organism, this fluid (blood) is renewed at definite intervals. But with what is it renewed? Of the substances which man breathes, drinks, eats. It is renewed with foul air, impure water, dead food, tobacco juice, intoxicants, soda-fountain slops—and in time man dies of self-poisoning.

Lesson No. 39, Chapter No. 107

REJUVENATION

Degeneration means the replacement of high-grade tissue with tissue of a lower grade.

The process of degeneration begins in the seed of the new person, and continues to the day of death, except when halted by the process of rejuvenation called disease, and by a change of habits of the person.

No human body is free from the work of degeneration, for no person has sprung from parents who obeyed the Law of Life in their living habits; and the bad habits of the parents are adopted and followed by the children.

When a person has lost his health, when he is given up by doctors, when told that he has but a short time to live, he is ready to listen to reason, and do anything he can to regain what he has lost. He is eager to know whether his frail body can be Rejuvenated.

It is possible to rejuvenize weak, stiff, decrepit bodies. The extent to which the rejuvenescent process will progress, depends upon the (1) condition of the particular body, and the (2) conduct of the care-taker.

A body seriously degenerated, will not respond so readily nor so fully to the process of rejuvenation, as will one less seriously degenerated. Also, the response will be more rapid and extended if the body is young, and the care-taker rigidly follows the Law of Life.

In Lesson No. 14, Chapter No. 38, the student saw that Eternal Intelligence rises to meet every condition thrust upon the organism.

Let the weak man with flabby muscles begin indulgence in such exercise as chopping wood, and observe how rapidly his muscles grow larger and firmer. It is the work of the Life Principle, rising to meet the new demand made upon the body. This is a process of rejuvenation.

If the delicate office-worker, with tender hands, indulges in heavy manual labor, the Life Principle rises to meet the new condition by providing tissues in the hands of extra thickness and toughness. This is a process of rejuvenation.

The student was told what the process of rejuvenation did for Cornaro, who was a physical wreck at the age of 40, and given up to die. Cornaro saw that his only hope lay in living more in harmony with the Law of Life.

This he did, with the astonishing result that he passed beyond the century mark.

John Bailes of England, in middle life, suffered from severe illness of a chronic nature. He adopted a strict mode of living, and not only recovered his health, but lived to be 128 years old.

Capt. Goddard E. Diamond, of San Francisco, at the age of 79, was suffering from a severe case of hardened tissues and blood-vessels, and general stiffness of the joints. Yet, for thirty years he had lived a life of what is commonly called Vegetarianism.

The tissues of his legs and back were so hardened, that he could not rise from a chair nor sit down without extreme discomfort, and he often required the aid of an assistant. The tissues of his arms and hands were so stiff, that it was with difficulty that he held a knife and fork to feed himself.

Then a bright light came to him. In searching for help he discovered a rejuvenating process. This he diligently practiced for ten years and at the age of 90 he was instructing a class in physical culture. In 1904, at the age of 108, he could ride a bicycle and walk 20 miles a day. He lived to be more than 114 years old.

What man has done, man can do. It is a matter of learning how, and then living what you learn.

But as degeneration progresses by gradual steps and stages, so regeneration, or rejuvenation, progresses by gradual steps and stages.

Cell by cell, a degenerated organ is regenerated. Each time the new cell is just a little bit better than the old cell it replaces. In time the improvement is so great that it is noticeable to man's senses, as where a degenerated heart or liver in time recovers so fully that it fails any longer to bother its owner.

But every step and stage of degeneration leaves its mark. While a degenerated heart or liver may be regenerated to such extent that it fails to bother its owner as it once did, it cannot again become a normal organ. That is evidenced by the fact that an external wound, though it heals, yet leaves a visible scar composed of tissue known as scar tissue, or tissue of low grade.

A fatty heart cannot again become a normal organ. A fibrous liver can not become a normal gland. A deteriorated mucous membrane can not return to its original, normal state. A degenerated brain will always remain below par.

There is another rule, which is that the downward transit of the quality of the tissues may be halted by the habits of the person.

If the Law of Life is known and its requirements are met, the degenerative process of the tissues is stopped, and as the years roll on, improvement will be the reward of him who pays the price. For the original size of all scars diminishes as time passes and this process may be helped and hastened by good living habits.

Chapter No. 108

PROCESS OF REJUVENATION

The subject of Rejuvenation is discussed in Lesson No. 21, p. 8, Elementary Orthopathy, to which the student's attention is again directed.

We have contended that Old Age and Death are not natural. We are supported in this contention by eminent Biologists and Physiologists. Dr. George W. Crile, famous surgeon, asserts:

"There is no natural death. All deaths from so-called natural causes are merely the endpoint of a progressive acid saturation."

But the progressive acid saturation is not due to any defect in the formation or function of the organism, as some medical authorities appear to think.

The body as a machine is perfect and automatic. Its departments of digestion, assimilation, depuration, and elimination are so great and efficient, that they are able to perform well, several times more work in a day, than they should ever be required to perform. This statement is proved by the fact that man may live in fairly good health for a number of years, after one lung, or one kidney, or part of the liver, or part of the small intestine has been removed.

From information presented in previous lessons, the student knows that a "progressive acid saturation" of the body is not the sole cause of old age and death. The body is poisoned, its tissues are hardened, its nerves are weakened, its glands are deteriorated, as the body passes thru a gradual process of degeneration, beginning before birth and ending in death.

The cause of the degeneration has been frequently mentioned. As the subject is presented, a solution of the problem of old age and death appears to lie in discovering ways and means to prevent the progressive degeneration of the organism.

The valuable work of Carrel shows that this is not only possible, but that it may be accomplished. Nearly twenty years ago, he discovered a method by which bits of living tissue from an animal's body can be kept alive indefinitely outside the body.

One of Carrel's specimens, a small bit of a chicken's heart, the story of which is now famous in biological literature, has been kept alive for more than seventeen years, after the death of the chicken from which the cells were taken.

The cells have repeatedly become senile and were about to die. Each time they were immediately rejuvenated by a process of cleansing. Of this Dr. E. L. Fisk says:

"These cells are multiplying and growing, apparently unchanged by time—to all appearances immortal, so long as they are periodically washed of poison and nourished."

This knowledge leads Biologists and Physiologists to declare, that Old Age, and even Physical Death, except by accident, are due to waste material accumulating in the body, which, as Crile says, poisons it to death.

The existence of the body depends upon the existence of its cells. The existence of the cells depends upon regular and adequate (1) nutrition and (2) purification.

The cells will die of (1) starvation, and they may also be (2) poisoned to death. The poisoning may result from (1) substances in the blood stream, or from the (2) waste of the cells that is not promptly washed away because the circulation is sluggish, or from both of these causes combined.

If all body purification by means of the kidneys is stopped, a man would die in three to five days. If all body purification by means of the lungs is stopped, a man would die in three to five minutes.

A healthy body is one that is adequately (1) nourished and (2) regularly purged of its waste by an active, normal blood stream. A body kept in this perfect condition, should neither age nor die.

A disordered body is one that is not adequately (1) nourished, and not (2) regularly purged of its waste.

Such a body is clogged and poisoned with putrefying waste and is poorly nourished by a sluggish, abnormal blood stream.

When the cells of the chicken's heart become senile and are about to die, they are immediately rejuvenated by a process of cleansing.

A cleansing, purging process, applied to the body of a patient, brings him back to health. This is rejuvenation for the cells of a man, just as truly as it is rejuvenation for the cells of a chicken.

The cells of the chicken's heart are cleansed by being washed with pure water. The cells of a man's body are constantly bathed and washed with the blood. But the blood is poisoned and polluted. Instead of its nourishing and purging the cells, it poisons them (1) unto sickness, and finally (2) unto death. All this is carefully covered in these lessons.

From whatever angle the proposition is presented, we are invariably brought back to the blood as the starting point. If progressive acid saturation is the (1) cause of degeneration and death, it is the result of (2) polluted blood.

Having found our field of labor, the method of procedure is in order. (1) How may the cells be cleansed of the acid saturation? (2) How may we restore the normal acid and alkaline balance of the blood? (3) How may we purge the body of the degenerated fluids?

The only means by which this may be accomplished have been given. That procedure is Fasting. By Fasting the patient, his body is rejuvenated. For the (1) cells are cleansed of the acid saturation, the (2) normal balance of the blood is restored, and the (3) body is purged of the degenerated fluids.

But in order to complete the purging and rejuvenating process, to be reborn, most men should fast forty days or longer. The length of the fast must be governed by the condition of the patient, as previously stated.

Mrs. Walker of South Africa fasted 101 days. She weighed 232 pounds when the fast began. Her body was burdened with a large accumulation of flesh and fat. Such people should fast much longer than thin persons.

During the course of the Fast, the weight of the body decreases. This is because of the active depuration and elimination of retained waste material, the stiffening deposits, the burdensome fat, the degenerated fluids.

As these degenerative substances are thrown off, the body begins to assume its normal size and youthful form. The cells that were becoming senile and about to die, are rejuvenated by the purging process. They are restored to the physiological condition of the cells of youth.

In fact, during a Fast, the body goes through a process that is not unlike being born again.

The rejuvenescence of the body is evidenced by its improved appearance and function. There is an increase of energy and endurance, with a quickening of the senses. The brain becomes more alert, the memory awakens, the power of sight, sound, smell, and taste improve with the progress of the Fast.

Under a Fast, the nerves experience such marked recovery and rejuvenation, that patients afflicted with insanity and paralysis may and do recover.

If a man properly nourishes his body, and keeps it free from pollution and poison, no one can say how long he should live. Physiologists claim that he should never die.

But the road to this perfect state is rigid, narrow, and

straight. At the beginning of the road stands a tall guidepost, with a white cross-arm near its top, on which appears in large, red letters, reading:

"If any man will come after me, let him deny himself, and take up his cross, and follow me."—Matt. 16:24.

Self-denial in all things leads man onward and upward, to the highway of success and happiness. In diet alone, self-denial has a profound effect upon health and the length of the life span. This was shown by Prof. C. M. Child, Chicago University, in his experiments with flatworms, of which he writes:

"Experimental investigations carried through a number of years in the Department of Zoology of the University of Chicago have shown that these little flatworms, when fed, grow old just as the higher animals do, but that they may be made young again in various ways.

"When these animals are deprived of food, they do not die of starvation in a few days . . . but they are able to live upon their own tissues for months. During this time they become smaller and may be reduced to a minute fraction of the original size. When fed again after such starvation, they show all the physiological characteristics of young animals. With continued feeding, they go again through the processes of growth and of becoming old, and may again be made young by a starvation period.

"One group of the flatworms was well fed, and passed every three or four months through the cycle of growing old and reproducing . . . The other group was given just enough food to maintain the animals at a constant size. The individuals of this group remained alive and in good physiological condition without becoming appreciably older as long as the experiment continued—that is, during some three years.

"With abundant food, this species may pass through its whole life history . . . in three or four weeks; but when growth is prevented by lack of food, it may continue active and young for at least three years, as the foregoing experiment has demonstrated, and doubtless for a much longer period.

"According to the observation of Julian Huxley, the extension of the length of life in this experiment is roughly equivalent in human forms to keeping a person alive from the time of Chaucer (1340 to 1400) down to the present date."

Bernarr MacFadden thinks that by fasting, man may do for himself, in a measure, what he does for worms. He remarks:

"I have consistently maintained . . . that a body can be revived and made more youthful in every way, mentally, physically, etc., by a fasting process.

"It is my firm belief that we can live for an almost unlimited period, maybe for centuries, if the youth-building possibilities of a prolonged fasting process, followed by the use of nourishing elements that would fortify vitality, are properly investigated and understood in all their details."—Physical Culture Magazine, August, 1925.

In the time of Adam, when man searched all day for food, and ate less in a week than most men eat now in a day, the duration of youth extended over 100 years or more, and man retained his vigor and vitality for many centuries.

We draw this inference from the ancient poet, who said, "The nerves that joined their limbs were firm and strong; their life was healthy, and their days were long. Returning years still saw them in their prime; they wearie even the wings of Measuring Time."

We draw the same inference from the experiment with the worms. When well-fed, they grow rapidly, soon reach maturity, then grow old, decay and die in three or four weeks. But when the food-supply is limited, they continue active and young for three years, and longer.

We draw the same inference from the Christian Scriptures, which show that as man created to himself new wants and a greater and wider food-supply, his health declined and his life-span decreased.

1. The dawn of Man pictures him in a happy climate, satisfying his hunger with the fruits of vines and trees.

2. Then, in addition to these, he turns to the herbs and vegetables, which he obtained from a more avaricious earth, as the reward of his labors.

3. He next adds the milk of his cattle.

4. Lastly, he slays the defenseless beasts and eats their flesh.

Feast and perish, or deny yourself and live. These are the two great highways. One of them is broad; it leadeth to destruction, and many there be which go in thereat: Because strait is the gate, and narrow is the way, which leadeth unto life, and few there be that find it.—Matt. 7:13, 14.

A similar admonition was voiced by Socrates, the wise sage, who said:

"The less physical Man becomes through the conquest of his desires, the less he needs. The less Man needs, the nearer he becomes like gods, who use nothing and are immortal."

Self-denial in the matter of food is opposed to all the teaching of medical institutions. But they believe that animation and function spring from food.

Chapter No. 109

SEXOLOGY

Self-denial as to food alone, while good, is far from being enough to bring man to the goal of his dreams. Self-denial must be practiced in all things, chief among which is that of sex.

The seed or germ of a new person, is elaborated from the body's finest fluids. It is estimated that one ounce of this fluid is equivalent to forty ounces of blood.

This rich fluid, when retained in the body, acts as the body's replenisher and regenerator. It is the substance of which the brain and nerves are built, renewed, and nourished. He who wastes this fluid, will suffer from many ailments, among which are deficient mentally, decreased nerve power, and paralysis.

For whosoever hath, to him shall be given, and he shall have more abundance: but whosoever hath not, from him shall be taken away even that he hath.—Matt. 13:12.

That parable has puzzled many. But it has a practical meaning and explanation. To him that hath the controlling power to restrain his desires, to deny himself, within his body is continually increasing these powers, and he will enjoy good health and long life as his reward. But whosoever hath not this control, to enable him to restrain his passions and lusts, from him shall be taken away even that which he hath, and he shall go down to the dust.

The Law of Sex Relation is respected by all animals but human beings. Man alone violates it, and considers the subject too delicate to discuss. But truth is never too delicate to face.

The rich, sex fluid should be retained and used by the body that makes it. The sex act should not be performed until one reaches the age of 30, and then only a few times for the purpose of perpetuating the race.

All education and religion is worthless that does not teach man this phase of the Law of Life.

Why is man, with religion, less godly than animals without religion? Because no religion teaches the Law of Life.

Lesson No. 40, Chapter No. 110

LAW OF MENTALITY

Harry Gaze held that his theory of Perpetual Youth is based on the three conditions described in Lesson No. 2, Chapter No. 8. These are:

1. The body literally and completely returns to dust in less than one year; and during this period, a new body is built, molecule by molecule.
2. Conscious cooperation with this change is the secret of Immortal Youth.
3. Old age and somatic death are brought about by conditions that can be effectually prevented.

The influence of certain numbers has exercised a remarkable effect upon man. Many writers, in expressing their opinions and beliefs, are ruled by the influence of numbers. No one seems able to explain the reason of this.

The number Seven has always swayed superstitious people. Jacob served Laban seven years for Rachel. Pharaoh dreamed of the seven fat kine and the seven lean kine; then he dreamed of the seven ears of corn, rank and good, and seven thin ears, blasted with the east wind.

The Yogis of India divide the body into seven vital etheric centers, viz., (1) The sacral plexus and glands at the base of the vertebral column, in the sacrum. (2) The hypogastric plexus and the glands which are located in the abdominal region. (3) The solar plexus. (4) The cardiac plexus and the glands in the region of the heart. (5) The pharyngeal plexus and the thyroid gland, which are located in the throat, as well as the parathyroid glands, and the glossopharyngeal nerves of the tongue and pharynx. (6) The pituitary plexus and the gland in the brain, and the naso-ciliary plexus between the brows. (7) The pineal plexus and gland in the brain.

The seven vital etheric centers, which Hindu philosophy calls the seven chakras, are said to be the "Seven Seals" of Moses. In the spiritual passages of various religious books, they have been termed the "seven hidden doors," the "seven holy temples," the "hidden locks and keys," the "seven stars," and similar names. The seven chakras correspond to the seven colors, and the seven notes of the musical scale on the physical plane.

Out of this influence of the number Seven has come the belief, expressed by some authorities, that Seven Years are required for the cells of the body to be completely renewed.

The discovery made in recent years, that the Universe is ruled by Immutable Law, is sweeping away the swaying superstition of primitive people. In weighing and solving the Phenomena of Life, men are coming to consider the Fact of Existence, and not the superstitious belief in certain numbers.

In the opinion of Dr. E. F. Adolph, University of Rochester, the water content of the body, which constitutes about 75 per cent of it, changes every three weeks; the salt of the body is replenished every 22 days; the potassium is replaced every 72 days; the magnesium, every 105 days; the iron, every 300 days; the phosphorus, every 800 days; the lime, every 2300 days—thus, man's body is over 90 per cent new every year, according to this physician.

We are not inclined to agree with this opinion. The body fluids are constantly bathing every cell of every structure,

supplying each with new material to replace its waste and wear from use. The process is occurring incessantly in every cell, in both bones and muscles.

The whole body is renewed as often as its billions of cells are renewed. The great question is, How much time is required to renew the cells? A correct answer to this question solves the problem.

The living organism is a vast aggregation of cells. The cell forms the component parts of every tissue, whether soft, as muscle, or hard, as bone. The blood itself is a great mass of cells, the smallness of which is astonishing. The red-blood cell is about 1/3000th of an inch in diameter, and about 1/16000th of an inch in thickness. Thousands of these tiny cells are grouped together in one drop of blood. Less than a thimbleful of blood contains five thousand million of them.

The cell is the working-unit of physiology no less than of morphology. It is the limit of human knowledge as to the composition of either vegetal or animal structures. It is so small as to be visible only by the aid of the microscope. Beyond the cell, Science knows nothing of organized matter.

The length of time required to renew the body, is the length of time required to renew the cell. It is not definitely known how long it takes to renew the cell. With some knowledge of the smallness of the cell, we are constrained to infer that less than an hour is required for its complete renewal. The renewal may occur several times an hour.

If the cells are renewed several times in an hour, then the body is renewed several times in an hour. Gaze has allowed a year for the completion of the renewal process. We are willing to agree that his allowance of time is amply sufficient, according to which, man has a new body annually.

We cannot agree fully with the second proposition. It is open to much argument. The student knows this, if he has followed closely the lines of the preceding lessons.

Gaze believes that Immortal Youth will rise from the effect of what he calls "conscious cooperation" with the constant cell changes occurring in the body. That is good, so far as it goes.

But Gaze makes man's part in the process too simple. He thinks man's duty is ended when, by "conscious cooperation," man daily suggests to himself, or to his body, that "new, perfect atoms" are being substituted for the "old ones," in the body's renewal processes. He adds:

"In order permanently to renew the body, the Mind must be in harmony with the change, but this humanity hitherto has failed to do. In positive contradiction to the law of renewal, man has steadfastly believed the body to be gradually growing older until no longer able to perform its function."

We agree that the Mind must be in harmony with the change. But we hold that man's physical conduct as well as his mental, must also be in harmony with the change.

The student saw the sad results that occur, when the Law of Change is not observed and obeyed. The illustration of the River and the Engine explained this.

It requires more than harmony between Mind and the Law of Change to produce Immortal Youth. The body, like the River and the Engine, is a physical instrument, composed of Matter. The KIND of Matter supplied to the body, for use in renewing its cells, has as much influence in determining the condition of the body, and the length of its existence, as has the KIND of Matter supplied to the River and the Engine, in determining their condition and the length of their existence.

Gaze is prone to place the bulk of the burden upon the saying, "As a man thinketh in his heart, so is he." He reverts

to the old-line psychology, wherein Mind is said to rule supreme, and is entirely independent of Matter. He exalts Mind, while he degrades Matter.

Gaze makes this statement:

"The necessary equilibrium between the processes of waste and of repair in the physical system is wanting. New, perfect atoms are not substituted for the old ones, and the system is unable to dispose of the accumulated substance that interferes with the various vital processes. This constitutes the basis of 'old age,' and is a certain forerunner of somatic death."

The substance of the citation is good. But in his work, Gaze prescribes no positive rules for the correction of the condition, further than to fall back on "Mind." He attempts to show, by certain references to hypnotism, that "conscious cooperation" of Mind and Matter will produce the "necessary equilibrium," and Immortal Youth will become a reality.

Gaze is a modern Psychologist pure and simple. Psychologists have found that it is far easier to gather in "vibrations," and get "in tune with the Infinite," than it is to live in harmony with the requirements of the Law. They have forgotten that the Law is, Ye shall reap as ye sow. They have carried much beyond its legitimate limit the adage, "As a man thinketh in his heart, so is he."

Psychologists discovered that man is not searching for Truth. Experience proves that people are willing to pay good prices for being hoodwinked, but are not willing to change their mode of living, however harmful it may be.

There is but one course open to the Teacher of Truth. He must leave man to follow the line of least resistance, and retire to the shelter of his vine and fig-tree. If he attempts to teach Truth, he will have no audience. Or, if by chance men stop to hear him, what he says will arouse their anger, and they will want to stone him to death, or crucify him.

So man continues to fool himself with the art of suggestion. He is too blind to see that it requires more than subtle suggestions to fool Eternal Intelligence.

In Lesson No. 2, Elementary Orthopathy, the relation of Mind and Matter is well discussed by Shelton. In Lesson No. 23 of the same course, the subject of Psychology is considered. This the student should now review.

Psychologists have tried for twenty centuries to construct a Science of Mind. Failure has crowned every effort. They are divided at this hour into a multitude of schools, still at variance about the very elements of their subject.

Not one proposition has been established to the satisfaction of the schools. No two of them are able to agree even upon the fundamentals of their theory.

The Idealists hold that Mind is all, while Matter is merely an illusion. They seem to forget that there is Matter without the manifestation of Mind. But there is no Mind without the presence of Matter. In this respect at least, Matter is pre-eminent to Mind.

Man knows nothing of Mind that is devoid of Matter. He knows nothing of Mind that is not bound up in Matter. Apparently, Mind and all its qualities are indissolubly connected with Matter.

Mind is the Brain in action, and nothing more, says Broussaris. From Matter we rise to Mind by means of the Brain, says Tuttle. Outside of the nerve centers, there is no Mind, says Prof. Bruhl.

Prof. Buchner observes:

"The word 'mind' is in reality nothing more than a collective word, and a comprehensive expression for the whole of the activities of the brain and its several parts or organs, just as the word respiration or breathing is a collective word for

the activity of the breathing organs, or the word digestion is a collective word for the activity of the digestive organs."

Man must be regarded as a unit. His body is composed of Matter. Like all other machines, its movements and functions rise from the presence and operation of Force. In making the body and maintaining its existence, one is as essential as the other—there must be both Force and Matter. Even then, Force would not work orderly, unless ruled by Intelligence.

Orthopathy holds that the action of Vital Force upon Organized Matter produces all functions of the body. These functions are mechanical, physical, mental, and vital.

Mind is as truly the effect of the action of Force upon Matter, as is the blood or the bile. It can be regarded as nothing more than a special mode of motion occurring in the brain cells, due to the action of Vital Force.

Man's mental capacity cannot rise above the condition and capacity of his brain, the organ of mentality, the organ of thought—but not an organ that thinks, as some believe. The condition of the Mind depends as fully upon the condition of the Body, as does the condition of the Body depend upon the condition of the Mind.

The relation existing between the mental and the physical is of a strictly reciprocal character, the most intimate that man can conceive, wherein the mental acts by return or response to the impressions received by the physical from its environment; while the physical, in turn, acts by response, as these impressions are translated into mental effects by the action of Vital Force upon Organized Matter.

The relation existing between the Mental and the Physical is so intimate, that normal blood will build a normal brain that will express normal thoughts; while abnormal thoughts will react through the brain upon the blood to such extent, that serious changes will occur in the chemistry of the blood.

It is now common knowledge that the mental states of anger, hatred, jealousy, fear, worry, despondency, love, joy, influence the excretions of the glands, producing a definite chemical effect upon the blood, and through the medium of the blood, affecting every cell and nerve of the body. The result is favorable or unfavorable, as the mental state is favorable or unfavorable.

Naturalists assert that the venom of reptiles is generated by the influence of anger and fear; that the substance is rapidly collected in a special receptacle, and thence discharged at the object of its anger and fear.

It is further explained, that the same process occurs in the human body. In the absence of a special organ to receive the substance, it is dispersed in the blood, acting against us instead of for us.

In unusual instances of anger, there occurs a chemical change in the blood. The gastric fluid is not excreted, the muscles of the stomach and intestines become partially paralyzed, making digestion not only faulty, but impossible.

There is on record the case of a woman, while eating, being handed a message of grief. This was so absorbed by her consciousness, that a chemical change occurred in the blood of her body, to the extent that the food which she was eating when the message arrived, not being digested, became caked, and the woman died within twenty-four hours.

Medical literature reports instances where women have so poisoned their nursing infants, during fits of anger, that the little ones have died.

Patients go to health resorts and experience improvement. They attribute this to a change of air and a change of drinking water. The improvement perhaps results from a change of environment that changes the patient's mental suggestions.

Mineral water and mountain air have received credit that is largely due to the mental state which is improved by the change of environment, leading to improvement of the physical.

As a man thinketh in his heart, so is he. I have not found so great faith, no, not in Israel. Go thy way; and as thou hast believed, so be it done unto thee. Thus speaks the Philosophy of the Ages, based on knowledge gained from the experience of man.

We must BE before we can DO. We can DO only to the extent that we ARE. What we ARE depends in a high degree upon what we THINK. For we first think, then act, and our Acting is governed by our Thinking.

All that man is or may become, he grants unto himself. There is no limit to his possibilities; but he can receive no more than he will permit himself to have. He fixes his own limitations; for no limitations exist as to Vital Force and Infinite Matter.

Man thinks from the day he is old enough to think and reason, that he is born to die, as do the beasts of the field and the fowls of the air. As he thinks, so he believes; and as he believes, so he lives, and so it is done unto him.

"We are born into a world of error—of physical and mental limitations. No sooner do we come into being, than these limitations and conditions, detrimental to eternal living existence, are thrust upon us," observes that great teacher, Dr. Claunch. And no man tries to dodge the thrust.

Man can not tell to what extent the Mental influences the Physical. There are startling examples in history to indicate that through the influence of suggestion, the Mental is capable of causing processes of Physical Function that are either detrimental or beneficial, depending upon the character of suggestion in a given case.

In order to demonstrate the effect of the Mental on the Physical, Dr. Rybilkin, in the presence of his colleagues, at the hospital Marie, in St. Petersburg, performed the following experiment on a young man 16 years old, whom the doctor hypnotized, and then suggested to him that—

"When you awake you will be cold; you will go and warm yourself at the stove, and you will burn your forearm on the line which I have traced out. This will hurt you; a redness will appear on your arm; it will swell; there will be blisters.

"On being awakened, the patient obeyed the suggestion. He even uttered a cry of pain at the moment when he touched the door of the stove, which of course was cold. Some minutes later a redness, without swelling, could be seen at the place indicated; and the patient complained of sharp pain on its being touched.

"A bandage was put on his arm, and he went to bed under our eyes. When the dressing was removed at ten next morning, we saw at the place of the burn two blisters, one the size of a nut, the other of a pea, and a number of small blisters. Around this tract the skin was red and sensitive."

The degenerative effect of an adverse mental attitude on the body has been recognized by doctors and others in all ages. The ancient writer Plutarch, in one of his essays, remarks:

"Should the body sue the mind before a court of judicature for damages, it would be found that the mind would prove to have been a ruinous tenant of its landlord."

Many persons have suddenly collapsed and expired because of sudden fright, excitement, joy, and so on. The press recounted five cases of death, to our knowledge, resulting from the intense excitement incident to the Tunney-Dempsey championship fight on Sept. 22, 1927—

1. When Charles F. Brown, 64 years old, heard the radio description of the seventh round of the above fight, when Dempsey floored Tunney for the count of nine, he collapsed and died in front of the loud speaker.

2. Reuben J. Glick died suddenly at the radio in his home while listening to the account of the same fight.

3. Richard W. McConnell died at his home in Troy, N. Y., while listening to the radio returns of the same fight.

4. Excitement over the blow-by-blow account of the above fight, to which he was listening on the radio, caused a heart attack from which Joseph H. Deegan, 33 years old, died that night.

5. Prof. Charles L. Owen, 66 years old, retired assistant curator of anthropology of the American Museum of natural history, Chicago, after listening in on the radio description of the above fight, started to describe a boxing match that he has seen in Chicago years ago, when a heart attack seized him, and he dropped dead.

Shock of the news of the death of her grandson, John H. Riley, 44 years old, in an automobile accident, resulted in the death of Mrs. John Moore, Sept. 18, 1927.

Frightened because she believed that a motor car in which she was riding had killed a boy, Mrs. Mabel Smith, 29 years old, collapsed and died. This occurred November 17, 1927. The boy got up, shook his fist at the car a block away, and went on his way.

R. W. Bulkley, one of the directors of the Knickerbocker theater, Washington, the roof of which collapsed, killing 93 persons and injuring more than 100 others, died on Feb. 7, 1928, from "nervous prostration," resulting, the attending physicians said, from the theater disaster.

Thus the list could be continued, of sudden death resulting in connection with various circumstances that cause fright, fear, worry, excitement, jealousy, joy.

If the effect of the Mental on the Physical is so potent as to cause death, we cannot deny its potency to cause serious degenerative changes in the physical.

The same powerful influence that will produce death, will not only help to induce the approach of the feeble condition called Old Age, but it will also help to hold the condition of Old Age at bay.

This fact is also frequently mentioned in history. One remarkable incident at hand, is that of an English lady, who, according to the London Lancet, a medical magazine, being disappointed in love in early life, became insane.

Unconscious of the fleeting years, like a cataleptic patient or a hibernating bear, the lady continued to live in the hour that had parted her lover and her, and she rose each day, carefully arranged her toilet, and watched thru the window for the one that was never to come.

Days passed into months, and months into years; but she knew it not. To her there was no such thing as Time. Her mind still lingered and lived in that youthful day, and her youthful appearance remained unchanged.

At the age of 74 she seemed to be no more than 20. There were no grey hairs, no wrinkled brow, no dimming of the eye, no lessening of vitality, no signs of decay. The coming and going of the years had not affected her body—because it had not affected her mind. To that particular phase of existence, her mind was blank.

It is only in recent years that the potency and extent of the influence of the Mental on the Physical is beginning to be recognized.

This influence can be directed into constructive channels as well as into destructive ones.

If fright, fear, worry, sorrow, suffering, hate, anger, etc., are mental states that have destructive tendencies on the body, then faith, hope, happiness, love, joy, cheer, and so on,

are mental states that have constructive tendencies on the body.

It is through the constructive mental states that good results are obtained by divine healers, spiritual healers, mental healers, hypnotic healers, christian science healers, medical healers, and other healers.

The same influence that produces destructive tendencies, will, on a reversal of the lever, also produce constructive tendencies. The same faith that removes the mountain from the path, will also place the mountain in the path.

Every second of time, Vital Force, ruled by Eternal Intelligence, is weaving subtle Atoms into the structures of Brain and Nerve, Muscle and Bone, that these may serve as a machine for its expression and operation.

By his mental conduct, by his thoughts and desires, by his physical conduct, by his breathing, drinking, eating, and the general use of his body, man may help or hinder the weaving process.

The fact that the body, instead of its growing old, is constantly renewed hour by hour and day by day, is something that has failed to receive adequate attention and investigation.

The existence of this constant change should be recognized, and man should build into his thoughts the suggestion that each year he has a new body, in the literal meaning of the statement.

Instead of this, man thinks that each day he grows older, and he acts in accordance with his thinking. In time these thoughts show the effect of their work; for they are built into every fiber of the body, and are expressed by and in every act and movement of the body. We can not disregard with impunity the axiom, As a man thinketh in his heart, so is he.

It is man's failure to realize the constant renewal of the body, that leads to the false belief that the body grows old. As this belief becomes fixed upon the Mental, the effect thereof is impressed upon the Physical, thus producing the picture of man's mental contemplation.

Visualization is the process of making mental images. The image is the mold or model that serves as a pattern from which man's future emerges. He is today the result of his past thinking. He will be tomorrow what he is thinking today.

By a process of constant adverse contemplation and suggestion, extending through the entire genealogy of the race, man builds into his blood, and thru his blood into his body, bones, and brain, the degenerative mental processes that gradually help to degenerate his frame, and finally help to destroy it.

By constant adverse suggestion, man so interferes with the normal function of the body, that it develops into a distorted condition, from which flows a process of decay that sinks it into the grave.

Thus man murders himself.

The belief and fear in Death is the principal mental state that must first be subdued. This state alone is responsible for much damage resulting to the body.

Fear makes the face pallid, retards or quickens the heart beat, changes the character of the body's fluids, and alters the body's functions. Fear puts wrinkles in the face, whitens the hair, and hurries man to his grave. The Bible, from beginning to end, contains one continuous admonition to cast out Fear.

However, the student is carefully cautioned against falling into the sad error of believing that the influence of suggestion, faith, prayer, hope, can overcome the influence of the Law.

It is a dangerous doctrine which teaches man that faith and prayer can conquer the degenerative effects on the body, that rise from such maltreatment as feeding it soft lead, and giving it of water to drink that contains fine sand, when it calls for material to repair and renew its wearing and wasting parts.

Perpetual Youth will come from the condition of (1) Perfect Correspondence as between the (a) Organism and its (b) Environment. This state will appear when man has acquired that profound knowledge, which will enable him to have and to hold (2) Perfect Harmony as between the (c) Mental-self and the (d) Physical-self.

"Be ye transformed by the renewing of your Mind."

Chapter No. 111

PRIMITIVE MAN

Why has man always sought for the fabled Fountain of Youth? How did the thought originate, and why does the thought persist, like the continued voice of one crying in the wilderness, that youthful Vigor and Vitality should not fade, but continue to flow through the human frame until the last; and, eventually, that a time will come when even the great enemy Death shall be conquered, instead of being submitted to?

The Christian Scriptures, which we take as wonderful history, foretell of a time when a new Earth is to come forth; that there shall be no more short life-spans, "nor an old man that hath not filled his days;" that a man 100 years old shall be as a child. The ancient Sage continues:

"They shall build houses, and inhabit them; and they shall plant vineyards, and eat the fruit of them.

"They shall not build, and another inhabit; they shall not plant, and another eat. for as the days of a tree are the days of my people, and mine elect shall long enjoy the work of their hands."—Isa. 65:21, 22.

The Prophet takes a retrospective view of the distant past, when man sat under his vine and fig-tree, and lived a thousand years; then he peers into the distant future, and sees a time returning, when man shall again sit under his vine and fig-tree, and live a thousand years.

This is the new Earth that will come forth. It is the work of the Law of Cyclicity, mentioned in Lesson No. 8, Chapter No. 22.

Even now the pendulum is swinging in that direction. Established institutions have sensed the change, and are frantically striving to stop the swing. Their existence depends upon keeping things as they are. If they fail in their fight, their doom is sealed.

Going on, we read of a time to come when there shall be neither pains, nor sorrow, and no more death (Rev. 21:4). Also, that the last enemy that shall be destroyed is death; that death is swallowed up in victory; that the sting of death is sin, "and the strength of sin is the Law" (1 Cor. 15:26, 54).

On what facts, if any, are these statements based? The facts are, and they come to us from the early experience of man.

In the Christian Bible it is related that Haran died before his father Terah in the land of his nativity (Gen. 11:28). According to the chronology of this literature, the event here recorded occurred more than seventeen hundred years after the days of Adam—and it is the first information found, in all these years, to indicate that any person, until then, had died before his father.

This knowledge was transmitted orally down thru num-

berless generations, from father to son, before the invention of writing, coming down to us in the form of carvings, clay tablets, and papyrus rolls.

We began these lessons with the statements, (1) There is no old age; and (2) there is no natural death.

More than three thousand years ago, the Prophet proclaimed that (1) A man of 100 years old shall be as a child, and (2) the sting of death is sin.

He further says, "The strength of sin is the Law." That statement may not be clear to the student. We have previously explained it thus: (1) Death is the result and end of Degeneration, and (2) Degeneration of the body arises as the direct result of man's misuse and abuse of his Temple. This destructive conduct the Prophet calls Sin.

Student, think not that we are attempting to establish the truth of our theory by recourse to the Christian Bible as the word of God.

Sages, saints, and saviors unnumbered, as shown in Lesson No. 25, Elementary Orthopathy, have lived and died in grappling with the problems of human origin and human destiny. The fruitage of their labors, preserved in the philosophies and scriptures of all races, has been bequeathed to succeeding nations, a legacy of sacred and philosophic lore.

The Old Testament has been culled from thousands of pages of ancient writings, and from the legends and allegories of ancient races. Hence, the Christian Scriptures, while not the word of God, are far greater than the interpretations given to them.

These ancient Seers made many other statements, which were toned and tempered to fit the condition of the time, but which are now rejected, because the condition that called forth the statements, have long since passed away.

Hesiod is another ancient man of learning, who lived about a century later than Homer. He states that there was a time when man enjoyed Perpetual Youth, sinking into his death-sleep without pain. He confirms what the Prophet says in the Bible, and the Prophet confirms what earlier men declared.

Before the dawn of the Christian Era, Horace, about 65 B. C., said that fevers were unknown until Prometheus discovered Fire, which led man to heating and cooking his food. We quoted Newton as observing:

"Man, at his creation, was endowed with the gift of Perpetual Youth; that is, he was formed not to be a sickly, suffering creature, as we now see him; but to enjoy health, and to sink by slow degrees into the bosom of his parent Earth, without disease or pain."—Lesson 31, Chapt. 92.

Another ancient writer stated that early men were healthy, and their days were long; that returning years still saw them in their prime; that the length of their life-span was so great, that counting their days wearied even the wings of Measuring Time.

Chapter 112

EVIDENCE OF DEGENERATION

Strict universality is the infallible test for distinguishing Truth from Falsity. All the early writers appear consistent in their claims that primitive man was large, strong, healthy, and long-lived. None of them makes any statements to the contrary.

These writers also declared that the human race is suffering from a general process of decline and degeneration.

There is not one general instance recorded in any age, to show definitely that man is evolving physically, instead of

devoluting, or that the length of the life-span is increasing, instead of decreasing.

In our own history, a brief, retrospective glance is sufficient to show in a startling manner, that man is devoluting and degenerating, both as to his physical proportions and his life-span.

In 1813 the height-standard for admission into the United States Army was six feet. In 1845 the standard was lowered to five feet, six inches. In 1898 the standard was further decreased to five feet, four inches. In 1918 the height-standard was practically disregarded entirely.

In this generation, a six-foot man is a tall man. In 1813, a little more than a century ago, our country could muster an army of such men.

As we write these lines, there come to us certain clippings that describe some extraordinarily large men of this generation, as follows:

1. Ray Williams, Enid, Oklahoma, 23 years old, is 7 feet 6 3/4 inches tall.

2. Jack Earle, movie star, is 8 feet 3 inches tall, and weighs 305 pounds of bone and brawn.

3. The Cowboy Giant of the Wonder Circus, Olympia, London, is 8 feet 6 inches tall.

4. Almiro Crema, of Turin, Italy, is over 9 feet tall. His home is in that part of Italy which produced Primo Carnera, 6 feet 8 inches tall, weight 270 pounds, who is the present giant of the boxing world.

These are instances of human development which may be interpreted as showing that occasionally the process of biologic inheritance reverts back to earlier types, and presents evidence to prove that man originally was of much greater stature than he is now. We are thus given a glimpse of the Giants of ancient days.

A remarkable article by R. M. Johnson, D.C., appeared in the Chiropractic Record of July, 1916. He said:

"Man has degenerated from a normal time of existence of from some hundreds of years, to the present average duration of less than two score years, and from being a race of giants, to the modern dwarf and cretin.

"As late as the 18th century may be found examples of primitive physical perfection. In 1830 there was exhibited at Rouen a living man 18 feet in height. A few years later, near the same city, was found a human skeleton 19 feet long. Three human skeletons unearthed near Palermo measured, respectively, 21, 30, and 34 feet in length."

In spite of our boasted knowledge, and the proclaimed progress of the practice of medicine, the human life-span continues steadily to decrease.

Prof. C. H. Forsyth, Dartmouth College, observes:

"The expectation of life at advanced ages, that is, the number of years that a man of 50, for example, may expect to live, is definitely declining The expectation of life from the age of 45 or 50 on, is the lowest of which we have any record—far lower than it was even 40 years ago—and it is still going down, not up."—Public Press, July 29, 1929.

Royal S. Copeland, M.D., former New York Commissioner of Health, and now United States Senator, in a recent issue of the press said:

"Fifty years ago there was a population of a little more than 50 million people in the United States, 4,000 of whom were centenarians.

"At the present time, with nearly twice the population of 50 years ago, there are only 2,841 people who have reached the age of 100."

Kellogg observes:

"The human race is dying. This melancholy fact is now recognized by all students of anthropology. Such eminent economists as Major Darwin, son of the famous Charles Darwin, and Prof. C. B. Davenport of the Carnegie Institution, consider the case hopeless, and believe the race of man will ultimately become extinct through degeneration.

"So it is evident that Mr. Babson, the well-known critic and philosopher of business and finance, is right in asserting that the world's greatest need is HEALTH"—Good Health.

But the conditions of Health are as foreign to medical methods as daylight is to darkness.

Lesson No. 41—Chapter No. 113

HEREDITY

Heredity and Environment are the two master-influences of the Organic Realm. They make man what he is. Through them we trace his history. By their aid we decipher his mystery and determine his destiny.

Biological Heredity is that influence which determines the pattern of the body, and the physical and mental qualities that pass by descent from parent to child.

The student saw in Lesson No. 5, Elementary Orthopathy, that Vital Force builds the body from an invisible speck, and brings it into being. But the KIND of body that is built and produced, its form, shape, contour, eyes, skin, hair, teeth—these are determined by the influence of Heredity.

The bearing of children is the production of a new generation that begins with the seed of the female, impregnated by the germ of the male.

By special glands, the seed and impregnating germ are elaborated from the blood. In the male, these glands are called Testes. The impregnating germ is called the Spermatozoon. In the female, these glands are called Ovaries. The seed is called the Ovum.

In Elementary Orthopathy, Lesson No 7, p. 3, under Making Man, it is explained that the beginning of a new person is a single cell, the fertilized ovum, composed of colorless colloid.

The ovum of the human female has the characteristic structure of the typical body cell, with the exception that its cytoplasm is filled with numerous yolk granules.

The spermatozoon of the male is the motile generative element of the semen that serves to impregnate the ovum. It is a microscopic cell, elaborated by the rich fluid of the testes. It consists of a body and a vibratile filamentary tail, and exhibits active movements peculiar to itself.

The fertilized ovum is the product that results from the union of the spermatozoon with the ovum. The first phase produced by the union of these two cells is called the Zygote; and after further development, the Embryo, and finally, the Fetus.

The spermatozoon and ovum are not derived from the tissues of the parents, and they never become a component part of the tissues of the parents. These are especial cells, and are especially elaborated from the superfine fluids produced from the blood in the male and female by the generative glands.

The seed, which is the beginning of a new person, is produced, as stated, by a union of the male cell with the female cell. These together form the Unit. They combine in accordance with the Law of Genesis, by which law all new organizations are produced and perpetuated. One of the principal phases of this law is the Law of Polarity (Chemical Affinity), which impels to union two opposites that vibrate in harmony with each other (Lesson 8, Chap. 22).

The bearing of children is the production of a new generation, as the direct result of the operation of Vital Force

upon Matter, *under conditions supplied by man in obedience to law.*

The Law of Production is explained in Elementary Orthopathy, Lesson No. 5, p. 9, to which the student is referred. For it applies as fully and as forcibly in the making of Man, as in the making of a tree, the Earth, or our Solar System.

But the bearing of children is not an act of Reproduction, as the world is taught to believe. Elementary Orthopathy, Lesson No. 7, p. 2, explains that Man, being the product of the operation of Vital Force upon Matter, can not produce nor reproduce that which produces him. To illustrate the point, we said there that, while Chemical Affinity (Polarity) produces water, no amount of water can ever produce Chemical Affinity (Polarity).

The Made can never make the Maker.

The Law of Eternal Formation and Production did not make Man, and thereafter turn over to him, the work of perpetuating the race, as physical science appears to think.

Every man is produced by the same law and in the same way, just as every drop of water is produced by the same law and in the same way. Man does not reproduce himself any more than a drop of water or a grain of sand reproduces itself.

The material from which a child is produced, is the seed elaborated in the body of the parent-stock. Being such, the child, developing from that seed, must, in truth and in fact, be regarded as an extension of the parent-stock, thus forming a direct line of descent, that runs unbroken thru the race.

That fact the student must grasp; for if he misses this point, he will miss the connection by which we shall show how the Message of Perpetual Youth has descended down from the distant past, and how it has been preserved.

Hereditary similitudes are due to the rise of succeeding generations from the same stock as that from which came the immediate parents, rather than from the parents themselves.

Successive generations of men are not distinct units. They are the regular and periodic expressions of the same continuous stream of germ-plasm.

The child's being an extension of the original parent-stock, explains the reason why father and son owe their resemblance, not so much to their immediate relationship, as to their direct and unbroken relationship with a common ancestor, as explained by Darwin.

By this means the Geneticist has shown, that while a son may resemble much his tall, auburn-haired father, he may resemble more his short, black-haired grandsire.

The physical and mental qualities of the child come not alone from the visible ones of the parents. They come also, thru the process of inheritance, from the one eternal source, with the result that blue-eyed children may come from brown-eyed parents, and vice versa.

The old maxim that Like begets Like is true; but this fact may not always be apparent on the surface.

Biologic inheritance is more than skin deep. It is deeper than flesh and blood. It does not consist merely in physical similarities on the surface, but extends to the physical similarities of the internal organs, to the marrow of the bones, to the cells of the brain and of every tissue, down to the last molecule and atom.

In the germ-plasm lies the connecting-link between succeeding and preceding generations of men, from the "unbeginning past."

The germ-plasm is composed of the cells received from both parents. The physical and mental qualities of man are governed by the behavior of the heritage of the germ-plasm, that each child, in due order, receives from both parents, and the

incidents that result from the union of the parent cells.

The germ-plasm determines the heritage, outlines the future form, and controls the particular and peculiar characteristics of the new person. Even the acquired characteristics of the immediate parents are hereditary, and may be transmitted to the progeny, if these are such as have affected or influenced to any degree the germ-plasm.

Eventually, the physical and mental similitudes of man with remote ancestors may grow faint, and even become almost indistinguishable to the untrained eye or the superficial observer. But deep down in the brain and bone they are and remain none the less, to show themselves most strikingly as generations come and go.

"No one will dare dispute," says Robert Walter, "that it is through Heredity that we all exist—that we have all been created, produced, and reproduced." He continues:

"It was even through Heredity, 'the first-born of every creature, we are told, that the words were created; it is, as it always has been, through the same Heredity that man has been created.'"—Vital Science, p. 71.

Walter is attempting to show that Heredity is even the Source of Life. As explained in *Elementary Orthopathy*, Lesson No. 5, p. 7, he believes that Life is a Gift from God to Man, and has been passed on to all succeeding generations by the Process of Inheritance. We showed there by logical argument that he is wrong.

Man is, because Intelligence (Law), Force, and Matter are. These have produced him. They produce him now. They have always produced him. But his shape and form are due to Heredity.

Chapter No. 114 ENVIRONMENT

What is Environment? What is meant by the term?

At its base, Environment is not merely a matter of hills and hollows, mountains and rivers, oceans and winds, an aggregation of vegetation, as some think. It is a phase of Eternal Formation, Eternal Production, and Eternal Processes.

Environment means that by which man is surrounded, and in which he lives and moves and has his physical being. It is an unappropriated part of his body.

The substances of which man's body is composed, come from the Environment. Definite portions of his body are constantly abstracted from the Environment and added to the organism, and just as regularly parted from the organism and added again to the Environment.

This is another phase of the Law of Cyclicity, mentioned in Lesson No. 8, Chapter No. 22.

Since the work of Darwin startled the system called Science, it has become the habit of Biologists, of limited mentality, to consider only the adaptation of Living Organisms to the Environment.

For such short-sighted scientists, Environment, in its past and present, has been an independent variable; and it has not entered into any of the modern speculations of science to consider whether, by any chance, the Universe also may be subject to the laws that are, in the larger sense, important to organic development and maintenance.

Every living organism normally requires for its development and maintenance, an Environment containing (1) air, (2) sunshine, (3) light, (4) water, (5) heat, (6) soil, and (7) vegetation. Remove these, and living existence not only ceases but becomes impossible. Supply these, and living existence continues normally, so long as the Environment remains favorable.

There must be fitness and harmony in the Environment as well as in the Organism. For man could not adapt his existence to a system of irrigation, for instance, if no water were within his reach.

It is certain that, in the beginning of the living existence of any particular class of creatures, the Environment was suitable and favorable for their appearance; for otherwise they could not have come into being, much less live and thrive.

Hence, living creatures, at the time of their origin, fit their Environment, and their Environment fits them. If, at a later time, they appear to fit their Environment none too well, it may be due to the conduct of the creature, as we find in man, or to a change of Environment that lay beyond the ability of the animal to meet, instances of which have heretofore been reviewed.

In spite of these prominent features, only as those conditions were formed by superficial states of the Earth, or by combinations of animals and plants providing nourishment or shelter, or playing the part of enemies, they have scarcely engaged the attention of Naturalists.

The Earth itself, and the materials of which it is constituted, were taken for granted by the Biologist, and a consideration of them was consigned to the physicist, the chemist, and the geologist.

It is such single-tracked study as this, where the proposition of Unity is disregarded, that has deprived the Universe of a Life Principle, has deprived man of correct knowledge, and plunged the subject of Living Existence into chaos and confusion.

When the whole fact of Eternal Formation is encompassed, man sees in it a vast Unity, beginning with the diffuse particles of a white-hot nebula, and continuing to the production of plants, animals, and men, dwelling on the surface of a cold and solid planet.

Such a gigantic system of law and order cannot properly be considered as accidental, nor should it be dismissed with the supposition that it represents nothing more than a series of creations.

The thinker is not satisfied with either view. He has learned that a Cause exists for every Effect, and that the Cause must come within the scope of Eternal Formation.

The theory of Creation was fabricated in the early days, when little or nothing was known of Causes and their laws. It satisfied all inquiry and was an answer to the question, Whence came I and all that is? But in this day of learning, the Creation theory means a reversion to ancient ignorance.

The child in the cradle, to all appearances, is purely the product of Heredity. But here, as elsewhere, appearances are deceptive.

While Heredity determines the pattern, it is Environment that determines the character. While Heredity controls the form of man, Environment shapes his thoughts.

The Potentialities in man may be governed by Heredity, but the Actualities are determined by his Environment.

However, there are differences in men that are present at birth. They are the product of Heredity, and not of Environment. They pass by virtue of inheritance, from parent to child, as we have explained.

For instance, a great violinist is born and not made. If this were not true, the same amount of training would make all men of equal ability in any particular line.

While the potentialities are there, and are governed by Heredity, yet it requires training and cultivation for their development. If this were not true, then all training and cultivation of children, to develop their capacities and abilities, would be time wasted and money squandered.

This training and cultivation are the product of Environment

Chapter No. 115

SOURCE OF KNOWLEDGE

Having traced Existence down to the point and appearance of Unity, we must pass beyond the boundaries of pure science, into the realm of Scientific Philosophy, as we follow the line of descent of the eternal message of Perpetual Youth.

In this course it is true that our conclusions will not bear that certainty which goes with observed facts; but they will belong to the class philosophic hypothesis whose courses are guided by facts of inference.

This does not decrease their validity, nor render them void. It simply shows that there is a limit to the trust we may place in them, and a possibility of their having to be abandoned later in favor of more accurate conceptions that new facts at some future time may reveal.

Some authorities hold that man, at birth, is devoid of all knowledge, and gains his knowledge from experience.

Immanuel Kant, the great German philosopher, says:

"That all our knowledge begins with experience there can be no doubt."

With that declaration he opens the Introduction to his Critique of Pure Reason, and adds:

"For how is it possible that the faculty of cognition should be awakened into exercise otherwise, than by means of objects that affect our senses, and partly of themselves produce representations, partly rouse our powers of understanding into activity, to compare, to connect, or to separate these, and so to convert the raw material of our sensuous impressions into a knowledge of objects, which is called experience? In respect of time, therefore, no knowledge of ours is antecedent to experience, but begins with it."—p. 43.

The scientific world has never questioned this theory as to the beginning and foundation of human knowledge. The educational world has accepted it as final and conclusive; and, thereafter, we find continued, a pursuit of Knowledge as the cumulative result of experience.

We have shown in Lesson No. 10, Chapter No. 28, Law of Polarity, that the influence which prompts man to seek the companionship of woman, is as much a proposition of chemistry and the power of polarity, as is that which propels to union the atoms of hydrogen and oxygen to form molecules of water.

Goethe clearly formulated the conception of cells, molecules, and atoms, in which appear the elements of so-called Consciousness. He held that the motives that govern human actions and affinities, are but those found in the cells of the body.

Haeckle and Vogt followed him, when they extended these qualities and attributes into inorganic substances, which again declared the great Unity of all things.

Where, when, and how this influence was impressed upon the Atom, are propositions which we shall not attempt to explain. It is sufficient for our work to know that the Atom is so impressed.

In Lesson No. 5, Chapter No. 15, we said that the conduct of the Atom, as it seeks vibratory correspondence with other atoms, must be recognized as an intelligent act; and that the intelligence is not a quality inherent in the Atom. It is a general principle that we have called Eternal Intelligence, and has existence as truly as has the Atom.

With these preliminary remarks, we come to the question Can there be Intelligence without Knowledge?

Knowledge is defined by Webster as "a clear and certain perception of that which exists, or of truth and fact" The same authority defines Intelligence as "the quality of knowing or understanding; knowledge; wisdom; perception."

If man, at birth, is devoid of all knowledge, then it follows that he is devoid of all intelligence, for, according to Webster, there is no place to draw a line of demarcation between Knowledge and Intelligence.

Kant further says:

"But, though all our knowledge begins with experience it by no means follows that all arises out of experience.

"It is a question that requires close investigation, and is not to be answered at first sight—whether there exists a knowledge altogether independent of experience, and even of all sensuous impressions?"—Ibid.

Had Kant gone deeper into the subject, it would have become apparent to him that there does exist a knowledge altogether independent of experience. For if Human Knowledge begins with experience, then Man is inferior in the scale of Living Creatures to the insect, the bird, the calf, cat and pig

The hornet has always known how to make paper. It was never taught; it needed no experience. If knowledge begins with experience, whence came the knowledge of the hornet to make paper?

No chemist knows how to make honey, regardless of his chemical experience. The bee has always known how to make honey. It was never taught; it needed no experience. If knowledge begins with experience, whence came the knowledge of the bee?

Birds have always known how to build nests, and each kind of bird always builds a different and certain kind of nest. They were never taught; they needed no experience. If knowledge begins with experience, whence came the knowledge of the birds?

Migratory birds in the north fly south in the Fall to escape the cold of Winter, as explained in Lesson No. 5, Chapter No. 16, which the student is urged to peruse again. They do this without experience.

Experience does not give the new-born pig its knowledge to seek its mother's breast for the first time for nourishment.

Experience does not give the tiny kitten its knowledge to dig a hole in which to deposit its bowel and bladder excretions, and then to cover these excretions with dirt.

As we descend in the scale of Existence, even down to the lowest Atom, there appears unmistakable evidence of the presence of a Principle of Intelligence that guides all things.

Heredity controls the form of man, and Environment shapes his thoughts; but what power is exercised over him by that Eternal Intelligence, which has impressed forever upon the Atom, the influence that prompts it to seek vibratory correspondence with other atoms?

Dr. Willard Carver observed the existence of a Universal Principle of Intelligence, and says that man receives impressions of this Intelligence through the channel of Intuition. He says:

"We are limited in our acquisition of knowledge to intuition—deduction. There is no other, there has never been another, there never will be another channel through which we may receive universal Intelligence. *We must get universal truth, if at all, through intuition.*"—*Psycho-Bio-Physiology*, p. 117.

All physical bodies are composed of Matter. Man's body is physical, and is composed of Matter.

There is no Intelligence in Matter, as the word Intelligence is commonly used and understood. Therefore, there is no Intelligence in Man.

At this point the student is referred to Lesson No. 5, Chapters 15, 16, 17 and 18, in which we have traced through physical bodies the operation of a mysterious element called Intelligence.

It is there shown that Intelligence arises as an Eternal Principle of Existence, and appears in connection with the action of Vital Force upon Matter.

It is also shown there that the conduct of plants, insects, and animals of the lower order, is fixed, definite, and certain, because their conduct is subject wholly to the Law of Eternal Intelligence, by which these things are guided, and from which guidance they are incompetent to deviate or stray.

Chapter No. 116

THE ANCIENT VOICE

We shall now consider further the effect upon man of (1) Heredity, and (2) Environment.

The student should refresh his memory here by referring to the Law of Vibration, Lesson No. 23, Elementary Orthopathy, and covered again in Lesson No. 10, Chapter No. 27, Advanced Orthopathy.

The Process of Heredity, we have seen, carries with it, in a direct line of descent, the mental traits and physical characteristics of the Ancestors by consanguinity, that is, persons related by blood and birth.

We observe blue-eyed children coming from blue-eyed parents, and the lingual, musical, and other mental traits of the parents expressed in the children. Even the tone of the voice of the child, at maturity, resembles that of the parent, after the law of Like begets Like.

We have seen that the vibratory-waves of man's Environment rule his conduct not only, but that from such source he gains all his primary knowledge. Any other knowledge that he may exhibit and express, is secondary, and arises as a variation of this primary knowledge.

The impressions made by vibratory waves coming from the Environment, are registered in man's brain-cells, as we have explained. These impressions are translated, by the process of Vital Force acting upon matter, into what is known as Thought. Consequently, the Thought must and does correspond with the Environment from which come the vibratory-waves. The Thought is merely an interpretation of the Environment.

Every instant of his existence, Man is subject to stimulation from his Environment. Every thought rises from the influence of the constant stimulation of Environment. Every action of the body is in accord with the thought.

The effect of the stimulation remains impressed upon the brain cells. The impressions may lie dormant and passive for years; but they may, at any moment, upon suitable stimulation, become active.

The effect of the vibratory-waves of Man's Environment, stored in the human brain cells, is not merely a small segment of the present. It includes the impressions of the years and centuries. It includes all the experience of the race, that has been received by the brain from Man's remote ancestors, and passed on and on, by the process of Inheritance.

Thus we say, and with truth, that the destiny of the race, from its beginning, is indissolubly bound up in the human brain. The history of Man is recorded in his brain, as in a vast book, full of hieroglyphic symbols, as Huschke says.

It is a fact of common knowledge, that such qualities as blue or brown eyes are transmitted from father to son, by the agency of Heredity, for generation without end. In the same way are passed on, the texture of the skin, the tone of the voice, the contour of the body, the shape of the hand and head. This has been the course since the dawn of Man. It is not open to dispute, since it is seen in every family.

But sharp demurrer will arise when it is held that just as truly, although not of such common knowledge, the impressions of remote Environments, made upon the brain cells, are passed on, thru the process of Heredity, from father to son, for generations without end.

This is the actual process by which Man's brain is made to contain his history, from the dawn of his appearance on Earth, down to the present day. Hence we can truly say that Man knows all, even though there may be many things that he cannot explain nor understand.

Here is revealed, for the first time so far as we know, one of the puzzling problems of Existence. It explains for the Reincarnationist the mystery, to him, of why some children show a marvelous precociousness, and why a child may speak in a language unknown to its parents—a fact believed by many to be the result of a Reincarnated Spirit.

A child, without previous instruction, has been known to speak German, while its parents spoke only English, neither speaking nor understanding the German language. An investigation disclosed that the maternal great-grandparents of the child spoke only German.

Ripley, in the press of May 31, 1931, relates the case of Marie Clashan Skotnicki of Warsaw, Poland, who overnight became possessed of the ancient Gaelic idiom, and created quite a sensation in medical circles toward the middle of the 19th century.

The child's only connection with this ancient language was the fact that she was descended on her paternal side from a native of the island of Lewis, in the outer Hebrides, Scotland, who immigrated into Poland in the 18th century. For more than 110 years the language had been completely forgotten in Marie's family.

The medical institutions term this phenomenon a manifestation of "acute psychic atavism." But why and how it occurs is to them a mystery so profound, that they make no attempt to fathom it; for it passes beyond the realm of Physics and Chemistry, on the basis of which they attempt to account for all the various functions of the body and its many organs.

Here is a recorded instance of where the knowledge of a language is passed by Inheritance, just as blue eyes and brown hair are. From the brain-cells of the ancestors, the language is transmitted down thru the direct line of descent. The impressions may remain dormant and passive in the intermediate parents, but in this case they became active in this child.

Physical lesions or injuries of the brain, often cause remarkable effects. It has been credibly reported that in St. Thomas' Hospital, London, a man badly injured on the head, spoke in a foreign language. It was his native Welsh, which he had formerly spoken at home, but had forgotten entirely in the course of a thirty-years' stay in London.

A similar incident occurred in the case of Dr. Solger, a German-American, who served the United States as Secretary of the Treasury. He had received an injury to his skull and brain by a fall from his horse. From that moment he entirely forgot his English and French, which he formerly spoke fluently, and was able to speak only German.

Lesson No. 42—Chapter No. 117

AGE OF PERPETUAL YOUTH

We have considered the process by which Man received the sublime message of Perpetual Youth, and passed it down thru the countless generations of the past.

It came from the Environment to early man, as all Thoughts come, was impressed upon his brain cells, and passed on by inheritance, just as truly as are blue eyes and brown hair.

Let us now trace the various Ages of Man down thru the corridor of Time, as they come to us in the form of information from the Traditions of the Ancients.

We have been prone to treat with great skepticism, many of the legends and fables founded on remote events, especially those having reference to the early period of man's existence, But recent discoveries are leading us to place greater credence in these accounts of events that occurred centuries ago.

Prof. T. Leslie Shear, Princeton University, working from a description written by Pausanias, nearly 2,000 years ago, sank a shaft and found the long lost and buried Agora of ancient Athens, where lay the very stones on which Socrates walked while he threw out those penetrating and perplexing questions, which so embarrassed the bigots of his day, that they censored him in the only way they could, by making the great philosopher drink poison. They declared that his teachings corrupted the youth, but now in modern colleges modern youth is required to translate his teachings.

Going back into the distant past, we turn to India for the Cradle of Man.

We think of Egypt as a land of Antiquity, and of the Hebrew tongue as an ancient language. But the Hindu was a Sage when the Egyptian was a Savage; and his language, the Sanscrit, was finished and polished when the primitive Hebrew was scrawling upon parchment his first alphabet.

In the primitive Hindu brain, deep impressions were made by vibratory waves from his Environment, when Perpetual Youth was more than a dream. These impressions were preserved in the brain-cells, and have been transmitted by inheritance from father to son. This is the source of the wonderful message of Perpetual Youth. This is the manner in which it has come down to us.

We get a glimpse of this fact from Hindu traditions regarding the Ages of the Earth. Baba Bharati divides these Ages into the Golden, the Silver, the Copper, and the Iron.

The Golden Age lies far back in antiquity. It covered 4,800 Solar years, each of which contains 360 of our years—making the length of this Age 1,728,000 of our years.

This Age was the most wonderful and spiritual. Gold literally abounded during this remote period. In Genesis 2:11, gold is said to abound in the whole land of Havilah, which land was watered by the river Pison. The word Havilah means to bring forth and to supply strength.

The Silver Age succeeded the Golden. It lasted for 3,000 Solar years, making the length of this Age 1,080,000 of our years.

The Fall of Man, mentioned in all ancient literature, occurred during the Silver Age. This event is described by the ancient Hindu philosopher as being the result of a strong attraction and worship of the Unreal or the Relative.

In the Golden Age man knew nothing but Truth. But in the Silver Age a system of erroneous teaching sprang up, which led man astray by deceptive appearances. Believing in this, and confounding the Relative with the Real, he fell from the original purity.

The Fall consists in the fact, that man becomes so deeply attached to the Relative (Flesh), that he considers it The ALL as explained in Lesson No. 8, Chapter No. 23. Yet, he knows that Flesh is only Inert Matter, profiting nothing because it is quickened, and subject to the law of disintegration.

Modern science still lives in the belief that the Physical Man is the Real Man, and positively denies the existence of the Spiritual Man (Life Principle). On this belief is based our educational systems, which must be destroyed, root and branch, before human elevation and enlightenment can come.

The days of the Silver Age, while not so happy as those of the Golden, were yet wonderful and joyful; for it is not until the period of the Copper Age, that Hindu literature records any information of warlike people and ferocious beasts.

The length of the Copper Age is estimated at 2,000 Solar years, or 720,000 of our years.

Next comes the Iron Age. It carries man down to the very bottom of human misery and degradation, wickedness and corruption.

But the days of the Iron Age are numbered. Their course is nearly run. Man is waking from his sleep. He is rising to a higher plane. The Dark Age of ignorance and superstition is passing. An age of great knowledge and wisdom is dawning.

In the Golden Age, man enjoyed Perpetual Youth, and lived for thousands of years. His food he gathered from the Tree of Life, while other living creatures subsisted on the green herb (Gen. 1:30).

The Silver Age began when The Great Sentence was passed upon man—(1) Cursed is the ground for thy sake; (2) in sorrow shalt thou eat of it all the days of thy life; (3) in the sweat of thy face shalt thou eat bread, till thou return unto the ground. And still he lived nearly a thousand years.

All this sorrow and suffering, wickedness and corruption, until now unknown, and yet no turning back. At no time of his existence has man turned aside from his downward course. In this day he continues to bring forth new inventions, the effect of which is to produce greater suffering and misery.

Came the Copper Age, with its wickedness and corruption (Gen. 6:5), with its drunkards and gluttons (Prov. 23:20, 21), with its human life-span shrunk to 120 years, to be followed by the Iron Age, in which the life-span dwindled down to 30 years, and men, sinking far below the brute, murdered one another by the most fiendish methods.

In agony and despair, man has sought for relief. He has come at last to realize that the Hell he has pictured in his theology is the product of his own work, and that the Heaven he longs to see must be made by his own hands.

With his back against the wall, man has reached down deep into his brain. In the Kingdom Within, he finds the glorious impressions of the Golden Age, made on the brain-cells of his early Ancestors, by the harmonious Environment of that Grand Day.

In the human brain cells, preserved there for the race, is the marvelous Message. It tells the study of the times of peace and plenty, of joy and happiness—the Golden Age of Perpetual Youth.

Chapter 118

THE HUMAN BRAIN

We must return once more to Spencer's classic description of conditions necessary to make possible the state of Perpetual Youth.

"Perfect correspondence would be perfect life. Were there

no changes in the environment but such as the organism had adapted changes to meet, and were it never to fail in the efficiency with which it met them, there would be eternal existence and eternal knowledge."

We have discussed the proposition of Heredity and Environment, and observed some of the effects these have and leave on man.

What Heredity does for man, is determined for him, and lays beyond his control. No man can select his own parents, nor control their conduct and mode of living. If their mode of living is such as leads to degeneration, their children suffer as a result.

Every man, to a large extent, can choose and control his own Environment. His relation to it, however largely determined by Heredity in the first instance, is always subject to alteration.

So great is man's control over Environment, and so radical its influence over him, that he can direct it so as either to undo, modify, perpetuate, or intensify the earlier hereditary influences within certain limits.

No living creature can long endure in a hostile Environment. No living creature could come into existence in a hostile Environment.

Man did not appear, until the Earth presented a hospitable Environment for his appearance and existence. The condition of his body and the length of his life-span depend upon Heredity and upon the relation existing as between him and his Environment.

Plants, guided entirely by Eternal Intelligence, and animals of the lower type, where Individual Intelligence operates more in conjunction and cooperation with Eternal Intelligence, are free from the influence of Will and Desire. They remain in harmony with their Environment, to that extent, and for them this is Perfect Existence.

The very lowest class of Insects are guided entirely by Eternal Intelligence. They do not suffer from that physical degeneration which affects man and mammals, and which Science has been unable to prevent.

Such Insects do not grow old. They do not degenerate. They do not die of disease. But, having attained, by a series of gradual stages, the culminating point of their development, making their organism produce at this point its maximum results, they die a quick death as soon as they have drawn from their existence all the good that they can receive, and immediately after having assured the future of their species.

Insects never know that slowly-approaching decrepitude which comes upon man, whose body is too tough to be killed by doctors and drugs in its younger years. Insects never become helpless charges to fill charity homes.

The migratory birds, guided by the promptings of Eternal Intelligence, leave the northland in the fall, fly directly to the South without hesitation, and there find the conditions that are favorable for their existence and sustenance.

In the beginning, man was not less endowed than plants, bees, and birds. If the favorable conditions are there, which the birds seek in the South, and the birds not only know it, but go and find it, shall we believe that the conditions of Perpetual Youth, which man is incessantly seeking and some day hopes to find, do not exist?

We shall not believe that the search for the Fountain of Perpetual Youth springs solely from the reaction of humanity "to a natural impulse, which is the dread of the infirmities of age and the horror of death." We shall not believe that birds may follow the urge of "animal instinct," and find that for which they search, while man is mocked in his efforts.

Man appeared on Earth as the weakest and poorest armed,

physically, of all living creatures. But to compensate for this deficiency, he was given that which no other animal has in the same proportion and degree. He was endowed with great brain capacity, concerning which we said in Lesson No. 23, Elementary Orthopathy:

"Who that has cast but a single glance at the powers and properties of the most wonderful of all organs, of which unfortunately so many authors and educators scarcely know the proper use, can refuse to endorse what Huschke says:

"In the brain lies the temple of the highest that is of interest to us. Yea, the destiny of the whole human race is indissolubly bound up in the 65 or 70 cubic inches of brain-mass, and the story of mankind is recorded therein, as in a vast book, full of hieroglyphic symbols."

"The human brain is the highest and fairest blossom of all terrestrial organization. It is far more than an organ of digestion, assimilation, or excretion. It is the mightiest formation of material combinations. It is that part of Matter, so highly and so elaborately constructed, that it exhibits in its function the most marvelous phenomena that proceeds from the human organism."

The Brain of man makes him Ruler of all living creatures. It is the brain of man that lifts him high above all other animals. It is the human brain alone that is sufficiently perfect to receive the glorious message of Perpetual Youth.

The liver of the horse or the cow is as remarkable and complex in structure as is the liver of man. So are the kidneys, the lungs, and the other glands. But the Brain of the horse or the cow, and of all other animals, is far less complex and far less perfect than the Brain of man.

Man's Brain is the storehouse of knowledge, the regulator of the intricate mechanism of his body, the director of his destiny. It possesses far greater Power than any man has yet developed and used.

The more the brain is developed by use, the thicker becomes the gray matter. It is said that no man, at death, is found to have developed more than two per cent of his brain cells. Of the two per cent developed, less than two per cent is used constructively. The remaining 98 per cent of the two per cent of the brain developed, is used destructively.

The body degenerates from lack of use. This is a fixed rule, with no exceptions, and applies to each and every part of the body. It is found in the saying:

"For whosoever bath, to him shall be given, and he shall have more abundance; but whosoever bath not, from him shall be taken away even that he bath."—Mat. 13:12.

If man uses well that which he has, to him shall more be given; but he that uses not that which he has, from him shall be taken away even that he has.

Man's brain appears to be degenerating from lack of use. This is seen by comparison of modern human skulls with the skulls of the Ancients.

Many years ago near Cro-Magnon, France, certain human bones were found, and the skulls were remarkably large. The brain of these representatives of some primitive race of about twenty thousand years ago, was much larger than that of the best human brain of today.

Due to man's marvelous brain capacity, Individual Intelligence has developed in him to that high degree, where he is able to meet, master and control his Environment.

By the use of his wonderful mentality, man has triumphed over all living creatures not only, but he has been able to exist, sustain himself, and progress in the midst of an Environment so unfavorable to living organisms, as to have caused other creatures, one after another, to succumb and disappear.

Birds and beasts can find safety only in flight from an un-hospitable Environment. Man alone possesses the mental capacity that enables him to change the Environment to serve his needs

In the arid regions of the Earth, where the shifting sands are parched with heat, where no other creature can exist, man by means of irrigation, has turned barren waste into beautiful gardens and productive groves.

No other animal has been able to accomplish such work. Because of the smallness of the brain capacity, the Individual Intelligence of other animals cannot develop to such high level. All other creatures are subject to the influence and conditions of their Environment. These they cannot control nor change, even though their existence depends upon it. Man stands pre-eminent and alone in this respect.

The history of the Earth shows that even since man came into being, many kinds of animals have perished. Only a few thousand years ago, several species of powerful mammals, such as the cave bear, the saber-toothed tiger, the mammoth, the auroch, the giant stag, became extinct. In physical endowment, these were far superior to man in equipment for defense and resistance. But they lacked his marvelous mental capacity.

We observe how much more greatly is man endowed, in many ways, than are plants, bees, and birds. In him the development of Individual Intelligence reaches its highest peak. He is emancipated from all restraint; he is the sole dictator of his course and director of his conduct. This perfect freedom was intended for his higher elevation and evolution. It was intended to guide him to Eternal Knowledge and Eternal Existence.

Bees and birds are directed by the influence of Eternal Intelligence. Man marvels at their display of knowledge, and the perfection of their work. While they live in harmony with their Environment, and pursue a healthy, happy life, he finds himself in the midst of a hostile Environment, and groans under the burden of his maladies.

The misery of man aroused the attention of wise Solomon, and constrained him to utter these words of warning:

"For in much wisdom is much grief; and he that increaseth knowledge increaseth sorrow. Lo, this only have I found, that God hath made man upright; but they have sought out many inventions."—Ecc. 1:18 and 7 29.

Something is sadly wrong when much wisdom means much grief, and the increase of knowledge is the increase of sorrow. It means wisdom misdirected; and knowledge based on error. It means wisdom and knowledge that lead in the wrong direction, that subvert and obstruct the true course of things. It means the production of the innumerable "inventions," as man strives to "improve on Nature."

When the weight of his "inventions" crushes him to earth, he calls for help and cries, O Father, save me from my sins! He clutches at the false doctrine of base institutions, bent only upon profit and power, and is led onward to greater degradation.

Science is remaking our lives, pipes a silly World of Medicine. Science is improving on Nature, pipes the deluded World of Invention. Science is wonderful, pipes the deceived World of Humanity.

To remake "our lives," to "improve on Nature," means to transgress Universal Law. For it means to attempt to subvert and obstruct, and change the true course of Eternal Formation.

From such display of wisdom comes much grief, from knowledge thus gained comes much sorrow. It is wisdom misdirected; it is knowledge based on error.

THE KINGDOM WITHIN

Eternal Intelligence strives in various ways to teach man the right road. But in his ignorance he fails to grasp the message. He continues to search in his inventions for the Secrets of Life. He knows not that the Kingdom of God is within. So he casts his whole being into his inventions, as he struggles to escape from the miseries of his own making.

Mis-education leads man to believe that his Environment is trying to destroy him; and he works to find ways to save himself from this imaginary foe.

There is no enlightenment from without. In the human brain is revealed all things. "If that which thou seekest thou findest not within thee, thou wilt never find it without thee."

Even to himself, man is an impenetrable mystery. His body and being rise from the operation of Vital Force upon Infinite Matter, under the direction of Eternal Intelligence. But he is content to view and study the Matter only, while disregarding the Directing Law, and denying the existence of the Animating Force.

If man were taught to know himself as he is, if he were taught the great lessons of Life, his sorrow and misery would vanish forever. Fear, worry, discord, would flee with wings into the darkness, never more to return. From the fading embers of perishing manhood, would rise the Perpetual Youth of Eternal Godhood.

Man is degenerating, but he will not disappear. The King of the Visible World is just waking from his long slumber. By the Golden Thread of Knowledge, Humanity and Divinity are being drawn closer and closer together, sensing more surely the subtle Truth, that All is One.

More than ever before, the propelling influence of Perpetual Youth is stirring the heart and brain of man. It seems to come as a long-remembered fragrance, wafted by a gentle zephyr from the Homeland, and the Human Brain responds in joy, gladly seeking that Grand Country from whence it comes.

* * * * *

There is little of profit in these lessons for him who is unable to rise above the general opinions of the day. But for him who makes the knowledge contained in these lessons his religion, there will be opened a World of Beauty and Splendor. He will rise to that exalted Plane, where Living Existence brings Peace and Pleasure.

Knowledge is Power. The conditions of Perpetual Youth will rise from Eternal Knowledge. But Eternal Knowledge rises only from the Light of Eternal Truth.

In conclusion, this is the formulary of the Law: (1) Eternal Knowledge based on (2) Eternal Truth leads Man to (3) Eternal Life.

These lessons have much exceeded the space originally allotted to them. But as Dr. Clements wrote, he gained greater inspiration and further insight. Even now, at the end, he knows that he has only scratched the surface. The student is urged not to stop here, but to use the facts uncovered as a foundation for further work.

May the Blessings of a Healthy Body and a long life be yours. Amen

QUESTIONS

- (a) Give the relation of vitality and fever. (b) What fact may be inferred from the pale skin of the sick? (c) How shall we correct this condition?
- (a) Tell how to prepare the Electric Blanket for a patient, how long the patient should remain in it, and how to prepare him for removal from the blanket. (b) How shall we massage the legs and arms?
- (a) State when to use the sweat-bath, and when not to

use it? (b) State the weakness of the argument of the opponents of the sweat-bath. (c) Does stimulation waste and exhaust Vital Force? (d) State the fundamental difference between non-poisonous stimulants, sunshine, and exercise. (e) State how poisons stimulate the body.

4. (a) Give the beneficial effects of stimulating the body by (1) Heat, (2) Sunshine, (3) Exercise.

5. (a) Give the cause of old-age and death as explained in Chapt. 106. (b) Tell how to prevent these states.

6. (a) Is degeneration sudden, or by degrees? (b) Is regeneration sudden, or by degrees?

7. (a) Give the process of rejuvenation. (b) Give the effect upon the body of self-denial in all things.

8. (a) How often is the body renewed? (b) Has the Mind any effect upon the renewal and existence of the Body (Matter)? (c) Has the condition of the body and brain any effect upon the Mind?

9. (a) Did early man have thoughts of Perpetual Youth? (b) Is there evidence to indicate that man is degenerating?

10. (a) What is meant by Heredity? (b) State its effect upon men (c) Give the limitations of Heredity.

11. (a) What is meant by Environment? State its effect upon man (c) Give the limitations of Environment as to man. (d) Can man rise above his Environment??

12. (a) What is Intelligence? (b) Give the source of man's Knowledge? (c) Give the source of the knowledge or intelligence of insects?

13. (a) State how mental traits of patients may pass to their offspring. (b) What is meant by Reincarnation? (c) Do you believe in the theory? Explain your answer.

14. (a) Give the four ages of man. (b) In which age are we today? (c) Into what age are we passing at this time?

15. (a) Give the one definite reason why man should develop far beyond all other living creatures. (b) Give the reason why he has not so developed physically. (c) There is evidence that man is degenerating, but in your opinion do you believe he will disappear?

A LIST OF LESSONS, CHAPTERS, AND SUBJECTS COVERED IN THE COURSE OF **CREATIVE SCIENCE**

Chapt. Lesson No. 1	Lesson No. 12	Lesson No. 22	Lesson No. 31
1. Rejecting the New	31. Law of Cyclicity	62. Law of Development	91. Science of Threpsology—
2. Perpetual Youth	32. Law of Change	63. Law of Analogy	Food
3. Origin of Thought	33. Law of Birth & Death	64. Law of Prefiguration	92. Science of Threpsology—
4. Deception and Profit	Lesson No. 13	65. Law of Degrees	Cooking
5. Law of Self Preservation	34. Time	66. Law of Promotion	Lesson No. 32
Lesson No. 2	35. Space	Lesson No. 23	93. Science of Threpsology—
6. Horror of Death	36. Law of Kind	67. Law of Growth	Digestion
7. No Natural Death	Lesson No. 14	68. Law of Correspondence	94. Food Combination
8. Fact vs. Speculation	37. Conditions of Perpetual	69. Law of Use	Lesson No. 33
9. Theories of Life	Youth	70. Law of Duration	95. Food Combination (Con-
Lesson No. 3	38. Law of Use	Lesson No. 24	tinued)
10. Breath of Life	39. Law of Regeneration	71. Law of Vitality	96. Excessive Eating
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