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As the lesser mysteries are to be delivered before the greater, thus also discipline must precede philosophy. —IAMBlichus.

# THEOSOPHY

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## TIMES OF THE CYCLES

**I**N different cycles of race evolution, different classes of men assume responsibility for the condition and progress of civilization. During the Middle Ages the few men who raised themselves to positions of dominance in human affairs were ecclesiastics, or laymen wholly under the sway of religious modes of thought. Even the representatives of the Theosophical Movement conformed—outwardly, at least—to the general limitations of Christian dogma. The Rosicrucians were ostensibly orthodox in their convictions. Roger Bacon and Albertus Magnus were monks. The revolt against Rome was itself guided by men who had no quarrel with the Christian religion; who were in fact enthusiastic supporters of its leading tenets, but who objected to the abuses of its administration by the Pope and the Catholic hierarchy. The religious reformers of the sixteenth century were devout Christians who struggled for the common salvation of mankind.

The Reformation, however, contained the seeds of another great change. While it established freedom only within the limits of Christian belief, in two hundred years that freedom had been turned against Christianity itself, and the day of the great churchmen was done. A century more, and a new frame of orthodoxy was established as the pattern of advanced thought—the political philosophy of the social contract. The best minds of the later eighteenth and early nineteenth centuries focused on the problem of government. Theological issues gradually became academic; the *ruling* ideas were political in significance. Paine wrote against dogma, but his immediately effective labor was for democracy, in America and in Europe. What little we know of St. Germain indicates that he served his time politically, whatever else he may have accomplished. Mesmer and Cagliostro, it seems plain, worked for the future.



Consider that H. P. B.'s discussion of the psychic nature was largely dependent upon the foundation laid by Mesmer; add to this the fact that both he and Cagliostro were repudiated by their contemporaries, and the leavening and preparatory character of their work becomes evident.

The exoteric "greats" of this second period were political philosophers—almost without exception. After the firm establishment of the American Republic, however, political thought suffered an eclipse. There has been no *essential* contribution to political philosophy since the early years of the nineteenth century. Creative minds were drawn to other fields, leaving politics to the merely critical refinements of analysis.

The nineteenth century saw a transition from politics to science. In the free air of the great nations where the victories of political freedom had been won, the leading spirits of the age turned to the intellectual conquest of Nature. We see today the fruit of this change. The confidence that men of the eighteenth century had in political philosophy is now rapidly giving way to a similar confidence in science. Leaders who still believe in a political panacea are either atavistic in their thinking or mere exploiters of the people; the dictatorship does not build on the values which democracy provides; its criticism of present political structures is the criticism of destruction.

Today, the major prophets of human progress are looking to science. Only "exact knowledge" can chart the course of present humanity. Dr. Carrel suggests that mankind's destiny be entrusted to an ascetic elite of scientists—a select group something like Plato's guardians. This view suggests that democracy be limited; men must be protected from themselves; the race is menaced by its own ignorance, becoming increasingly dangerous in a complicated age of high-speed technology. From Biology and its child, Psychology, will come the plan for a new order of society. While individual scientists may differ as to details, there are few objectors to the general proposition that science alone has the answer. Democratic forms may be maintained; indeed, this is most desirable; but through scientific education the members of society must be taught how to model their private lives and be guided to adopt the needed regulation proposed by those who have knowledge.

It was with this third cycle of western thought in mind that H. P. B. wrote *The Secret Doctrine*. While the Secret Doctrine itself apprehends equally both philosophy and science, in addressing itself to the thought of an age it recognizes here, as it does every-



where, the *law of cycles* that rules in the intellectual development of a race no less than in the revolutions of suns and worlds. So it addresses the times from that plane of thought which is in the ascendant. The object of H. P. B.'s great work was to bridge the gap between a scientific world-view and philosophy. Mr. Judge wrote: "We are now in a transition period, and in the approaching twentieth century there will be a revival of genuine philosophy, and the Secret Doctrine will be the basis for the 'New Philosophy.'" "

There are several converging lines of intellectual influence pointing to a revival of "genuine philosophy." These lines may meet in 1975. Important among these tendencies is the growing criticism of materialism in science, offered by historians of thought, philosophers of science, and intelligent religionists. Another important change is to be discerned in the trend of modern physics. All the branches of science have taken their method and borrowed their basic assumptions from Physics, which is now the least materialistic of the lot. This is a reform from within. Einstein, Millikan, Eddington, Planck, and Bohr might be described as speculative Pythagoreans. While the physicists of the past read materialism into science, their intellectual heirs and descendants have corrected this mistake; modern physics needs no such defense-mechanism against theological polemic. Today physicists speak with as much assurance about free will as about gravitation; with more, in fact—in the words of Dr. Millikan, "Practical free will, or the sense of responsibility, is to me a brute fact given by direct experience." This knowledge he distinguishes from scientific knowledge, calling the latter "rather *evidence* that by long experience of our own or of others we have come to trust. . . ." Further indication of change in the attitude of scientists comes from those who see the dogmatism arising from uncritical acceptance of mere theory as though it were established fact. The results of scientific dogmatism are becoming evident in various ways: in the wishful thinking of eugenicists—disturbing to sober geneticists; in the "blind belief" of the average student of college science courses—a tragedy of modern education; and in the childlike faith of the public in the miraculous powers of the scientist. Such criticisms have been given great emphasis by Dr. Hutchins of the University of Chicago, ardent apostle of educational reform. He maintains that all the findings of science must be subjected to the review of reason; he champions the autonomy of *philosophy* as alone entitled to judge the broad *meaning* of scientific fact.



As these tendencies in modern thought gain ground, the way is being prepared for an impartial consideration of spiritual philosophy. H. P. B. adopted the modes of thinking common to science because she brought to science its missing *soul*—Occultism. But this incarnation of truth within the intellectual "body" of the Race—its lower *Manas*—requires a further preparation, the work of a spiritual impregnation from within: *altruism* and *brotherhood* alone can bring to viable existence the philosophy that men need to live by. Perhaps the present agonies of the West are the first pains of a greater travail; perhaps the suffering which men now inflict on one another will lead to another sort of misery—woe because *others* suffer, compassion for the miseries of all the world. Those who work to spread the truths of Karma and Reincarnation have learned that very few are able to read even the first letter of the larger word of life before suffering has burst the chrysalis of thoughtless, dreaming, personal existence. But if the obstacles of selfishness and ignorance can be overpassed in the coming cycle, then for the first time in our history will come about a unity of mind and soul, not merely in individuals, but in *races* of men.

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#### LIMITATIONS OF SCIENCE

There can be no possible conflict between the teachings of occult and so-called exact Sciences, where the conclusions of the latter are grounded on a substratum of unassailable fact. It is only when its more ardent exponents, over-stepping the limits of observed phenomena in order to penetrate into the arcana of Being, attempt to wrench the formation of Kosmos and its *living* Forces from Spirit, and attribute all to blind matter, that the Occultists claim the right to dispute and call in question their theories. Science cannot, owing to the very nature of things, unveil the mystery of the universe around us. Science can, it is true, collect, classify, and generalize upon phenomena; but the occultist, arguing from admitted metaphysical data, declares that the explorer, who would probe the inmost secrets of Nature, must transcend the narrow limitations of sense, and transfer his consciousness into the region of noumena and the sphere of primal causes.

—*The Secret Doctrine.*



## ANCIENT LANDMARKS

FROM THE NEOPLATONISTS TO H. P. B.

**T**HE Neoplatonic School of Alexandria was founded in 193 A. D. by Ammonius Saccas. Its object was to reconcile the religious and philosophical systems of East and West by tracing them back to their original source, thus uniting all nations on a common ethical basis. The School was divided into an exoteric and an esoteric section, with rules copied from the Orphic Mysteries. The Neoplatonic philosophy was based upon three fundamental propositions: (1) that the whole of Nature is rooted in one Supreme Essence; (2) that the soul of man, being a radiation of the Universal Soul, is immortal; and (3) that man, by self-purification, can become a god in human form. After the death of Ammonius, his work was continued by Plotinus, who founded a school in Rome; by Porphyry, who expressed the Neoplatonic principles in terms of practical life; and by Iamblichus, the Pythagorean, who re-awakened an interest in the Egyptian Mysteries.

The Christian Church was opposed to the Neoplatonic Movement from its beginning. The Christians taught a personal God, the Neoplatonists an impersonal Principle. The Christians regarded the universe as a creation of God, the Neoplatonists declared it to be an emanation of the Supreme Essence. Christianity claimed to be a unique religion; the Neoplatonists pointed to the source of *all* religions. Several prominent Church Fathers—Origen, Clement of Alexandria, Athenagoras and Augustine—were drawn into the Neoplatonic Movement, but their efforts to reconcile Neoplatonism with Christianity met with little success.

Julian, Initiate-Emperor of Rome, strove in his short reign of three years to revive Neoplatonism, but within a generation after his untimely death (363), another Emperor, Theodosius, had killed or exiled all the pagan philosophers, made churches of the temples and destroyed the last of the Mystery Schools. Hypatia, the girl-philosopher of Alexandria, was murdered by Cyril's horde of fanatical monks in 414. A little later Proclus brought new life to the Platonic Academy in Athens, but not for long. In 529 Justinian closed the School and drove the last of the Neoplatonists from Europe. It was the end of the cycle.

The destruction of the Mysteries and the Neoplatonic Movement left the Christian Church in full control. The German hordes who descended upon the Romans in the fifth and sixth centuries



offered splendid material for Christian propaganda. Uncouth and uneducated barbarians, they were greatly awed by the spectacular pageantry of the Church and readily accepted its narrow dogmas. During the three centuries that followed, Greek literature entirely disappeared from the continent, although some of the writings of Plato and the Neoplatonists found their way into Ireland. In the ninth century the Irish scholar John Scotus Erigena resuscitated some of these works and inaugurated the Scholastic movement, which was a reaction against the intellectual stupor of the times. For the next three centuries the thinkers of Europe turned toward Plato for inspiration. Toward the end of the twelfth century the writings of Aristotle were introduced to the schoolmen. From then on the scholars of Europe were divided into two classes: the Realists, who followed the Platonic line, and the Nominalists, who were Aristotelians.

In the fifteenth century another reincarnation of Platonism occurred. This movement was started in Italy by a number of Greek scholars who had fled from Constantinople in fear of the Turks. In 1438 one of these scholars, Gemisthus Pletho, an ardent Greek Platonist, inspired Cosmo de Medici with the idea of founding a Platonic Academy in Florence. In preparation for this event, Cosmo gave Marsilio Ficino, the son of his physician, an education in Greek philosophy. Ficino undertook his task with enthusiasm, making excellent translations of Plato and the Neoplatonists. The Florentine Academy reached its peak under Lorenzo the Magnificent, Ficino and Pico della Mirandola, the latter being a student of Kabala as well as a Greek scholar. This period of the Renaissance witnessed the rebirth of practically all of the old Greek schools—the Platonic and Aristotelian, the Stoic and Epicurean, the Skeptic and the Neoplatonic.

Germany also participated in this revival of Greek thought, students there repeating some of the teachings of the Mysteries. Trithemius, the teacher of Paracelsus, presented the sevenfold order of evolution. Cornelius Agrippa described the marvelous powers of the soul which has united itself with its divine source. John Reuchlin translated the inner meaning of the Pythagorean *Tetraktys*. Paracelsus showed his affinity with Plato by declaring that "the true philosopher sees the *Reality*, not merely the outward appearance," and by defining philosophy as the "true perception and understanding of Cause and Effect." Giordano Bruno openly confessed that he had derived his knowledge from Plato, Pythagoras and the Neoplatonists. He reiterated the fundamental propo-



sitions of these philosophers by declaring that nature is a living unity of living units whose evolution proceeds under the law of cause and effect, and by stating that man's progress through earth life is accomplished by means of numberless reincarnations. Against these spiritual philosophers who followed the Platonic method were ranged the followers of Aristotle, culminating in Francis Bacon, the father of modern materialism. Reversing the true order of evolution, Bacon declared that "the first Creation of God was the light of the sense; the last was the light of the reason; and His Sabbath work ever since is the illumination of the Spirit."

Jacob Boehme, the mystic-philosopher of the early seventeenth century, faithfully reflected the archaic wisdom in his writings. Boehme was a fountain of inspiration to later German schools of philosophy. Modern science and philosophy are said to have been born in this century. Any one, however, who is acquainted with the scientific and philosophical concepts of the ancient Greeks will discover that these "modern" ideas are but warmed-over dishes covered, in most cases, with a thick sauce of crass materialism. The scientific theories of the seventeenth, eighteenth and nineteenth centuries are merely repetitions and enlargements of theories presented twenty centuries before by Anaxagoras, Leucippus and Empedocles. When Galileo argued for the heliocentric system in 1632, he built upon what Pythagoras, Heracleides and Ecphantus had taught two thousand years before.

Modern philosophy is said to have started with René Descartes, whose system is based upon the concept of Self-existence. *Cogito, ergo sum*. In attempting to define the Self, Descartes said: "I am not this collection of members which is called the human body. *I am the being who perceives.*" He believed that the seat of the soul is located in the pineal gland which, although linked to the brain, has an independent action, as it can be put into a swinging motion "by the animal spirits" (the currents of nerve-auric compound circulation) "which cross the cavities of the skull in every sense." Descartes also revived the theory of elemental vortices which had been taught in Greece by Anaxagoras and Leucippus, and before that by the Egyptians, the Chaldeans and the Brahmins of the esoteric school.

If the philosophical systems of Spinoza and Leibniz were reconciled and each corrected by the other, the true essence and spirit of the esoteric philosophy would appear. Spinoza recognized but one universal indivisible substance and absolute ALL, like Parabrahm. Leibniz recognized an infinitude of Beings, from and in the One.



Leibniz endowed "the whole creation with mental life" as every Occultist does. In his *Monadologie* he came very close to some of the hidden secrets of esoteric Theogony, although these speculations did not lead beyond the lower principles of the great Cosmic Body. The "Monads" of Leibniz are the "Jivas" of Eastern philosophy, his "reduced universes," of which "there are as many as there are Monads," are the chaotic representation of the septenary system with its divisions and sub-divisions.

It is difficult to find a single speculation in Western metaphysics which has not been anticipated by archaic Eastern philosophy. From Kant to Spencer, it is all a more or less distorted echo of the Vedantic doctrines. Kant's primordial substance which "cannot be the matter which fills today the heavenly spaces" is nothing more than the *Akasa*. His idea of the Self and its importance in the scheme of things is an echo of Eastern psychology. His belief that there is a form of knowledge which transcends human experience is a reflection of the doctrine of the Mysteries. His statement that the truths gained by the intellect are inferior to those gained through moral insight may be found at the same source.

The German Transcendentalists, Fichte, Schelling and Hegel, while borrowing profusely from Vedantism, Neoplatonism and the writings of Jacob Boehme, diverged widely from the primitive archaic concept of an Absolute Principle, and mirrored only an aspect of the basic idea of the Vedanta. Fichte distinguished Being as One, which is known only through the Manifold. According to Hegel, the "Unconscious" would never have undertaken the laborious task of evolving the Universe except in the hope of attaining Self-consciousness. A Vedantin would not accept that idea, although he would agree with Hegel that "nature is a perpetual becoming." Although Schelling and Hegel drew copiously upon Jacob Boehme's *Mysterium Magnum* for their inspiration, the truly occult theories of this great mystic are most faithfully mirrored in the works of the "unknown" philosopher of the eighteenth century, Louis Claude de St. Martin.

Herbert Spencer, who was a contemporary of H. P. Blavatsky, brings us still closer to ancient truths. Certain passages in his *First Principles*, portraying the alternate periods of universal evolution and dissolution, indicate that he was either acquainted with Hindu philosophy or that he had clear intuition. He repeats the ancient doctrine of emanation when he describes the gradual appearance of the known and heterogeneous from the unknown and homogeneous, and expresses an ancient Vedantic tenet when he asserts



that the nature of the First Cause may be essentially the same as that of the consciousness which wells up within man himself.

As the tide of the Theosophical Movement moved westward, a restatement of the ancient doctrines appeared in the writings of the American philosopher, Ralph Waldo Emerson. He led the world straight back to Plato, and to the philosophical concepts of the ancient East. He openly declared that the *Vedas* contain the ethics which have influenced every great thinker since the time that they were written. He described the *Bhagavad-Gita* as the "first of books," calling it the "voice of an old intelligence which in another age and another climate had pondered and thus disposed of the same questions which exercise us." He declared the Indian and Persian Scriptures to be "majestic" and pictured Buddhism as the "necessary or structural action of the human mind." Recognizing Plato as the link between the East and the West, he said that out of Plato come all things that are still written and debated among men. With the humility of the true disciple, he suggests the fraternity of the Masters in speaking of the "high priesthood of pure reason, the *Trismegisti*, the expounders of the principles of thought from age to age." Emerson was a true forerunner of H. P. Blavatsky, as his philosophy was based upon the age-old truths of the Wisdom-Religion. His prime doctrine was that of Unity in diversity. He considered the Law of Polarity as the fundamental law of the universe. He pointed to the presence of the God within every man and urged self-induced and self-devised efforts as the only means of man's salvation. Further, he considered himself merely as the voice of one crying in the wilderness, and openly proclaimed the coming of a new Teacher who would bring back the ancient doctrines in all their fulness.

The new Teacher was "H. P. B." She claimed no originality for her ideas. In the first chapter of her first book she led her readers back to Plato and Pythagoras, to the Neoplatonists and to the "Brahmans and Lamaists of the Orient." In the Introductory to *The Secret Doctrine* she showed that all true philosophies, of whatever age, are but "fragments of a primeval revelation granted to the ancestors of the whole race of mankind." She also prophesied that in the twentieth century some other disciple may be sent by the Masters to give final and irrefutable proofs of the existence of the *Gupta-Vidya*, from which all philosophical systems have sprung. "Thus," she says, "the Past shall help to realize the Present, and the latter to better appreciate the Past."



## BEING IMPERSONAL

THE idea of Adepts, both the root of Theosophical philosophy in a historical sense and a logical necessity in the philosophical sense, suggests beings who have transcended all personal considerations. It is well to reflect on the real meaning of such a state of mind, and the way in which it is attained. Newcomers to Theosophy may sometimes regard impersonality as cold or "unnatural," and be puzzled by the apparent emptiness of an "impersonal" life. Yet at the same time, the fundamentals of Theosophy may suggest to them that here is truth, and that the practical theosophic life is the only life worth living. Must they, then, give up their personal relationships in order to study the teaching and live the life?

It should be understood at the outset that right action is always natural. No one can live the theosophical life and neglect his natural duty. Many of the relationships commonly called "personal" are natural karmic duties. Robert Crosbie once warned against "a doctrine of impersonality which takes everything human out of life and makes it a cold negation," saying that such a doctrine "has no patience with *evolution*—all faults must disappear at a single stroke." Impersonality, then, does not mean to cut off abruptly all our personal contacts with others. Our duty is to help "personalities" to become "living souls." When we begin striving to help those with whom we share human ties of love and affection, we are beginning to be impersonal.

Impersonality means an *impartial* state of mind, a wish to minister to the needs rather than to the desires of others. Only when we calculate our own individual happiness and think of how appreciative our friends will be if we satisfy their desires and wants, do we become "personal" in a detrimental sense. It is the selfishness in human relationships that brings harmful results. As evidence of this we have only to examine the desire to be or to follow a leader. In the first case, ambition and thirst for power are the unmistakable indices of selfishness. In the second, those who follow blindly hope someone else will make *their* effort, do *their* work.

The personality, as everything else, is neither good nor evil in itself, but is simply our means of contact with other beings. Some relationships are under Karma closer than others, and we are inclined to let them become exclusive. Our duty is to refine and elevate such relationships by our own more universal point of view toward them. If then the ties weaken of themselves, the Karmic attach-



ment will have been worked out. But where a sincere love or affection for another exists, there is a natural channel through which much good can flow, in accordance with the purity and unselfishness of those concerned. Such Karmic affinities provide needed experiences of this incarnation, as indicated by W. Q. J.:

Other beings once known to the man arrive into incarnation at the same time, and bring into action affinities, attractions, and powers that can only act through them and him. Their influence cannot be calculated. It may be good or bad, and just as he is swayed by them or as his sway the other being, so will work out the Karma of each.

Very necessary "personal" relationships exist, the avoidance of which through prideful ambition to reach adeptship overnight would actually mean falling in the opposite direction. The neglect of Karmic debts is not the path of progress.

Recognizing that all, nearly without exception, naturally have such relationships—whether with husband or wife, brother or sister, mother or father—the question is not whether or no one should reject these opportunities for mutual expression and learning, but in just what way those opportunities can be used to the greatest advantage of all: what is the line of duty? How did the Adepts, whose "impersonality" we strive to emulate, become as they are? Certainly, by making the most of every opportunity offered, by fulfilling in the best way known at the time the Karmic duties presented, and above all not by worrying as to whether they were "impersonal" enough to become adepts. How, then, does it help us to know of adepts at our present stage of development? Because we can raise ourselves to the same impartial *state of mind*. Even though our *duties* be entirely different from theirs, so shall we be best able to perform our own duties, however mean or humble. Such an attitude rests on an understanding of the interdependence of all beings and on the will to follow the wisest course of action.

The problem, then, as ever, is how to transcend *selfishness*—not how to evade certain relationships or duties. We shall come to realize through a study of our own karmic propensities that what is truly natural is truly best. If we wonder as to the emptiness of a life without the satisfaction of personal desires, let us remember that a life of petty selfishness has already become empty, or we would not be considering such problems, nor would we *naturally* have come in contact with Theosophy.



# KOSMIC MIND

## I

"Whatsoever quits the *Laya* (homogeneous) state, becomes active conscious life. Individual consciousness emanates from, and returns into Absolute consciousness, which is eternal MOTION." (*Esoteric Axioms*.)

"Whatever that be which thinks, which understands, which wills, which acts, it is something celestial and divine, and upon that account must necessarily be eternal."—CICERO.

EDISON'S conception of matter was quoted in our March editorial article. The great American electrician is reported by Mr. G. Parsons Lathrop in *Harper's Magazine* as giving out his personal belief about the atoms being "possessed by a certain amount of intelligence," and shown indulging in other reveries of this kind. For this flight of fancy the February *Review of Reviews* takes the inventor of the phonograph to task and critically remarks that "Edison is much given to dreaming," his "scientific imagination" being constantly at work.

Would to goodness the men of science exercised their "scientific imagination" a little more and their dogmatic and cold negations a little less. Dreams differ. In that strange state of being which, as Byron has it, puts us in a position "with seal'd eyes to see," one often perceives more real facts than when awake. Imagination is, again, one of the strongest elements in human nature, or in the words of Dugald Stewart it "is the great spring of human activity, and the principal source of human improvement. . . . Destroy the faculty, and the condition of men will become as stationary as that of brutes." It is the best guide of our blind senses, without which the latter could never lead us beyond matter and its illusions. The greatest discoveries of modern science are due to the imaginative faculty of the discoverers. But when has anything new been postulated, when a theory clashing with and contradicting a comfortably settled predecessor put forth, without orthodox science first sitting on it, and trying to crush it out of existence? Harvey was also regarded at first as a "dreamer" and a madman to boot. Finally, the

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NOTE—Readers will find it interesting to compare the current "Science and the Secret Doctrine" article with this editorial by H. P. B., which first appeared in *Lucifer* for April, 1890. "Kosmic Mind" was reprinted in *THEOSOPHY* for January, 1915 (III, 149). Its present publication will be in two parts, the second of which will appear next month. (The "March editorial" referred to in the opening sentence above is "The Cycle Moveth," reprinted in *THEOSOPHY* IV, 152.)—Editors, *THEOSOPHY*.



whole of modern science is formed of "working hypotheses," the fruits of "scientific imagination" as Mr. Tyndall felicitously called it.

Is it then, because consciousness in every universal atom and the possibility of a complete control over the cells and atoms of his body by man, have not been honored so far with the *imprimatur* of the Popes of exact science, that the idea is to be dismissed as a dream? Occultism gives the same teaching. Occultism tells us that every atom, like the monad of Leibnitz, is a little universe in itself; and that every organ and cell in the human body is endowed with a brain of its own, with memory, therefore, experience and discriminative powers. The idea of Universal Life composed of individual atomic lives is one of the oldest teachings of esoteric philosophy, and the very modern hypothesis of modern science, that of *crystalline life*, is the first ray from the ancient luminary of knowledge that has reached our scholars. If plants can be shown to have nerves and sensations and instinct (but another word for consciousness), why not allow the same in the cells of the human body? Science divides matter into organic and inorganic bodies, only because it rejects the idea of *absolute life* and a life-principle as an entity: otherwise it would be the first to see that *absolute life* cannot produce even a geometrical point, or an atom inorganic in its essence. But Occultism, you see, "teaches mysteries" they say; and mystery is *the negation of common sense*, just as again metaphysics is but a kind of poetry, according to Mr. Tyndall. There is no such thing for science as mystery; and therefore, as a Life-Principle is, and must remain for the intellects of our civilized races for ever a mystery *on physical lines*—they who deal in this question have to be of necessity either fools or knaves.

*Dixit.* Nevertheless, we may repeat with a French preacher: "mystery is the fatality of science." Official science is surrounded on every side and hedged in by unapproachable, for ever impenetrable mysteries. And why? Simply because physical science is self-doomed to a squirrel-like progress around a wheel of matter limited by our five senses. And though it is as confessedly ignorant of the formation of matter, as of the generation of a simple cell; though it is as powerless to explain what is this, that, or the other, it will yet dogmatize and insist on what life, matter and the rest are not. It comes to this: the words of Father Felix addressed fifty years ago to the French academicians have nearly become immortal as a truism. "Gentlemen," he said, "you throw into our teeth the reproach that we teach mysteries. But imagine whatever science you will; follow the magnificent sweep of its deductions . . . and when



you arrive at its parent source you come face to face with the unknown!"

Now to lay at rest once for all in the minds of Theosophists this vexed question, we intend to prove that modern science, owing to physiology, is itself on the eve of discovering that consciousness is universal—thus justifying Edison's "dreams." But before we do this, we mean also to show that though many a man of science is soaked through and through with such belief, very few are brave enough to openly admit it, as the late Dr. Pirogoff of St. Petersburg has done in his posthumous *Memoirs*. Indeed that great surgeon and pathologist raised by their publication quite a howl of indignation among his colleagues. How then? the public asked: He, Dr. Pirogoff, whom we regarded as almost the embodiment of European learning, believing in the superstitions of crazy alchemists? He, who in the words of a contemporary:—

"was the very incarnation of exact science and methods of thought; who had dissected hundreds and thousands of human organs, making himself as acquainted with all the mysteries of surgery and anatomy as we are with our familiar furniture; the savant for whom physiology had no secrets and who, above all men, was one to whom Voltaire might have ironically asked whether he had not found immortal soul between the bladder and the blind gut, — that same Pirogoff is found after his death devoting whole chapters in his literary Will to the scientific demonstration. . . ." *Novoye Vremya* of 1887.

—Of what? Why, of the existence in every organism of a distinct "VITAL FORCE" independent of any physical or chemical process. Like Liebig he accepted the derided and tabooed homogeneity of nature—a Life Principle—that persecuted and hapless teleology, or the science of the final causes of things, which is as philosophical as it is *unscientific*, if we have to believe imperial and royal academies. His unpardonable sin in the eyes of dogmatic modern science, however, was this: The great anatomist and surgeon, had the "hardihood" to declare in his *Memoirs*, that:—

"We have no cause to reject the possibility of the existence of organisms endowed with such properties that would make of them—the direct embodiment of the universal mind—a perfection inaccessible to our own (human) mind. . . . Because, we have no right to maintain that man is the last expression of the divine creative thought."

Such are the chief features of the heresy of one, who ranked high among the men of exact science of this age. His *Memoirs* show plainly that not only he believed in Universal Deity, divine Ideation,



or the Hermetic "Thought divine," and a Vital Principle, but taught all this, and tried to demonstrate it scientifically. Thus he argues that Universal Mind needs no physico-chemical, or mechanical brain as an organ of transmission. He even goes so far as to admit it in these suggestive words:—

"Our reason must accept *in all necessity* an infinite and eternal Mind which rules and governs the ocean of life. . . . *Thought and creative ideation, in full agreement with the laws of unity and causation, manifest themselves plainly enough in universal life without the participation of brain-slush. . . .* Directing the forces and elements toward the formation of organisms, this *organizing life-principle* becomes *self-sentient, self-conscious, racial or individual*. Substance, ruled *and directed by the life-principle*, is organized *according to a general defined plan into certain types. . . .*"

He explains this belief by confessing that never, during his long life so full of study, observation, and experiments, could he—

"acquire the conviction, that our brain could be the only organ of thought in the whole universe; that everything in this world, save *that* organ, should be unconditioned and senseless, and that human thought alone should impart to the universe a meaning and a reasonable harmony in its integrity."

And he adds *à propos* of Moleschott's materialism:—

"Howsoever much fish and peas I eat, never shall I consent to give away my *Ego* into durance vile of a product casually extracted by modern *alchemy* from the urine. If, in our conceptions of the Universe it be our fate to fall into illusions, then my 'illusion' has, at least, the advantage of being very consoling. For, it shows to me an intelligent Universe and the activity of Forces working in it harmoniously and intelligently; and that my 'I' is not the product of chemical and histological elements but *an embodiment of a common universal Mind*. The latter, I sense and represent to myself as acting in free will and consciousness in accordance with the same laws which are traced for the guidance of my own mind, but only exempt from that restraint which trammels our human conscious individuality."

For, as remarks elsewhere this great and philosophic man of Science:—

"*The limitless and the eternal, is not only a postulate of our mind and reason, but also a gigantic fact, in itself. What would become of our ethical or moral principle were not the everlasting and integral truth to serve it as a foundation!*"

The above selections translated *verbatim* from the confessions of one who was during his long life a star of the first magnitude in the fields of pathology and surgery, show him imbued and soaked through with the philosophy of mysticism. In reading the *Memoirs*



of that man of scientific fame, we feel proud of finding him accepting, almost wholesale, the fundamental doctrines and beliefs of Theosophy. With such an exceptionally scientific mind in the ranks of mystics, the idiotic grins, the cheap satires and flings at our great Philosophy by some European and American "Freethinkers," become almost a compliment. More than ever do they appear to us like the frightened discordant cry of the night-owl hurrying to hide in its dark ruins before the light of the morning Sun.

The progress of physiology itself, as we have just said, is a sure warrant that the dawn of that day when a full recognition of a universally diffused mind will be an accomplished fact, is not far off. It is *only* a question of time.

For, notwithstanding the boast of physiology, that the aim of its researches is only the summing up of every vital function in order to bring them into a definite order by showing their mutual relations to, and connection with, the laws of physics and chemistry, hence, in their final form with mechanical laws—we fear there is a good deal of contradiction between the confessed object and the speculations of some of the best of our modern physiologists. While few of them would dare to return as openly as did Dr. Pirogoff to the "exploded superstition" of *vitalism* and the severely exiled life-principle, the *principium vite* of Paracelsus—yet physiology stands sorely perplexed in the face of its ablest representatives before certain facts. Unfortunately for us, this age of ours is not conducive to the development of moral courage. The time for most to act on the noble idea of "*principia non homines*," has not yet come. And yet there are exceptions to the general rule, and physiology—whose destiny it is to become the hand-maiden of Occult truths—has not let the latter remain without their witnesses. There are those who are already stoutly protesting against certain hitherto favorite propositions. For instance, some physiologists are already denying that it is the forces and substances of so-called "inanimate" nature, which are acting exclusively in living beings. For, as they well argue:—

"The fact that we reject the interference of other forces in living things, *depends entirely on the limitations of our senses*. We use, indeed, the same organs for our observations of both animate and inanimate nature; and these organs can receive manifestations of only a limited realm of motion. Vibrations passed along the fibres of our optic nerves to the brain reach our perceptions through our consciousness as sensations of light and color; vibrations affecting our consciousness through our auditory organs strike us as sounds;



all our feelings, through whichever of our senses, are due to nothing but motion."

Such are the teachings of physical Science, and such were in their roughest outlines those of Occultism, aeons and millenniums back. The difference, however, and most vital distinction between the two teachings, is this: official science sees in motion simply a blind, unreasoning force or law; Occultism, tracing motion to its origin, identifies it with the Universal Deity, and calls this eternal ceaseless motion—the "Great Breath."\*

Nevertheless, however limited the conception of Modern Science about the said Force, still it is suggestive enough to have forced the following remark from a great Scientist, the present professor of physiology at the University of Basle,† who speaks like an Occultist.

"It would be folly in us to expect to be ever able to discover, with the assistance only of our external senses, in animate nature that something which we are unable to find in the inanimate."

And forthwith the lecturer adds that man being endowed "in addition to his physical senses with an *inner sense*," a perception which gives him the possibility of observing the states and phenomena of his own consciousness, "he has to use *that* in dealing with animate nature"—a profession of faith verging suspiciously on the borders of Occultism. He denies, moreover, the assumption, that the states and phenomena of consciousness represent in substance the same manifestations of motion as in the external world, and bases his denial by the reminder that not all of such states and manifestations have necessarily a spatial extension. According to him that only is connected with our conception of space which has reached our consciousness through sight, touch, and the muscular sense, while all the other senses, all the *effects*, tendencies, as all the interminable series of representations, have no extension in space but only in time.

Thus he asks:—

"Where then is there room in this for a mechanical theory? Objectors might argue that this is so only in appearance, while in reality all these have a spatial extension. But such an argument would be entirely erroneous. Our sole reason for believing that objects perceived by the senses have such extension in the external world, rests on the idea that they seem to do so, as far as they can be watched and observed through the senses of sight and touch. With regard, however, to the realm of our *inner* senses even that supposed foundation loses its force and there is no ground for admitting it."

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\* *Vide* "Secret Doctrine," vol. i, pp. 2 and 3.

† From a paper read by him some time ago at a public lecture.



The winding up argument of the lecturer is most interesting to Theosophists. Says the physiologist of the modern school of Materialism:—

“Thus, a deeper and more direct acquaintance with *our inner nature* unveils to us a world *entirely unlike the world represented to us by our external senses*, and reveals the most heterogeneous faculties, shows objects having nought to do with spatial extension, and phenomena absolutely disconnected with those that fall under mechanical laws.”

Hitherto the opponents of vitalism and “life-principle,” as well as the followers of the mechanical theory of life, based their views on the supposed fact, that, as physiology was progressing forward, its students succeeded more and more in connecting its functions with the laws of *blind matter*. All those manifestations that used to be attributed to a “mystical life-force,” they said, may be brought now under physical and chemical laws. And they were, and still are loudly clamoring for the recognition of the fact that it is only a question of time when it will be triumphantly demonstrated that the whole vital process, in its grand totality, represents nothing more mysterious than a very complicated phenomenon of motion, exclusively governed by the forces of inanimate nature.

But here we have a professor of physiology who asserts that the history of physiology proves, unfortunately for them, quite the contrary; and he pronounces these ominous words:—

“I maintain that the more our experiments and observations are exact and many-sided, the deeper we penetrate into facts, the more we try to fathom and speculate on the phenomena of life, the more we acquire the conviction, that even those phenomena that we had hoped to be already able to explain by physical and chemical laws, *are in reality unfathomable*. They are vastly more complicated, in fact; and as we stand at present, *they will not yield to any mechanical explanation*.”

This is a terrible blow at the puffed-up bladder known as Materialism, which is as empty as it is dilated. A Judas in the camp of the apostles of negation—the “animalists”! But the Basle professor is no solitary exception, as we have just shown; and there are several physiologists who are of his way of thinking; indeed some of them going so far as to almost accept *free-will* and *consciousness*, in the simplest monadic protoplasms!

One discovery after the other tends in this direction. The works of some German physiologists are especially interesting with regard to cases of consciousness and positive discrimination—one is almost inclined to say *thought*—in the *Amoebas*. Now the *Amoebas* or



animalculae are, as all know, microscopical protoplasms—as the *Vampyrella Spirogyra* for instance, a most simple elementary cell, a protoplasmic drop, formless and almost structureless. And yet it shows in its behavior something for which zoologists, if they do not call it mind and power of reasoning, will have to find some other qualification, and coin a new term. For see what Cienkowsky\* says of it. Speaking of this microscopical, bare, reddish cell he describes the way in which it hunts for and finds among a number of other aquatic plants one called *Spirogyra*, rejecting every other food. Examining its peregrinations under a powerful microscope, he found it when moved by hunger, first projecting its *pseudopodiae* (false feet) by the help of which it crawls. Then it commences moving about until among a great variety of plants it comes across a *Spirogyra*, after which it proceeds toward the cellulated portion of one of the cells of the latter, and placing itself on it, it bursts the tissues, sucks the contents of one cell and then passes on to another, repeating the same process. This naturalist never saw it take any other food, and it never touched any of the numerous plants placed by Cienkowsky in its way. Mentioning another Amoeba—the *Colpadella Pugnax*—he says that he found it showing the same predilection for the *Chlamydomonas* on which it feeds exclusively; “having made a puncture in the body of the *Chlamydomonas* it sucks its chlorophyl and then goes away,” he writes, adding these significant words: “The way of acting of these monads during their search for and reception of food, is so amazing that one is almost inclined to see in them *consciously acting beings*!”

Not less suggestive are the observations of Th. W. Engelmann (*Beitrage zur Physiologie des Protoplasma*), on the *Arcella*, another unicellular organism only a trifle more complex than the *Vampyrella*. He shows them in a drop of water under a microscope on a piece of glass, lying so to speak, on their backs, *i. e.*, on their convex side, so that the *pseudopodiae*, projected from the edge of the shell, find no hold in space and leave the Amoeba helpless. Under these circumstances the following curious fact is observed. Under the very edge of one of the sides of the protoplasm gas-bubbles begin immediately to form which, making that side lighter, allow it to be raised, bringing at the same time the opposite side of the creature into contact with the glass, thus furnishing its *pseudo* or false feet means to get hold of the surface and thereby turning over its body to raise itself on all its *pseudopodiae*. After this, the Amoeba proceeds to

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\* L. Cienkowsky. See his work *Beitrage zur Kenntniss der Monaden*, Archiv. f. mikroskop, Anatomie.



suck back into itself the gas-bubbles and begins to move. If a drop of water is placed on the lower extremity of the glass, then, following the law of gravity the *Amoebae* will find themselves at first at the lower end of the drop of water. Failing to find there a point of support, they proceed to generate large bubbles of gas, when, becoming lighter than the water, they are raised up to the surface of the drop.

In the words of Engelman:—

“If having reached the surface of the glass they find no more support for their feet than before, forthwith one sees the gas-globules diminishing on one side and increasing in size and number on the other, or both, until the creatures touch with the edge of their shell the surface of the glass, and are enabled to turn over. No sooner is this done than the gas-globules disappear and the *Arcellae* begin crawling. Detach them carefully by means of a fine needle from the surface of the glass and thus bring them down once more to the lower surface of the drop of water; and forthwith they will repeat the same process, varying its details according to necessity and devising new means to reach their desired aim. Try as much as you will to place them in uncomfortable positions, and they find means to extricate themselves from them, each time, by one device or the other; and no sooner have they succeeded than the gas-bubbles disappear! It is impossible not to admit that such facts as these *point to the presence of some PSYCHIC process in the protoplasm.*”\*

(*To be concluded*)

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### AS ABOVE, SO BELOW

In Esoteric Philosophy, every physical particle corresponds to and depends on its higher *noumenon*—the Being to whose essence it belongs; and above as below, the Spiritual evolves from the Divine, the psycho-mental from the Spiritual—tainted from its lower plane by the astral—the whole animate and (seemingly) inanimate Nature evolving on parallel lines, and drawing its attributes from above as well as from below.

—*The Secret Doctrine.*

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\**Loc. cit.*, Pflüger's Archiv. Bd. II, S. 387.



## THE LEADERSHIP OF EXAMPLE

THERE are any number of books dealing with leadership, including studies of the world's great military "leaders," such as Napoleon, Alexander the Great, and Tamerlane, and treatises which analyze great literary figures like Poe, Dickens, Hugo, Flaubert. The trend in modern biography is to display the weaknesses of these personalities; and even to show in some cases that their very weaknesses elevated them to fame. Napoleon was only five-feet-three; hence, his ambition to dominate those who were taller! The shrivelled arm of the former Kaiser was the real impulsion behind his quest for glory.

But what of spiritual leaders? Modern psychology honestly searches for some ignoble motive to "explain" even great Teachers. Because no man known to the world is without some kind of imperfection, it is always easy to seize upon some attribute or quality as the "reason" for greatness. Jesus was not a pure-blooded Jew. He was poor and bore the insults which come to the poor. So he made virtues of poverty and humility. He professed to despise distinctions of race, creed, sex, condition and organization—a mere "defence-mechanism," we are told. But does this so-called "debunking" of history explain why thousands of other men born in the same circumstances failed to attain the same greatness?

Such theories neglect altogether the fact that the message of the world's spiritual leaders is always the same. It is part of the work of the present cycle of the Movement to gather together the numberless spiritual teachings of the world and to show their identity. Here is an illustration. According to Matthew (22:37-40):

Jesus said to him: Thou shalt love the Lord thy God with thy whole heart, and with thy whole soul, and with thy whole mind. This is the greatest and the first commandment. And the second is like to this: Thou shalt love thy neighbour as thyself. On these two commandments dependeth the whole law and the prophets.

And on "leadership" (Matthew 20:26-8):

But whosoever will be the greater among you, let him be your minister: And he that will be first among you, shall be your servant. Even as the Son of man is not come to be ministered unto, but to minister, and to give his life a redemption for many.

The same great ethical ideas form the Seven Keys of *The Voice of the Silence*, which tell of Charity and love immortal; Harmony in word and act; Patience, and indifference to pleasure and to pain. Indeed, in the *Voice* one finds the *essence* of the ethical teachings of all the world.



The Theosophical movement was initiated by beings great in Spiritual Wisdom. The impetus behind that cyclic effort is the mighty knowledge of the brotherhood of All, a limitless compassion for all Life, in which sense of self has no part. When the Teachers retire from outward participation in the work, its fulfillment is left to the companions. How well they carry on the work is a secret in the heart, a knowledge each one has within himself, and which no other can know for him. The foolish world thinks the humble servant and lover of mankind to be worthless. But ultimately, "he who Wisdom hath is honored by all men."

A true leader is personally unimportant in his own eyes. His value is measured by the extent of his help to others. His only thought concerning each one he meets is, "How can this spark be fanned from mere good intention into an all-consuming devotion to the spiritual welfare of all beings?" Any and all practical ways and means are used by him; all contacts of hearing, sight, touch, and perception, may serve to make the earthly and psychic vehicle porous to the voice of the inner man.

Each student can in this sense become a "leader." But a leader of this sort is never "authority." Each being is an example to some, and each looks to others for example to follow. In whatever position we stand, we must regard the divine in others as the *real*, work that it may manifest, and refrain from appealing to the lower separative nature which thrives on pride and subtle flattery. It is not our business to note that a man is susceptible to the "wiles of Mara." It is our business to see that we are not guilty of striking him where he is weak.

Jesus said, "Woe unto the world because of offences! for it must needs be that offences come; but woe to that man by whom the offence cometh." Every being participating in this Movement has been touched by a divine desire to let the Higher Self shine forth. That is the only call made to the world, and those who come answer to that call. The spark is there, now active, now quiescent, but it can be fanned into bright flames. If our purpose is to aid the weary pilgrim, no word or act of ours can increase the hold of matter upon him.

How can a leader be great because of some weakness, coupled with a strong personal ambition to dominate? A true leader is great because he calls always to the spirit in man—because his faith in the omnipotence of the spirit is *supreme*. His voice is universal, and all who hear it are raised in some measure to union with the truth.



Just as we stand where we are because of our karmic relation to the whole, so all others stand in their positions through a universal interactive influence for which we share responsibility. We are now affecting those who are and will be examples to countless others. We have consciously chosen the ideal we desire to make paramount in our own lives. There must be no cross-purposes, no confusion or contradictions in the forces flowing from ourselves to others.

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"CLEARANCE"

What true Theosophists are all engaged in is a work of *clearance*; that is, in the removal of obstacles, rather than in a work of immediate construction. Elimination of barriers to direct perception is not an advance into a new condition, but the undoing of past action.

Once we all had direct perception on all planes. Masters still have it, but we have lost it through the neglect or misuse of our powers under temptation, and now are trying to regain this vision. The barriers that exist, therefore, are not so much our present neglect or misuse, as the consequences or effects, still unadjusted, of former misuse. Upon the removal of these obstacles to direct perception, there is true seeing, spiritual clairvoyance, on *this* plane, without striving. It "comes of itself," because it is there all the time, as the sun is in the heavens all the time, and only obscured by clouds of false impressions.

The light of the sun is obscured by the clouds which rise from earth and by the earth's diurnal rotation. We do not see the sun nor create sunlight by any efforts at building fires or setting fire to the earth, but by removing the clouds and altering the character of our earthly "rotation." Until that resultant is achieved, what we have to do is to work steadily and steadfastly during our gloomiest "days" and in our darkest "nights" at *living the life*, knowing all the time that the Sun is there, and that the variations are in ourselves—not in the "Sun."



# SCIENCE AND THE SECRET DOCTRINE

## THE FADING BOUNDARY

### II

WE have seen how the theosophist and the materialist have simultaneously realized a dream from the same set of facts; the former has witnessed scientific acceptance of the proposition that there is no boundary between the "living" and "non-living"; the latter, as he thinks, has been fortified in his belief that "life" is merely a phenomenon of molecules. How should an impartial observer of the two views—as if such abstraction were possible! —determine which is correct?

Obviously, the answer is likely to lie—for such an observer—in an attempt to apply the discovered principle to the more highly organized forms of life. It has been the dream of most biologists to resolve all "life" into unconscious molecular motion, and efforts along this line have been unremitting.

Specifically, the task of genetics is to explain the initial formation of the body; other fields of biology are concerned with how that form is maintained. But science has made so little headway in understanding the nature of form that it is now clear that both problems hang on the same "missing link." To date one of the best resumés of the methods used and the progress made is an article by Prof. Edmund W. Sinnott, which leads in *Science* for Jan. 20, 1939. Prof. Sinnott deals principally with the problem of cell mechanics. As introductory to considering his views, it should be said that most biologists agree that cell development is due to some action of the chromosomes—strings of matter in the germ cell, which are thought to consist of the mysterious "genes." The intimate likeness of genes to the filterable viruses, and the position of the latter on the borderline of the "living" and "non-living," have been discussed.

Prof. Sinnott's article treats the question of form in terms of the larger units of cells and the organism as a whole, as distinguished from the subject of our prior study—the viruses and genes, or "atoms" of biology. If his analysis thus should show as logical a continuity from the gene to the entire animal or plant body, as biochemical research has shown from atom to gene, the materialistic contention would seem to gain support, so long as one is content to ignore the implications of the existence of *consciousness*.

Prof. Sinnott sets the note of his discussion with the word "baffling":



It is not my intention here to undertake the ambitious task of reviewing the significant part which the cell theory has played in the history of morphology, physiology, genetics and indeed of every biological discipline. I do propose, however, to discuss briefly with you certain of its implications for one particular field—that most baffling of biological enigmas, the problem of the organized development of living things. An organism is not static. It continually changes, but in such a regular and orderly fashion that we must recognize in this developmental process the operation of a constant control. The wealth of knowledge which biologists have acquired about plants and animals has thrown surprisingly little light on what this control is or how it is exercised. To watch a fertilized egg or a tiny primordium march unflinching onward until the ultimate form of complex organ or body has been attained is an experience common enough among biologists, but it cannot fail to impress the thoughtful observer with a sense of his ignorance. Until we shall discover what is really happening in this mass of developing protoplasm, what molding and morphogenetic processes are here so subtly at work, our knowledge of living things will still be merely superficial. This is the biologist's frontier. Beyond is undiscovered country into whose borders a few explorers have penetrated here and there just far enough to see how broad and fertile the land is and how well protected against those who seek to enter it.

It is to this problem of organic development, of course, that the cell theory has made one of its major contributions. To understand that growth is accomplished chiefly by the multiplication of essentially uniform cellular elements and that changes in external form and internal structure are related to differences in the rate and plane of cell division and in modification of the characters of the cells themselves, is evidently to take a long and hopeful step along the road toward a knowledge of the process of development. But we must sadly admit that the hopes raised by this first triumph have not been altogether realized. The developmental relations between cells and the higher structures which they compose are still unknown. . . .

Here Prof. Sinnott not only admits that our knowledge is as yet superficial, but says that it may so remain, even after considerably more investigation. Of the problem of the geneticist, he writes:

. . . He has learned much about the gene as it occurs in the fertilized egg, primarily through a study of gene-controlled differences in the adult organism; but how the gene is actually related to the development of these traits is still unknown. The spectacular analysis of the cell and thus of the entire organism into an aggregation of genic units has thus far proved no more helpful in solving the basic problems of development than was the earlier analysis into an aggregation of cellular units.



But perhaps the process of subdivision should be carried still further. Students of cytogenetics hopefully discuss the possibility of an analysis of the gene into even smaller units and thus of bringing their problem to the very door of the biochemist. Those who feel content only when their problems can be stated in terms of atoms and molecules look to such an analysis for a final solution, but it is permissible to wonder whether, even if the molecular constitution of every gene were known, we should not still be confronted with the problem of exactly how this elaborate series of units actually gets itself built into what we so well have named organism.

With an insight most unusual, Prof. Sinnott at once puts his finger on the difficulty—the difficulty inherent in inductive as against deductive research, analysis as against synthesis:

The repeated failure of these various attempts to solve the problems of organized development by cutting up the individual into smaller and smaller unitary elements breeds the uneasy suspicion that here again, as in so many other scientific problems, we have been confusing analysis with solution. The scientific temperament feels much more comfortable when it is breaking down a complex phenomenon into simpler parts than when it is trying to pull together a series of diverse facts into a unity of relationship. For a solution of the ultimate riddles, however, synthesis is more important than analysis. It is far less easy to come by, and often requires the intuition of genius itself. Thus the progress of chemistry has been marked by an analysis of the material universe into a series of ninety-two different kinds of atoms, which arrange themselves into units of a higher order, the molecules, and are themselves further resolvable into unitary charges of electricity. . . . It is not an understanding of units which we now seek, but of unity. We are like the small boy who takes the clock apart to discover the secret of its running, but after he has dissected the works into an impressive array of wheels, gears and springs is unable to put them together again successfully and is still as far as ever from an understanding of synthetic horology. Like him, we need to know the principles underlying the construction and operation of our machine. Analysis is not enough. . . .

It is important to know that a living plant is composed of cellular units, but it is even more important to understand how, through the multiplication and interrelations of these units, the orderly development of an organism is assured. The analysis is more than a century old; the synthesis is still far from consummation.

Prof. Sinnott now raises the question of why attempted syntheses have proved unfruitful, which failure he attributes to inherent difficulties of method and the intractability of the materials studied.



Shall we say it is due rather to an inherently materialistic and hence separative bias, which has so affected the minds of researchers that they are virtually incapable of any experiment which does not tear things to pieces? — that scientists are magnificently potent to destroy, but helpless to *create*? Shall we say that even a little leaven of the idea of an *intelligent and living universe* might have inspired these men to seek for a *plan of organization*, and consequently for the necessary media (“missing links,” truly) for the concrete manifestation of such a plan?

The existence of such plans, and of their necessary agents, is actually implicit in Prof. Sinnott’s further exposition. After describing certain phases of organic development, he remarks:

This evidence all suggests that the mechanisms controlling growth and differentiation in the fruit are concerned with the entire organ and not with the behavior and interrelationships of the individual cells of which it is composed. The unity of behavior, and thus presumably the unity of organization, inheres in the whole and not in its elements.

On its own level the cell also displays a unity of organization independent of the organ above or of smaller units below. Biologists have long recognized that cell size, for a given tissue, is relatively constant as compared with organ and body size. Every cell also seems to possess a uniform complement of genes. These are not arranged at random but in a very definite order in each chromosome, and this constancy of position seems important in determining the rôle which a gene plays in development. Nor are the chromosomes entirely independent, for events in one have been shown to have effects on the others. The essential elements in the cell seem clearly to be the genes, for it is known that if one or at most a few of these are lacking, the cell will die. So far as can be determined the genes are of the same general order of magnitude and seem to be fundamentally similar units. It is in accord with the facts to regard the cell as an organized group of equivalent but somewhat differentiated genic units, just as we regard the organ as an organized group of equivalent but somewhat differentiated cells.

Of course one can speculate on the possibility that the gene itself is an organized aggregation, at a lower level, of still smaller units, perhaps protein molecules or simpler chemical entities, but our knowledge of genic constitution can go no further than to suggest that such may be the case. What is the ultimate living unit, if there is one, and of what it is composed are questions for the future to answer.

It should be noted that this process of organization is not a mere building up of similar units into an amorphous mass. Their arrangement and inter-relations produce specific patterns which are evidently



the result of a control more precise than one which would merely bring them together. Hence arises the problem of the development of organic form, which makes dynamic morphology a fundamental biological discipline.

His conclusion leaves us at just about this point.

Those early biologists who established the cell theory made the first great contribution to such a descriptive study of development, and under the stimulus of their idea, biological analysis has gained many triumphs in the century that is past. We can best honor these pioneers of yesterday, however, not by pushing indefinitely onward over the path they first began to blaze and which now seems destined to end blindly in discouragement and frustration, but rather to follow the pioneers of today along the far more difficult path which will lead, however distantly, to an understanding of biological synthesis. Life is integration. Life is the knitting together of units into patterned wholes. Many of the units we know, thanks to the labors of a hundred years. An understanding of how these units are built into the fabric of an organism is the task for the hundred years that are to come.

This is prophetic, and it is true prophecy; but in its realization research will be led as far from the science of today as the science of today has advanced from the naïve materialism, and in some cases, the puerilities, with which Madame Blavatsky had to deal.

Let us analyze Prof. Sinnott's remarks. If the integrating factor is inherent in the whole and not in its elements, one can only conclude that this factor is somewhat different from the cell substance, that it has a *prior, organized form* of its own, and finally, since it has not been physically discovered, that its substance is *not* physical under the *present definitions*. This is not to say that the formative principle will never be "physically" recognized, since in fact it has been, and not in Theosophy alone; nor can we say that it will not one day be considered as physical, say, as electricity or cosmic rays, both of which were once known—and in strict definition still are known—only by their *effects*. Prof. Sinnott has seen the phenomenal effects of the integrating factor clearly; when will he recognize the noumenon behind them?

The nature of the noumenon which operates to produce organic forms is well enough known to Theosophists. According to *The Secret Doctrine*:

Science is welcome to speculate upon the physiological mechanism of living beings, and to continue her fruitless efforts in trying to resolve our feelings, our sensations, mental and spiritual, into functions of their inorganic vehicles. Nevertheless, all that will ever be accomplished in this direction has already been done, and



Science will go no farther. She is before a dead wall, on the face of which she traces, as she imagines, great physiological and psychic discoveries, but every one of which will be shown later on to be no better than the cobwebs spun by her scientific fancies and illusions. (I, 133-4.)

The Darwinian theory . . . of the transmission of acquired faculties, is neither taught nor accepted in Occultism. Evolution, in it, proceeds on quite other lines; the physical, according to esoteric teaching, evolving gradually from the spiritual, mental and psychic. This inner soul of the physical cell—this “spiritual plasm” that dominates the germinal plasm—is the key that must open one day the gates of the terra incognita of the Biologist, now called the dark mystery of Embryology. (I, 219.) Complete the physical plasm, mentioned in the last footnote, the “Germinal Cell” of man with all its material potentialities, with the “spiritual plasm,” so to say, or the fluid that contains the five lower principles of the six-principled Dhyan—and you have the secret, if you are spiritual enough to understand it. (I, 224.)

The astral form clothing the Monad was surrounded, as it still is, by its egg-shaped sphere of *aura*, which here corresponds to the substance of the germ-cell or *ovum*. The astral form itself is the nucleus, now, as then, instinct with the principle of life.

When the season of reproduction arrives, the sub-astral “extrudes” a miniature of itself from the egg of surrounding aura. This germ grows and feeds on the aura till it becomes fully developed, when it gradually separates from its parent, carrying with it its own sphere of aura; just as we see living cells reproducing their like by growth and subsequent division into two. (II, 117.)

*The whole issue of the quarrel between the profane and the esoteric sciences depends upon the belief in, and demonstration of, the existence of an astral body within the physical, the former independent of the latter. (II, 149.)*

Every object in the universe owes its existence to this astral principle, inchoate and unindividualized in the lower forms, distinct and organized in the higher. Below the plant or animal forms, organization is still within the individual powers and affinities of the units; above the mineral, the case is otherwise. Hence, science has brilliantly succeeded in discovering the truth in one realm, and so far has dismally failed in the other. We think, however, that this failure cannot continue for many more years. Whether or not the issue will be determined by open acknowledgment of Theosophical wisdom and priority, will depend in part upon the coming generation of theosophists, some of whom may, when the time comes, find themselves in position to speak the truth.



## YOUTH-COMPANIONS' FORUM

**I**T is said that Theosophists should try not to antagonize others in their work of promulgation. Yet great men have always attacked existing evils fearlessly, thereby stirring up a reaction. What principle should the Theosophist follow?

Here is the direction of one of the Teachers on this question:

*As an Association, it [a Society of Theosophists] has not only the right, but the duty to uncloak vice and do its best to redress wrongs, whether through the voice of its chosen lecturers or the printed word of its journals and publications—making its accusations, however, as impersonal as possible. But its Fellows, or members, have individually no such right. Its followers have, first of all, to set the example of a firmly outlined and as firmly applied morality, before they obtain the right to point out, even in a spirit of kindness, the absence of a like ethic unity and singleness of purpose in other associations or individuals. (THEOSOPHY I, 68-9.)*

Those who act from the basis of “firmly applied morality” will never be found judging, far less condemning others, nor would they provoke any *unnecessary* antagonism. Their only objective is to assist in the betterment of mankind, whenever that assistance is possible. They are undisturbed by any criticism of themselves, however unjust it may be, for they recognize that the personal and not the real man is the target of criticism. They follow the *inner voice* regardless of consequences to themselves.

*Ethics, according to Theosophy, gives the true basis for right living. How would this apply to the regulation of diet or the cure of disease?*

(a) In taking the position of the Perceiver, the student gives the right impetus or impress to every department of his nature, including the physical body. So the application of Theosophical ethics helps the whole nature from the causal side. When disease manifests in the physical body, it is the effect of past mistakes, and the wise method is to use such physical remedies as may be necessary.

Diet has a wider application than is ordinarily understood by this term. Our moral nature has a diet of motives, our mental nature a diet of thoughts, and our physical nature its “food” diet. Right diet should extend throughout these three fields of evolution. In *The Bhagavad-Gita*, XVII, Krishna suggests no specific diet, but gives the classes of food and their effects upon the body. There is a diet “which is attractive to those in whom the *Sattva* quality prevaieth.” The *Sattva* quality means truth or goodness, and when the moral



and mental nature of the student is in harmony with the Perceiver, the right food should come to be his choice quite naturally.

As the race adopts right ethics, better foods will be developed. According to Theosophy, the most perfect foods we have, honey and wheat, are not a product of this evolution, but of a cycle in the past.

(b) Diet, especially abstinence from meat, is thought by many to be essential to right living; disease, to be caused by germs; and ethics, a product of physical evolution. These ideas are based on the materialistic conception that man is his body. Theosophical ethics is based on the septenary nature of man, and his relation to the whole of nature. It embraces the concept of Universal Law, which makes man the responsible agent of his own destiny.

Disease means that we have violated the laws of Nature. Disease may be produced by wrong diet, but all too often it results from the improper use of our minds. We think all our ailments come from the food we have eaten, or some other outside cause. Our remedies are of the same nature; we put our faith in the "sure cures" offered by various sciences and religions—even those of "quacks," if the cures are "guaranteed." We attempt to substitute one effect for another, that we may continue in the same ruts of irresponsibility.

But how often do we seek a cure within our own natures? *The Bhagavad-Gita* says that food is of three kinds, for which men have preference according to the nature of the individual. Dieting, then, means selecting that food which is homogeneous to our natures, but dieting, alone, never produced a superior individual. The only *real* cure lies in the right use of all our principles; particularly the Mind, as this is the highest of our active principles, and its use or misuse is reflected in the lower four.

*Is it possible to follow the path of action and the path of resignation at the same time?*

(a) This is a question that perplexed the students of five thousand years ago as much as it does the students of today, as appears from the fifth Chapter of the *The Bhagavad-Gita*, where Krishna reconciles the views of two Indian Schools on this subject. On the same problem, Mr. Crosbie states, "It would be a grave mistake to think by not acting one frees himself from the consequences of action." Fundamentally, the teachings of Theosophy show that this is a universe of action. As the *Gita* says, "the principles of thy nature will compel thee to engage." Indeed, inaction in a deed of mercy may mean action in a deadly sin.



In the *Gita Notes*, Mr. Judge says (p. 121), "The polluting effect of an act is not in the nature of the mere thing done, nor is the purifying result due to what work we may do, but on either hand the sin or merit is found in the inner feeling that accompanies the act."

The inner feeling is the motive for action. The highest motive means taking the position of the Perceiver. Acting as the Perceiver, the whole action is performed because it is necessary to do, and there is no thought of self-interest in the result. This is true inaction.

As a theory this seems simple enough, but the application is difficult because we have to assimilate our actions to our inner nature. But if we persevere in the position of the Perceiver, a much greater strength comes by repeated efforts. Even a little of this doctrine delivers a man from great evil. Mr. Judge concludes his comments on the fifth Chapter of the *Gita* with these words: "And such is the word of the Master; for He says in many places that, if we expect to have His help, we must apply ourselves to the work of helping humanity—to the extent of our ability. No more than this is demanded."

(b) Let us interpret this question in the light of *The Bhagavad-Gita*, for there it is shown that the two paths are identical. Devotion in the performance of action is known as *Yoga*. The path of resignation, or renunciation of action, is called *Sankhya*; this is the exercise of reason in contemplation, or mental devotion. The system of *Yoga* teaches that man is compelled to act "by the qualities which spring from nature." His concern in performing any act should be to do his duty as he sees it, to the best of his ability. It is not necessary to be concerned with the results of action—the results, that is, for *him*.

The path of renunciation is the path to knowledge. This system points to the necessity of a realization of man's true nature and of his relation to all life. Krishna says that mental devotion is superior to the performance of action. Knowledge is the goal of evolution; mental devotion is the acquisition of Self Knowledge; action is an expression of that knowledge. Action is a necessity in acquiring knowledge, the value or lesson to be learned being in the action itself, rather than in the fruits of action. So the true path is the gaining of knowledge through the right performance of all our duties of everyday life. We are thus active as spiritual beings, and renouncers of action as persons.



## CRITICISM AND CREDULITY

THE inadequacy of modern education in science is the subject of an article by Prof. Otis F. Curtis, professor of plant physiology at Cornell University, published in *Science* for Aug. 4. The writer contrasts the ideal of scientific training with the way in which science is currently taught in modern schools and colleges, finding much to deplore generally, as well as a number of striking illustrations of the very negation of the scientific spirit. "Training in science," he says, "should make the individual more critical, not more credulous, should lead him out of superstition and not sink him deeper into the attitudes of the superstitious." He shows how far modern scientific education is from attaining this ideal:

Is there not something wrong with our educational systems when in this so-called scientific age we find, among our high school, college and university graduates, many who believe nothing definite and have no convictions, while many others will believe anything, no matter how fantastic? Is there not something wrong when so many join the ranks of the fundamentalists, fighting the teaching of truth about evolution and progress as it applies to biology? When so many others join the ranks of the "one hundred percenters" opposing the recognition of truth in history, in economics, or in government? When many are so gullible as to be deceived by the most faulty and superficial reasoning? Has not the teaching of science failed when so many taking these high school and university courses join the ranks of the faith healers fighting sanitation and health measures, degrading both religion and science? It is clear that some of the most elementary principles of science are disregarded by those graduates of our best universities who go to fortune tellers and astrologers for advice, or for spirit messages from the dead; who feel uncomfortable unless they knock on wood; are superstitious about so many things, about lucky or unlucky numbers, about black cats or walking under ladders; who rely on charms or "lucky" pieces of one sort or another, or who forward chain letters for fear of bad luck.

These weaknesses in the products of our "institutions of higher learning" Prof. Curtis attributes to a general ignorance of science and to "the emphasis on teaching *what* to think rather than *how* to think; to a tendency to teach by authority, by dogma, rather than for authority, for understanding."

Science teachers offend "by drilling students to memorize the conclusions of others, a mere accumulation of information, as contrasted with training in evaluating evidence, in understanding and in



solving problems for themselves." Students, too, Prof. Curtis has discovered, welcome the simplicity of dogmatic teaching. They are not interested in *issues* or *problems*, to be considered in terms of principles and experiment, but prefer "answers" — "the latest dope." Prof. Curtis tells of a student who dropped a course in plant taxonomy because the professor was not sure to which of two species a certain intermediate plant belonged. This student "refused to study under a professor who did not know his subject." Prof. Curtis suggests that courses which teach only well established "facts" while neglecting the principles of inquiry should be labelled "good for five years only."

Prof. Curtis describes the attitude of the ideal scientist: "One really interested in the truth should be constantly on the lookout for possible flaws in his conclusions or in the supporting evidence, and should actively search for possible opposing evidence to make sure that he has not overlooked something." He then tells of a research scientist who called to the attention of another worker several questionable statements in a publication of the latter. The critic was amazed to find, however, that the writer of the article was uninterested in examining the evidence on which the questions were based. Prof. Curtis comments: "How a scientist could be so sure of himself that he isn't interested in learning what mistakes another investigator working in the same field may think he has made, or what alternative interpretations he may have to offer, is beyond my comprehension."

We wish now to place beside this expression another portion of his article. Prof. Curtis refers to "strongly organized groups of Anti-vivisectionists, Anti-evolutionists, Theosophists, Faith Healers, New Thoughtists, etc.," and makes this comment:

It is my impression, though I have seen no data, that a high proportion of the people that make up these groups are from the so-called "more educated" classes. There are some grains of truth in the propositions of most of these organizations, but their adherents go to the greatest extremes and appear entirely lacking in understanding and common sense, in judgment and ability to evaluate critically. They fail to distinguish truth from the partly true or the false, to recognize values; and yet these people, many of them, have had the opportunities of higher education, including college and graduate schooling.

It is pleasant to learn from Prof. Curtis that there are possibly "some grains of truth" in Theosophy, but it would be interesting to learn also on what "data" he has based this and certain other



conclusions, and how he ascertained the justice of his miscellaneous grouping of Theosophy with rather diverse systems of thought and of prejudice and blind belief. Would it be too much to ask him to "search for possible opposing evidence to make sure he has not overlooked something"? He is clearly aware of the departures of scientists from the high discipline which his article describes. Has he a similar appreciation of the abyss which so frequently separates those calling themselves Theosophists and the philosophic system from which they take their name? And if Prof. Curtis were to study *The Secret Doctrine* himself, say in connection with the morphology of plants, — a central problem of modern biology — he might discover some "grains of truth" of great help to him in his professional studies.

To illustrate the lack of common sense which he attributes to faith healers, theosophists, and others, Prof. Curtis recalls the case of a science teacher who because of belief in faith healing allowed his son to die of appendicitis without consulting a physician. As the writer has classed theosophists with faith healers, otherwise uninformed readers gain the impression that students of Theosophy are guilty of similar crimes of ignorance. But theosophists, simply because of their basis of principles, are free from the fact-defying beliefs of faith healers, even if science teachers are not.

Prof. Curtis offers another illustration of what he regards as benightedness by quoting a nationally known economist who recently affirmed that "Vaccination and serum treatments are all bunkum." Secure behind the voluminous propaganda of orthodox medicine, he doubtless supposes that such a statement is absolutely without support. However, according to a leading *scientific* authority on this subject, Dr. W. H. Manwaring, professor of bacteriology and experimental pathology at Stanford University, the economist is at least 95 per cent correct in his judgment. Dr. Manwaring has said:

Our first half-century of modern immunology has been characterized by recurring waves of clinical hope and clinical disappointment. A hundred theoretically logical, monovalent, polyvalent, prophylactic and curative antisera proposed, clinically tested and commercially exploited during the transitional years of the twentieth century. Ninety-five per cent of them thrown into the clinical discard. An equal number of theoretically logical, monovalent, polyvalent, prophylactic and therapeutic vaccines. A scant 5 per cent of them of more than historic interest. A thousand frantic clinical trials with theoretically logical opsonic index and leucocytic extract. All shelved



with the miasmas and phlebotomies of our Revolutionary ancestors. And we call this scientific medicine.

This overwhelming clinical disappointment has served one useful purpose. It has graphically dramatized the errors and inadequacies of the immunological theories from which the proposed clinical methods were logical and consistent deductions. *No immunological hypothesis of the past half-century has had a clinical verification probability of more than 5 per cent* (Our italics).<sup>1</sup>

While theosophists object to vaccination principally on grounds which call into question the empirical foundations of modern medical theory, rather than resting their position on conclusions such as the above, it cannot be denied that Dr. Manwaring's expert testimony is forceful evidence in support of the contentions of Theosophy. And far from contesting the value of sanitation, theosophists urge it as a much better means of controlling infectious disease than vaccination. There is evidence to show that the decrease in infectious diseases since the turn of the century may be due rather to more effective sanitation than to vaccination and serum therapy. This is undoubtedly the case with regard to tuberculosis, in 1900 the leading cause of death in the United States, and today sixth among the major causes of mortality. Says Dr. John B. Crouch in *Colorado Medicine* (December, 1932): "This remarkable decrease in the tuberculosis death rate has been brought about without a specific cure for the disease, so that sanitation, better economic conditions with improved living standards, and less dependency have had more to do with this decrease than any advance in therapy." Further evidence of the importance of sanitation is found in the report of Dr. Martin Friedrich, who as health officer of Cleveland crushed the smallpox epidemic of 1898-1901 in that city with intensive sanitary measures and large-scale formaldehyde disinfection. His success is important because he was forced to discard vaccination (in which he believed) because of impurities in the available vaccines.<sup>2</sup>

This experience, it may be said, does not disprove the efficacy of vaccination; nevertheless, it *does* show the sufficiency of disinfection. And how can the powerless minorities who oppose vaccination "prove" anything on the subject while they are denied a hearing in orthodox scientific journals, when physicians who practice successfully without using serums suffer professional ostracism, and when workers in research never dream of undertaking controlled experiments or statistical studies which might invalidate the basic assump-

<sup>1</sup> *Science*, July 5, 1929.

<sup>2</sup> *Cleveland Medical Journal*, February, 1902 (I, 2, p. 77).



tions of modern immunology? For example, who would think of correlating the incidence of degenerative diseases with the inoculation of the victims much earlier in life, and then comparing the results with the incidence of degenerative disease among those who have not been vaccinated? The rise in degenerative diseases has closely paralleled the increasing use of vaccines and serums. *Is there any connection?* Important scientific discoveries have been made by following clues much more fantastic. But will such suggestions be investigated? We will allow a final passage from Prof. Curtis' article to answer, for his remarks may be applied specifically to physicians as well as to the more general class of "educated persons" at whom they are directed:

It often seems that people who have had a formal education are likely to have stronger prejudices, are less eager or less willing to hear both sides of a question than are those with less schooling. They are often more smug, more self-satisfied and less reasonable. This may be due to the fact that their training has made them complacent by giving them a false confidence and over-assurance. It has failed to make them more cautious and more humble. In short, it has failed to give them understanding.

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### WHAT IS THE "MATTER"?

The *matter* of the Eastern philosophers is not the "matter" and Nature of the Western metaphysicians. For what is Matter? And above all, what is our scientific philosophy but that which was so justly and so politely defined by Kant as "the Science of the *limits* to our Knowledge?" Where have the many attempts made by Science to bind, to connect, and define all the phenomena of organic life by mere physical and chemical manifestations, brought it to? To speculation generally—mere soap-bubbles, that burst one after the other before the men of Science were permitted to discover real facts. All this would have been avoided, and the progress of knowledge would have proceeded with gigantic strides, had only Science and its philosophy abstained from accepting hypotheses on the mere one-sided Knowledge of *their* Matter. —*The Secret Doctrine.*



# ON THE LOOKOUT

## "THE WAGES OF BIOLOGICAL SIN"

This is the title of a new kind of sermon preached by Dr. Ernest Albert Hooton, Harvard anthropologist, in the October *Atlantic*. Dr. Hooton has constituted himself a gloomy prophet of biological scripture; he is a scientific fundamentalist whose leading dogma is that man is the chance descendant of apes, monkeys and tree-shrews. He feels, moreover, that we have sadly degenerated in many important respects since leaving the shelter of trees. In humorous parallel to theology, Dr. Hooton distinguishes between "biological" sin and sin proper:

I shall first expound [he writes] original anthropological sin, since we must initially acquaint ourselves with the frailties of the human vessel, which is well known to be made of clay but is not always realized to be only half-baked and frequently cracked. We shall then proceed to discuss the actual sins whereby man himself has made a bad matter considerably worse.

## NATURE'S ERRORS

Dr. Hooton believes that natural evolutionary processes show woeful need of guidance by a little rational intelligence, such as, for instance, Dr. Hooton's. All along the line of human development, biological misfits have somehow contrived to perpetuate themselves and their faulty characteristics, whereas the elimination of these traits from the human heredity would have been preferable. He says:

Man is an animal organism which has been evolved by the impact of shifting environments upon a valuable hereditary endowment. . . . Selection is not an intelligent process; environment does not pick and choose organisms for survival or extinction. It merely sets up a series of barbed-wire entanglements placed without purpose.

Man himself, according to the learned doctor, is a fine example of the preservation of numerous useless traits rolled into one. He has too large a brain, which he no longer needs since his hardest lessons, such as how to climb down out of trees, have already been learned. From this over-abundant supply of gray-matter arise foolish notions of immortality and "metaphysical conceptions of man."

## REDUCTIO AD ABSURDUM

From one point of view, Dr. Hooton is to be congratulated. Unswervingly he follows to its logical conclusion the theory that man is the accidental product of a blind evolutionary process. He



has reduced materialism to its final absurdity. Along with a few other scientists of the same persuasion, he urges the brave suppression of all those sentimental humanitarian impulses which lead us to protect the weak from succumbing in the struggle for existence. He argues that medical science makes a huge mistake by saving poor physical specimens and deplures this interference with Nature's eternal law of the survival of the fittest. It would be better, he thinks, to let them die, and devote our constructive energies to breeding a better race under the guidance of the science of heredity. Because of our own mistakes of this kind, added to those of nature, "we arrive at a sum total of potentialities for an evolutionary mess which seem a trifle depressing, even to an incorrigible optimist like myself."

#### HOOTON TESTIFIES AGAINST HOOTON

Assuming that Dr. Hooton's distress is sincere—that he is not merely staging a literary burlesque of human ignorance and folly—what, actually, would be the result of adopting the Hooton formula for improving the species? First, all those who think that man lives in spirit as well as in matter, who regard evolution as a moral problem as well as a biological problem, would have to be suppressed or "bred" out of the race. This would mean the practical elimination of the kind of thinking and inspiration which is behind all efforts at general human betterment—behind even such misguided scientific "saviors" as Dr. Hooton himself! Whence this longing to be of service, if not from the spirit in man? Altruism is a spiritual trait, not a biological phenomenon.

In greater or lesser degree, scores of intellectual materialists belie their own doctrines by showing concern over the welfare of humanity. And when materialistic theories of social reform reach the extreme of logical development, all men of common sense can see that they suffer from a fundamental bias as revolting in its consequences as the theological dogma which led to the Spanish Inquisition. Modern thinkers who attempt to give a complete explanation of the nature of man from the purely biological assumptions of evolutionary theory will in the course of time be forced to reconsider these basic assumptions. (See Lookout in the November THEOSOPHY for Thomas Huxley's testimony in this regard.) Dr. Hooton's consistent development of materialistic first principles has such brutal consequences that we may hope for widespread public rebellion against the warped doctrines of scientific authority.



## MECHANICAL DIOGENES

Scientific investigators have lately assumed the discouraging quest begun by Diogenes in ancient Athens—the search for an honest man. Dr. A. A. Lewis, of Dennison University, in the *Scientific Monthly* for September tells of the increasing demand for “lie-detecting” machines. He is mildly optimistic about the future possibilities of a mechanical “scale for morality.” The efficiency of such devices is based on the discovery that the man who consciously tells an untruth is unable to prevent certain telltale physiological reactions. Changes in breathing and body temperatures, and the behavior of the heart, are believed to reflect the psychological strain of making statements which the subject inwardly knows are not so. Machines which record these reactions are slowly emerging from the experimental stage to routine employment as an aid in crime detection. Coupled with the use of carefully prepared questions and statistical tables of lying probability, the mechanical lie-detector, experts say, has often been instrumental in gaining a confession from a criminal in a more humane and satisfactory manner than is possible by the third degree.

## AN ANCIENT PRECEDENT

The modern lie-detector is a laboratory instrument “for securing telltale breathing curves, blood-pressure records and galvanic-reflex readings.” But is the recognition that an inner sense of dishonesty records itself externally by these reactions really a discovery of “modern science”? Twenty-five centuries ago, Confucius, China’s statesman-sage, established five rules to be followed by judges, showing a more profound knowledge of human nature than will ever be assisted by any mechanical device. This is how the judges of ancient and honorable China examined those before the bar of justice:

By the first rule they examined the placing of his words and manner of speaking; and this was called Cu-tim, that is to say, *the observation of the words*. By the second they considered the air of his countenance, and the motion of his lips; and this was called Se-tim, that is to say, *the observation of the face*. By the third they observed his manner of breathing when he proposed his cause; this rule was called Ki-tim, that is say, *the observation of the respiration*. By the fourth they remarked whether his reply was quick—whether he gave not intricate, ill-grounded, uncertain answers; or whether he spoke of any other thing than that in question; or whether his words were not ambiguous; and this was



called Ulh-tim, that is to say, *the observation of the answers*. Lastly, by the fifth, the judges were carefully to weigh the considerations and respect, to see whether there was no trouble, digression, or confusion—if there appeared not any sign of a lie and fraud; and this last rule was called Mo-tim, that is to say, *the observation of the eyes*.

It was by these exterior marks that this ancient Areopagite discovered the most hidden thoughts of the heart, rendered an exact justice, diverted a great many persons from law-suits and frauds, and inspired in them the love of equity and concord. ("The Morals of Confucius," in *The Phoenix*, New York, 1835, pp. 51-2.)

### CENSUS OF LIARS?

There are few honest men who would not prefer to be tried by *human* agents of justice, rather than by the machines in which Dr. Lewis has such confidence despite the confessed difficulties of *interpreting* the reactions recorded. It is probable that the naïve awe which most persons feel for anything "scientific" is responsible for a substantial part of the success of the lie-detector in extracting confessions from the guilty. How can a simple criminal cope with the magic of science? He loses his nerve and confesses.

Indicating further applications of these devices, Dr. Lewis suggests that if it were possible to discover which members of society are *potential* criminals, then proper surveillance of those whose dishonesty is thus established might forestall much crime. This would be possible only by a general testing of the whole population for deviation from truth. Dr. Lewis feels that lie-detecting machines used in this way might "bring ethical theory out of the clouds and answer such practical questions as: How far is it possible to teach morals? Or, What schemes now existing or to be proposed for producing the 'cardinal virtues' are to be preferred?"

### "HE HAS A LITTLE LIST"

It is doubtful that Dr. Lewis would find the majority of mankind enthusiastic over a universal test for honesty. Too many would be found "guilty" if this moral census were carried out as he has proposed. But his catalog of offences would prove valuable as the basis for *self-examination*. He writes:

Among these offenders against honesty is the modern gossip, whose name is legion, the rumor-monger who may go so far as to aid in whispering campaigns to defame, the radio huckster



whose blatant exaggeration has only the sky as the limit, the money grabber who signs his famous name to an unqualified endorsement of cigarettes he has never smoked, and last but not least, the political chameleon whose principle changes color with every shift in vote-getting expediency.

Supposing we knew with some measure of statistical accuracy the extent of these and other sorts of dishonesty among mankind—would such knowledge produce its cure? Rather would the results be so discouraging as to cause the race to forego the moral struggle altogether, just as tolerant disregard now countenances barefaced hypocrisy and fraud in high places. The seeds of moral reform do not lie in statistics but in the internal “lie-detector” of every human being, the “still, small voice” which today is all too still and small. Neither dishonesty nor the selfishness which is its cause can be cured by publishing a directory of human weakness and wrong-doing. The self-reform taught by Confucius is still the only solution to ethical problems.

#### NATURAL PHOTOGRAPHY

An instance of what H. P. B. in *Isis Unveiled* (I, 394-5) calls electrical photography, “accomplished by the blind forces of nature,” was reported recently by Dr. Rosario Fontaine of Montreal, Canada. He described the perfect imprint of ferns and leaves left on the chest, arms and legs of Ben Oliver, a seventeen-year-old telegraph boy, who was killed when lightning struck near him during a storm on Aug. 7. Dr. Fontaine said: “In all my seventeen years of experience I have never seen such marks. I have heard of them, but never actually seen them.” (*New York Times*, Aug. 9.) In the similar case noted by H. P. B. in *Isis*, a boy slain by lightning bore on his breast the faithful picture of a tree growing outside the window before which he was standing when the catastrophe occurred. She cites this case to illustrate the following principle:

Granting that the universal ether contains electricity and magnetism, these two convertible agents saturating both the air and the earth, and that there is a constant interchange of electricity and magnetism between them, the inherent properties previously latent in electricity will under favoring conditions become active, sometimes assuming the form of magnetic force, sometimes that of electric force. By things for which the force has an affinity, it is attracted, by all others repelled. Objects to which the electric force is attracted receive its impress in proportion to their conductivity. Under the impulse received from the electric force, and in proportion to its intensity, the mole-



cules of such objects change their relations with each other; either they are wrenched asunder, so as to destroy the object—organic or inorganic—which they formed, or, if previously disturbed, are brought into equilibrium (as in cases of disease); or the disturbance may be but superficial, and the object may be stamped with the image of some other object encountered by the fluid before reaching them.

### THE PRINCIPLE APPLIED

From this summary of the operation of electrical and magnetic force it is evident that the same principle is involved in mesmeric healing, in the marking of unborn children with characteristic features, and in the fortuitous “natural photography” accompanying these tragedies caused by lightning. In the latter case, the electric fluid operates as a blind force of nature, while the magnetic effects produced by the mesmerist and the mother are respectively voluntary and involuntary uses of *human* electricity. In the case of the mother, H. P. B. writes:

Her *pores* are opened; she exudes an *odic* emanation which is but another form of the *akasa*, the electricity, or life-principle, and which, according to Reichenbach, produces mesmeric sleep, and consequently is *magnetism*. Magnetic currents develop themselves into electricity upon their exit from the body. An object making a violent impression on the mother's mind, its image is instantly projected into the astral light, or the universal ether . . . the repository of the *spiritual* images of all forms, and even human thoughts. Her magnetic emanations attract and unite themselves with the descending current which already bears the image upon it. It rebounds, and re-percussing more or less violently, impresses itself upon the foetus, according to the very formula of physiology which shows how every maternal feeling reacts on the offspring. . . . As Pheidias, gathering together the loose particles of clay and moistening them with water, could give plastic shape to the sublime idea evoked by his creative faculty, so the mother who knows her power can fashion the coming child into whatever form she likes. Ignorant of his powers, the sculptor produces only an inanimate though ravishing figure of inert matter; while the soul of the mother, violently affected by her imagination, blindly projects into the astral light an image of the object which impressed it, and, by re-percussion, that is stamped upon the foetus. (*Isis Unveiled* I, 395, 397.)



## OF MICE AND MEN

This is the law which, were it understood by modern biology, would resolve many of the mysteries confronting that science. It explains variations in type, atavism, and shows how mutations in the germ cell can be induced by X-rays and ultra-violet rays. This law will also account for the phenomena of protective coloration and imitation in nature. But scientists, it seems, insist upon learning the "hard way." Recent investigations conducted by Miss Elizabeth Fekete, Hungarian scientist of the Roscoe B. Jackson Memorial Laboratory at Bar Harbor, Maine, have disclosed some "unexpected facts" about heredity which one acquainted with this Theosophic teaching could have easily predicted. She transplanted 100 fertilized ova of mice of one color from their natural mothers to the bodies of female mice of another color, also pregnant. The result was that the white mice gave birth to colored mice in addition to their natural offspring, while colored mice had white mice in their litters. According to the report of these experiments in the *New York Times* (Sept. 24):

One hundred young mice, with colors different from those of their mothers, have been produced to date by Miss Fekete.

Some unexpected facts are beginning to appear. While these double-mothered young always look exactly like the race of mothers which conceived them, they appear to have taken on new characters from the mothers that bore them. Only what they received from the conception mothers is true heredity, and all the rest from the second mothers is environment.

By means of this living mouse laboratory the whole question of heredity and environment may be tested to answer many of the questions of human mothers about prenatal influences at work on their own babies.

## DELUSIONS OF VIVISECTION

Statements of this sort prompt the query, Who are the real animal worshippers—the ancient Egyptians or modern biologists? To suppose that experiments under such artificial conditions can yield anything more than the merest fragments of fact is a great delusion, and a still greater one must result from the fallacy of relying on the data of animal experiment for conclusions about human beings. Furthermore, research which implicates its workers in the karma of the terrible practice of vivisection, however well-intentioned or seemingly innocuous in certain cases, can do little more than perpetuate basic errors of scientific method.



## RACE EVOLUTION

Discussing race and sub-race evolution, H. P. B. remarks that "the Americans of the United States have already become a nation apart, and, owing to a strong admixture of various nationalities and inter-marriage, almost a race *sui generis*, not only mentally, but also physically." (*S. D.* II, 444) .There is no reason to suppose that this sort of process is limited to the American continent. Dr. Ales Hrdlicka, Smithsonian Institution anthropologist, declared recently that the Russians are becoming one physical type, marked by sturdiness. (*New York Times*, Aug. 28.) Recently returned from a visit to the Soviet Union, he said of the Russian people: "It is almost as if they were all made in the same mold. I am told that there is already an increase in stature. Thousands of them exercise in the broad streets of Moscow and other cities, and the children are kept out-of-doors in parks and woods." Whatever one may think of Russia's political experiment, it must be admitted that the levelling influence of socialist doctrines is gradually achieving an unusually compact psychic unity for a vast collection of dissimilar stocks. The degree to which common psychological elements have contributed to this unification of physical type must remain an open question, but that they have played some part is undeniable.

## CHANGES IN ONE GENERATION

Such alterations in race characteristics are often accomplished quite rapidly. Studies of Japanese immigrants to Hawaii by Dr. H. L. Shapiro of the American Museum of Natural History leads him to observe that man is a "dynamic organism which under certain circumstances is capable of very substantial changes within a single generation." The immigrants—almost all of whom have come to Hawaii since 1898—diverge distinctly in eighteen out of thirty-five traits from the Japanese of their native villages. An article in the *New York Times* specifies some of the changes:

Japanese in Hawaii have broader shoulders. They weigh more. The face is longer, jaw wider, relatively; the nose is narrower. Hair is less coarse. Women show fewer changes, but, unlike the men, they are taller by a full inch.

Children of these immigrants show additional changes toward resemblance to the Hawaiians. While Dr. Shapiro devotes nearly 400 pages to analysis and discussion of the general problem in his volume, *Migration and Environment*, the important question remains unanswered. In the words of the *Times* writer:



Why—why should human beings change so distinctly in a new setting? He suspects that the immigrants may themselves have been a selective group, though their economic and social background offers no clue to this. He also concludes that environment has further modified these people. But how environmental factors can change man substantially within a single generation—that is a new scientific problem, for the future to solve.

### SECRET DOCTRINE TEACHING

There are doubtless a number of answers to this question—all of them important. One of them is hinted at in the suggestion that the immigrants were a "selective group," agreeably to the theosophist, who would add, however, "selected by Karma." Then, besides the physical factors of environment considered by Dr. Shapiro, there are the psychic factors involved. These would apply particularly to the second generation, as is evident from a correlation of the statement on page 385 of Vol. I of *Isis Unveiled* with that of a footnote to page 223 of Vol. I of *The Secret Doctrine*.

Most of the anthropologists of H. P. B.'s time were confident that no more entirely new races would be formed from the present stocks, which were regarded as well-defined types. For this reason, she said, "our general proposition will not be accepted." But if it is now admitted that a race can undergo "very substantial changes within a single generation," there should no longer be *a priori* objection to the Occult teaching that now, "under our very eyes, the new Race and Races are preparing to be formed, and that it is in America that the transformation will take place, and has already silently commenced." (*S. D.* II, 444.) Modern anthropology has found distinct evidences of some of the ways in which such transformations are accomplished.

### A NEW GOD HOLDS COURT

For three days, beginning on Sept. 3, "Father Divine," the Harlem Negro whom thousands of followers regard as divinity incarnate, held "open house" for his Pennsylvania flock at the old Phillies Ball Park in Philadelphia. (Philadelphia *Evening Public Ledger*, Sept. 5.) Carl Warren, writing for the Philadelphia *Record* (Aug. 7), briefly highlights the achievements of the amazing "messiah":



Once he mowed lawns and clipped hedges for 50 cents a day. Now he rules a kingdom with 10,000 vassals. He owns nothing. Yet he owns the owners of property worth \$1,500,000. He speaks in words unknown to any tongue, but enthralls his disciples. They call him a Deity—and believe it!

Students of this remarkable social phenomenon are at a loss to explain Divine's unbelievable success in establishing an economic empire throughout the Eastern United States on the basis of ideals that should make experimental socialistic communities "blush for shame." The seeds of the movement are in Divine's teaching, offered to his earliest followers along with room and board. Immortality must be attained by harmonious living on earth; desire for personal gain and material possessions must be made subservient to the will to lead a higher life.

#### SELF-SUPPORTING W. P. A.!

Former Alderman Lambert Fairchild of New York City estimated that Father Divine annually saves the city \$2,000,000 on its home relief bill, as well as "an enormous amount in police administration." He provides sanitary meals and comfortable housing in all of his "heavens" for an average cost of less than five dollars per week. His groceries, meat markets, bakeries and laundries undersell their neighbors in Harlem from 25 to 50 per cent. He operates a free employment bureau, providing workers of all types whose services are highly satisfactory. "Extension heavens," supplementing his fifty-room Harlem mansion, exist in many places along the Atlantic seaboard and are daily augmenting their list of tenants.

#### A PRACTICAL DOCTRINE OF REDEMPTION

To sum up, Father Divine offers a new religion—salvation here and now as well as in the hereafter. He envisions a future "world kingdom" without distinction of caste or color, based upon the ideals of love and brotherhood. Somehow he communicates these ideals to his followers, even to the point of arousing in them a desire for self-discipline, for the voluntary chastity and abstinence from smoking and alcoholic beverages prevailing throughout his kingdom are maintained simply at his suggestion. He speaks of the immortality which each may attain by following in his footsteps. He promises no external reward, but rather moral improvement for his "Angels"; material betterment of the underprivileged, however, often follows automatically from affiliation with a cause that is an



economic as well as a "religious" success. The well-to-do of his followers contribute their money and property to the cause. He has begun reform and improvement where it must be begun—in the outlook and attitude of mind of human beings. The harmony in his kingdom is due to a unity of doctrine—a lesson which might well be learned by socialistic reformers who believe that broad material reforms must precede the development of self-sacrifice and kindness in individuals.

### "UNADULTERATED"

When a New York reporter asked Father Divine if he was in fact "God," as claimed by his followers, he replied emphatically, "Unadulterated!" adding that he knew of no presently worthy competitors "in the Universal Mind Substance where I am." (*New York Times*, July 2.) Remarks such as these have heaped amused contempt upon his movement from many who might well begin ordering their own small households in the manner suggested by Father Divine's harmonious control of a growing empire. Perhaps the little Negro should not be blamed for considering his ideals and life closer to divinity than those of eminent politicians and financiers, nor for regarding the majority of religious "leaders" as unfit to be his "spiritual" competitors. Father Divine may not be "The Dean of the Universe," a title bestowed upon him by loving disciples, but the evident sincerity of his purpose is awakening a slumbering sense of responsibility in millions of underprivileged Negroes.

The intense emotionalism of Divine's movement, however, should be regarded as a warning "sign of the times." Social psychologists have frequently remarked the growing tendency to accept fantastic religious beliefs—a symptom not limited to the Negro population. Emotion is enthroned, while reason, having dallied so long with useless intellectualizing, now defaults to its sensational opponent. The ideals inspired by emotional appeals can always be destroyed by the same method, as the war hysteria of both past and present demonstrates. Effective ideals must be based on the philosophy of self-knowledge, and not upon the temporary enthusiasms of psychic elation.