

CONTINUITY OF LIFE

A COSMIC TRUTH.

BASED UPON

THE PRINCIPLES OF NATURAL PHILOSOPHY
AND THE CO-RELATIONS OF NATURE'S
ELEMENTS, ENERGIES AND FORCES.

BY

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INTRODUCTION.

How many are the centuries of time that have rolled away since man first questioned the possibility of "life beyond the grave!" How earnestly he has sought in every avenue of his existence, and his experiences for some token, —some indication that beyond the horizon of the grave there is an after life. Seeing around him on every hand indications of the continuity of cosmic processes, expressed in formations of rock, whose surface seems to his unskilled vision, to resist nature's elements and forces; noting the seeming perpetuity of mountain range, of seas and oceans, or gazing into the starry vault of azure blue, and sensing within his sensitive soul that these have swung in space for aeons of time, he questions the continuity of *human* life as an expression of existence, in comparison to these factors of earth and sky. "Why should sentient existence cease," he queries, "when non-sentient forms defy the ravages of centuries?" "How can it happen," he asks, "that a soul conscious of its consciousness loses its identity at the grave, while yonder range of mountains whose snow-capped summit seems wrapped in cloud, bears evidence of the formative ages of time?" "Why is it," he pleads, "that the sentient progressive soul of man seems lost to sight, buried in oblivion at the termination of earth existence, while yonder tree, monarch of the forest, whose leaves and branches have been kissed by the sunshine and rain of centuries, still swings its great arms defiant to time's ravages?" "Is consciousness, the knowing attribute of the soul of man, less permanent than the principles of cosmic process that nourished it into being, and supported its earth existence?" To these pleading interrogations of his soul, the

gods are silent. In vain has he questioned the sacred cosmogonies of ancient Egypt, and India, hoping to find in the wisdom of its sages and thinkers some fact in the keeping of the Orient, disclosing the identity of human existence in some soul form, beyond the obscuring shadows of the tomb. In vain has he perused the mythological theogonies of prehistoric ages, as expressed in star worship, in legends of poesy, and traditions of prose:—he finds only in these ancient records, the source from which have sprung all religious fantasy and worship in the history of the world. Here, and here alone is the origin of all Bibles and Sacred Cosmogonies expressed in sentiments of poesy and re-clothed in metaphor and allegory by the genius of a Homeric age, and given to the world as the voice of God to man. What mockery to offer these fables of a pagan age in answer to the earnest inquiry of honest manhood as to future life! How low and superstitious the intellect, that instructs that mystery, miracle and credulity are the premises of such knowledge and the basis of a true inspiration, the source of a true revelation! What wonder that nations rise and fall, or that civilizations come and fade away, whose moral ethics and ideas of the continuity of life are built upon the mysteries of Godliness, and the worship of a being who can be supplicated, coaxed and cajoled, by the selfish mouthing prayers of a dominant priesthood. What wonder that man loses respect for the clerical oligarchs of an age that offer these sensual mythologies as an answer to his pleadings for precise data, and knowledge of life beyond earth existence. No telescope of a Galileo or Newton can sweep the horizon of these dreams of mystery, no crucible of the chemist, no chemical balance of a Lavoisier, no equation of chemical energies by a Michael Faraday, no X-ray by a Roentgen, no wireless telegraphy by a Marconi, no meter of etheric energies by a Sir William Thompson, no evidence of the evolution of man from

nature's bosom by a Darwin or Huxley, can lend one demonstration of truth to these claims of theology, in the realm which the priest affirms to be the source of true inspiration.

In all of the gleanings of the Orient, from the mythological traditions of Egypt's former greatness, from the relics of the Vedic Aryan race of India, from the speculative theogony of Persia antedating the time of Zoroaster, from the Puranas of Brahmic theosophy, in all the Bibles known to ancient and modern ecclesiasticism, *there is no proof of individual existence beyond the physical dissolution of the mortal organism.* In the estatic vision of oracles and sybils, in the inspiration of seer, priest and prophet, can be found additional testimony only to the hope of the world, that life beyond the horizon of earth's experiences may be realized after the change called death.

But testimony, however voluminous, IS NOT PROOF. The testimony of man, however framed in sentiment, expressed in poetical imagery, in historical legends, or in Bibles and sacred writings, adds only human opinion to a dominant thought of a definite age, and however thoroughly accepted it may be by the concensus of popular opinion, *it utterly fails to establish proof of a truth.* In vain has the priest in all ages sought to establish a truth upon the accepted, but undemonstrated, opinions of men. He has borrowed from mythology the poetical imagery of its gods and clothed them with anthropomorphic attributes and omnipotence, and set them before the world as objects for psychic worship and invocation, inviting trust in their power to save, and faith in their omniscience. He has borrowed from the same source its fabled hells and heavens, its demons of revenge and its immaculate Saviours—progeny of adulterous gods with sensuous women, thus seeking and making an adulterous act the premise of easy atonement, and the fear of hell the scourge to impress all mankind

that he, the priest, had the power and the exclusive right to pilot the soul of man into a life of eternal bliss. Failing in this through some perversity of human nature, he, as an assumed vicegerent of an omnipotent God, sends the soul of man psychically to an "Eternal perdition," where, in strange opposition to the precept of "Universal love for all mankind," all the gods ever known to the history of time, aid the priest, the demons, and the devils, in heaping pangs of suffering upon the soul of man, in the agonies of hell.

What low and vicious fanged ideal is this, to which the muse and the poet have lent their willing support for untold centuries of time, and the civilizations of the world assent to, as the bases of virtue and morality here, and the hope of a life to come!

Why is it, we ask, that the data of the biologist, whose sphere of investigation includes some knowledge of the various forms and types of plasmatic and bio-plasmatic life, including man, are set aside as having no value as compared to this theology of mythology, since his gleanings cover a vast field of the greatest importance in the final settlement of this question? Why is it that the physicist, whose labor is to trace the formula and unity of cosmic processes, has not been allowed a hearing in the presentation of his facts bearing upon the eternal co-relations of elements, energies and matter in process of combination and development, whose field of research includes an analysis of Nature's formula of "invisible modes of motion" which are operative in all forms and types of growth known to cosmic process, including the co-relation of conscious mental modes of motion to matter, no less than the relation of consciousness to consciousness on every plane of existence? Why is it, we ask, that these inductions of vital importance in all investigations of the relations of conscious life here to possible and probable conscious life

beyond the grave, are set aside by this priestly and pretentious hierarchy, who affirm and insist that man's most valuable truths come from his faith in miracles, and his wisdom in the acceptance of mystery as the basis of knowledge! This arrogant infidelity is an insult to every college and school of inductive reasoning, and a shameful commentary on a civilized age!

But science, that great searchlight of truth and error, whose genius dares to penetrate every realm of Nature, and every avenue of human thought, and fearlessly to scan an error, and to disclose, when found, its incongruities and inconsistencies, is wresting from theology and its priests the vagaries upon which they build their purgatories and hells, the saints' asylums and heavens, the revengeful and adulterous gods, and the immaculate conceptions; and demonstrates that these low and sensuous concepts had their origin in the mythological astrology of a pre-historic age, and that they are unsupported by any data bearing upon the truth of life in a future state of existence, save that of credulity and the picturing power of the human intellect.

Science, aided by the gleanings of natural philosophy, does not rest here. Science is a builder. It never tears down but to build a more perfect and practical structure. It gladly accepts the gleanings of the naturalist, the geologist, the astronomer, the biologist and the physicist, and carefully rearranges and compiles their vast accumulations of cosmic data into treatise, Nature's own testimonies of THE ETERNAL CO-RELATIONS OF HER ELEMENTS AND ENERGIES, as found in rock structure and strata formation, as witnessed in the dynamical relation of stellar space, as noted in the co-related ganglia of bio-plasmatic life, and seen in the structural tissues of plants, and shrubs and trees. Infinite testimonies of the eternal partnership of elements in the evolution of cosmic forms, and the co-relation of genera, of types and species of life. Co-relation

also in the different spheres of existences, uniting types and species to their own kind, and sentient consciousness to sentient consciousness throughout the domain of time. From pillar to dome, throughout the vast evolutions of infinitude, co-relation expressed in the natural affinity of elements is the subtle link that binds into cosmic unity all processes of time and space from the evolution of simple to complex forms, or the throb of a soul's consciousness, reflected upon other souls, whether in seen or unseen forms. Here the naturalist, the astronomer, the geologist, the biologist and the physicist are clasping hands. Here at last we stand upon a solid foundation of cosmic truths, and here in the following chapters of this work we hope to be able to demonstrate that the data of the "Co-relation of Nature's Forces" comprise and promote not only the processes and formula of the evolution of the visible universe, but its lines of cosmic association extend into realms invisible, where disembodied consciousness is in close relation with the mortal plane, and that this fact is susceptible of scientific verification, hence, is A COSMIC TRUTH.

THE NATURE OF HYPOTHESIS.

As indicated in our introductory chapter, we shall establish the truth of life beyond the dissolution of the physical body in accordance with the accepted hypothesis of the "eternal co-relations of nature's elements, energies and forces;" and by a careful analysis of the principles of cosmic evolution review popular errors regarding the relation of phenomena to causation, as expressed in visible nature. Accepting largely the demonstrated hypotheses and views of the scientific school of thought, it may be well if at the outset we amplify the term "hypothesis," in order that the reader may have a thorough understanding of the difference between a verified hypothesis, or one capable of verification, and the assumptive hypothesis that eludes proof.

Lexicographers agree that the term implies "a proposition or principle which is supposed, or taken for granted, in order to draw a conclusion or inference for proof of the point in question." . . . "A system or theory imagined or assumed to account for what is not understood." To this general definition we may add that its use implies the employment of letters, characters, symbols and figures, for the sake of transferring precise and definite thought from one person to another. This formula being self-evident, it follows that the letters, figures and symbols of any written language are "assumed symbols" employed as hypotheses of written speech for the mental communication of the human race. Hence it will be seen that language itself, oral or written, comprises a vast system of hypothetical inferences.

In this connection also we must include mathematics,

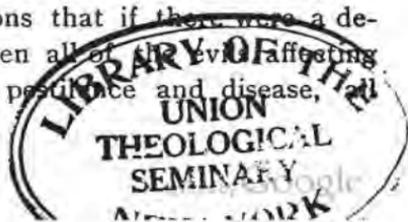
which, as a system of numerical notation, reckoning and computation, employs figures Roman, and Arabic, letters of the alphabet, symbols and signs, all and each being "assumed" hypothetical characters employed to carry on a mental process in mathematical calculations, relating to civil engineering, commercial exchanges and social interests and equities. It must be borne in mind that the use of these symbols of written and oral speech, together with those of mathematics, ARE ACCEPTED HYPOTHESES, which in connection with the accepted meaning of the words of various languages, are fundamental in all processes of human knowledge, based upon the correct use of words and languages in methods of reason and progressive research.

Upon this basis of *accepted hypotheses and symbols of written language*, science arranges and formulates her postulates, and all of those that can stand the test of inductive demonstration she accepts; while all those that elude demonstration, she classifies as assumptive and untenable. This review of the basis upon which human language is hypothecated, will, we trust, enable our readers to see the common-sense ground upon which correct systems of reasoning and scientific demonstrations are established, and the necessity for a general agreement upon the meaning of words in all matters of individual or universal interest, when a variety of opinions and beliefs obtain, but where *truth* is earnestly desired by all. Thus it will be seen that if we desire to establish a truth regarding any phenomena of nature, or any tenable conclusion as to what causes the phenomena of cosmos, we must make our research within the pale of natural philosophy and cosmic process, *where all true phenomena are expressed and have their origin*. To leave this domain of the known and knowable, and make research in the realms of the unknown and unknowable,—the realm of the supernatural and superstitious, is to ignore and subvert the right use of

accepted and verified hypotheses of language, by introducing it into the realm of thought impossible of demonstration and beyond the limits of natural and logical verification. This realm of impossible verification, unfortunately for civilizations and all mankind, has been the home of theology in all ages of the world. This realm has given birth to all of the gods known to the page of time, and in it theologies have been born, and the final destiny of man claimed to have been established. This is the sphere where sensuous and perverted mentality employing the language and symbols of speech of a natural world, builds its propagandisms of superstition in an unnatural mental realm, where its low-browed morality, and fetish of "Creation," the fall of man," and "vicarious atonement," *are still taught* as the true foundation of a civilized government, and the future welfare of mankind.

SOME FACTS IN THE LOGIC OF NATURE.

In distinct opposition to the formulas and platitudes of theology, science builds her intellectual structures upon known and demonstrative data. As beacon lights to guide her in search of truth, she establishes logical and self-evident postulates upon which to rear her facts. She affirms that NATURE IS INFINITUDE AND COSMIC PROCESSES ARE INFINITE. She reasons that nature could not comprise infinitude, without the elements, energies, forces and modes of motion qualifying the universe are included; and that cosmic processes could not be infinite, without these processes and their co-relations were involved in infinitude. Hence, there could be no beginning to infinitude—to that which has eternally existed, no "first cause," no creator or designer of cosmic formula. She reasons that if there were a designer in cosmic processes, then all of the suffering affecting society or the individual, all pestilence and disease,



deformities and disasters on sea or land, are a part of the design, since all these phenomena occur in nature, and are a part of cosmic process. She also suggests that if there were such designer, then demons, devils and endless agony for the "great unwashed," are a part of such design, if the claims of theology are true, since, "nothing exists apart from design."

In contradistinction to these pernicious platitudes, science affirms that the various elements of nature *possess within themselves*, all of the factors and functions of causation; that each element contains an invisible molecular energy, which is the life principle of such element, that it is automatic, and it is capable of combining with other elements upon a plane of polar affinity, in the promotion of higher form and functions; and that these attributes of elemental forces are generic in the evolution of matter in its various forms, and of life in all of its amplifications. These data being amplified on every hand, it follows that there can be no such thing as "Law" applied to Nature's reactions and combining processes. In witnessing the phenomenon of a common balance, we note no such possibility as "chance," as expressed in this equation, nor is it a manifestation of "Law in Nature." There being as many molecules of matter containing specific gravity on one side of the fulcrum as on the other, an equipoise or equation is produced. This equilibrium is not the result of chance, *but of eternal principle*. The term "Law" is from the Latin "*Lex,—legis*—and implies a lawmaker or a commander. No such concept can be applied to a balance. The expression of the balance is automatic, self-acting, therefore is a principle. The pitch of a sound is automatic, being the result of a definite number of vibrations. This is not chance, but a principle of sound as a mode of motion. Chemical combinations are automatic, depending upon principles of polar affinity in all combining processes.

Thus, it takes eighty-eight and nine-tenths parts of oxygen by weight, and eleven and one-tenth part of hydrogen by weight to evolve water. When these gases are quickened into molecular activity by the action of an electrical current, the action of the oxygen gas upon the hydrogen is such as to change the polarity of the hydrogen, and the reaction of the hydrogen gas upon the oxygen is such as to change the polarity of the oxygen. This mutual and reciprocal change of polarities evokes a new order of relationship in the combining molecules of these two gases, inducing the phenomenon of water. This polar action and reaction of these two gases upon each other comprise the principles of "THE CHEMICAL BALANCE," the "Balance" consisting of mutual polar action and reaction. Now, the expression of this phenomenon of water evolution is *not chance*, since it required the addition of one-tenth of a part of the hydrogen gas to the other eleven parts before this phenomenon could be evolved. Neither is this phenomenon the result of "law" since the combining proportions depend upon a mathematical principle which is automatic, self-existent, and eternal. Not a drop of water, *per se*, has been evolved, or ever will be evolved, that does not depend upon the mathematics of the combining elements of which water is composed. All chemical equations depend upon the automatic action and reaction of polarized elements in process of combining. This eternal principle of polar proportions noted by every intelligent physicist and chemist of the civilized world, has given rise to the term "CHEMICAL EQUATIONS," and all chemical equations are based upon mathematics, and mathematics as a principle of numerical notation is self-existent. Twice two are four; this equation can neither be made or unmade. Hence, there is no such thing as chance in the order and formula of Nature. All phenomena of whatsoever character is induced and evoked by natural causes; for all cosmic processes are controlled by the co-related principles of infinitude.

THE NATURE AND ORGANIZATION OF MATTER.

The world's great thinkers and philosophers have in all ages held divergent opinions as to the nature, character and structure of matter, each varying according to the school or bias of the time in which he was instructed. The student who closely scans the page of history from the time of Anaxagorus of the Ionian school of philosophy, until the time of Descartes of the 16th century, will have occasion to note the various opinions of earnest thinkers, as found in the systems of Democritus, Socrates, Plato, Aristotle and Spinoza, each seeming to be biased by some preconceived opinion of causation, and arriving at different conclusions. This great variety and diversity of opinion is also a marked feature since the time of Descartes; as seen in the speculations of Hume, Locke, Kant, Fichte, Humboldt and Huxley, and a great number of equally scholarly thinkers. It is not our intention to present here a summary of the opinions reached by these thinkers of the past regarding their individual concepts of the primordial energies and elements of Nature, since an investigation of their methods of reasoning and sequences of thought can be found in most of our public libraries, which are within the reach of all. But we believe that the careful reader will find basic thought in the concepts of Anaxagorus and Democritus, which in connection with the discoveries and data of modern investigation, will go far toward the establishment of truths capable of scientific demonstration; some phases of which have been noted and pointed out by many of the savants referred to. Like the modern watch, the perfection of which does not belong to any single individual, but is the result of consecutive improvements since the time of the first watch, so, the discovery of the truths re-

garding matter, its functions and co-relations, are an evolution from the time of the eminent philosophers of Ancient Greece until the present. Let us look briefly, but carefully, at the central theories of these two great minds. Anaxagorus affirmed that all bodies are simply aggregations of atoms, and that a bar of gold or iron or copper was composed of inconceivably minute particles of the same material; but he did not allow that objects had taken their shape through accident or blind fate, but through the agency of a shaping spirit or "Nous," which he described as "*infinite, self-potent, and unmixed with anything else.*"

This system of thought makes matter or atoms *qualitative*, and it was opposed by Democritus, who, although holding to the atomic theory, affirmed "that all atoms were eternally possessed of a *primary motion*, and that the varying or *quantitative* relation of these promotes the basis or groundwork of nature."

It may be well for us to note here that centuries before the time of these philosophers, the ancient alchemist of Greece divided matter into four forms and conditions, viz.—solids, fluids, gases, and spiritual substances, the spiritual substances having reference to the active life principle of atoms or things. The various elements of nature of which science now claims seventy-two in number, were not known in their present order to the ancient alchemist, or to Anaxagorus and Democritus. With this fact in mind, we shall be able to see that the "Nous" or "shaping spirit," of Anaxagorus, "the primary motion" "possessed by all atoms" in the system of thought of Democritus, bears a close resemblance to the concept of "the life principles of atoms," of the more ancient alchemist, which he called spirit. It should be known that "the atomic theory," did not originate with Democritus or Anaxagorus, but is found as a concept of matter in the early traditions of Egypt, antedating the time of Anaxagorus by thousands of years.

Let us amplify the diverging thought of these ancient thinkers and experimentalists, and see in what particular there is agreement.

Anaxagorus claimed that his "Nous" was an universal spirit of homogenous character, *possessing all knowledge and power*, and was the shaping energy or formative force, promoting the various forms and types of life, molding all atoms of matter into form and energizing every expression of existence. This view is largely that of the modern theologian.

The more ancient alchemist claimed that "every atom of matter of whatsoever kind *possessed an active life principle of its own*," which he denominated "spirit," while Democritus claimed that "all atoms possess a primary motion;" hence every different type of an atom had a motion of its own. It is quite evident from these facts that the concepts of the ancient alchemist and that of Democritus were essentially the same, while the thought of Anaxagorus differed in that his "Nous" was an omnipotent universal spirit, which permeated all forms of matter. It will be noticed in this connection that Anaxagorus did not attempt to account for the origin of matter *per se*, but assumed that it eternally had existed, while the alchemist and Democritus affirmed spiritual forces or motion to comprise the base of the organization of matter. At the time these discussions were taking place, the principles of the eternal polarity of elements comprising matter, and the molecular affinity of substances based upon polarity were not known; neither were the principles of the definite proportions of elements entering into combination, known. Hence, when Democritus affirmed that a definite quantity of atoms of various kinds was the basis of organization in Nature, he must have had a deep intuition of what has since been discovered with some modification to be a fact. Let us point out these modifications. It has been conceded by

all thinkers for many ages that we live in a world of phenomena,—that what we see in looking at the visible world is one thing, whereas the energies that promote these phenomena, are something entirely different. Science, whose sphere of effort is to trace the unknown through the phenomena of the known, here steps in and affirms that the continuous change of the external of things as is witnessed in the phenomena of growth and development of all forms and types of organic life, indicates an internal, invisible life energy which as *the actuating formative principle, is the real thing which is being evolved*, while what we see—the external—is only the changing phenomenon of appearance, promoted by this invisible life force. Thus in the oak, we witness the continuous change and development of its external appearance through a century of time; yet it maintains its individuality of species through all of the years of cosmic process. The individuality of form, and type and species is maintained in defiance of the cosmic principle and chemical postulate that, “the natural tendency of all of the elements of Nature is to promote the development and evolution of something entirely unlike each factor.” We witness the verification of this postulate in the evolution of water. Composed of oxygen and hydrogen, the product is water, which is unlike either factor. Should we mix salt to water, we again verify this axiom of chemical combination. With this tendency operative, in every element to change the character, form and individuality of physical structures, there could grow no oaks, there would be no rock formations of different variety, no vegetation, no flowers or fruitage, *were it not for some inborn formative or shaping principle, that holds and perpetuates the form, safe from the encroachments of those changes incident to the reactions of chemical combination.* Hence, science argues that the tree we see, is only the phenomenal result of an invisible shaping soul principle, which *is the real tree life, that*

nature evolves. With these data manifest in all cosmic processes of evolution, science affirms that it is this "invisible, active life principle of the atom," this "primary motion of atoms" as voiced by Democritus, this "shaping spirit" or "Nous" of Anaxagorus, divested of the fetish of "its knowledge of all things," but clothed with the omnipotence of molecular function, which lies behind and promotes cosmic process and develops every form and type of life known to infinitude. Therefore it will be seen that we are *dealing with the invisible life principle of atoms*, and not with atoms *per se*, in the evolution of organic life. This fact has been continuously overlooked by writers upon the atomic theory since the time of its inception, and the oversight has led to continuous error, regarding the basis and formula of organic structure for the reason that we cannot consistently apply the term "atom," to the life principle of an atom. Life principles of all forms of atoms, will be best understood as *magnetic energies*, which are comprehended by the term "volume." Thus the life principle of an atom of salt, is a *definite volume* of energy of magnetic character, representing the life activity of salt as a compound. The life principle of an atom of chlorine, is a different form of life from that of salt, but it is an energy of magnetic character, and is a definite volume, representing the life activities of chlorine *per se*. Each element of nature has a different life principle, from the other elements, and is vested with certain primary motions of polar affinity, which render it capable of entering into combination with other elements in the promotion of form. But it must constantly be borne in mind that it is not the atoms of these elements that combine, *but their active life principles*, of which the atom is a corpuscular structure and ideal. Hence, definite volumes of the molecular life of elements, are the real combining energies, and the variation of this molecular life of the elements of nature in their various combining relations,

evokes form, and function and sensation and consciousness; requiring the ladder of time and the co-related associations of the infinite laboratory of cosmos to carry on this evolution. When we understand that the principles of the molecular life energy of the elements of nature were not known in the time of the great savans of Greece alluded to, that only a few of the elements were known, that the polarity of all forms of matter was not comprehended, and that the combining proportions of elements were also unknown, it will be seen that they arrived at conclusions, not so divergent to those entertained in more modern time. The most ancient alchemist made "spirit" the underlying factor of all simple and complex forms of matter, Anaxagorus made "Nous" or spirit the shaping and functioning force, and Democritus admitted "a primary motion of its own," to each atom of matter. The discovery of the divergent principles of polarity expressed in the combining proportions of elements functioning all forms of matter, evoking sensation and consciousness, dispels the concept of Anaxagorus that "Nous" or spirit "was an all-knowing entity," since this concept would make all forms of life "all knowing," as it was in his system of thought the "shaping spirit;" hence, one form of life would possess all or equal knowledge or intelligence with other forms. But the discovery of the different attributes of elemental energies, and the varying principle of proportion as is witnessed in the different combinations of matter, will account for divergent function in differentiated organisms, and a knowledge of these data will save the advocates of "an all-wise intelligence," from many a twinge of distrust and disrespect, when they have occasion to note how sparingly it is manifest in human nature.

As all forms of matter can be reduced to invisibility, the modern physicist affirms the invisible as the basis of all organization, and in this thought he comes in touch with the ancient alchemist, with Anaxagorus so far as it relates

to "Nous" as a shaping energy, with Democritus in his theory of "a primary motion of its own" for each atom of matter, and with other eminent thinkers and philosophers. But what gives strength to the modern hypothesis of matter, is, that it is susceptible of scientific proof.

With this demonstrable scientific premise then, we shall be able to postulate

INVISIBLE SPIRITUAL ELEMENTS AND ENERGIES. THE
BASIS OF COSMIC EVOLUTION.

It should be understood in this connection that we do not use the terms "spiritual elements," and "spiritual forces" in any sense as implying deific attributes, or relating to a God; but simply as a *term expressive of the invisible fundamental substances from which matter is evolved.* Hence, matter in any form is an evolution of spiritual elements by virtue of combining processes, or, in other words, the result of *the combination* of spiritual elements. Thus water is matter in fluid form, while the life principle—the active principle of oxygen, and hydrogen gases which in certain definite combination evoke water, are in their primary essences spiritual substances. This view makes matter appear to be infinitely spiritual, since all cosmic process is the result of invisible spiritual elements functioning into form and expression, the varied characteristics of matter in all of its organic types, and life in an infinite octave of expression. But a large element of the popular mind of theological bias interpose the criticism, that this view of Nature and cosmic process is strongly materialistic, since it ascribes to matter the potency of promoting form and life, and ignores the overruling power of a God. This short-sighted criticism is strangely inconsistent, and reveals the materialistic tendencies and theological insincerity of those who employ it. When science discovered the func-

tioning power of certain soils suited to the development of special cereals in agricultural processes, when astronomers discovered that certain planetary conjunctions and correlations promote the functioning of the spring solstice or vernal equinox—the summer's showers and heat, the autumnal frost and sear, and the winter's snows and rains and storms, when the meteorologist discovered the functioning energy of cold and warm waves of heat upon the atmospheres of space, intensified into activity by the close conjunction of associated planets, and was enabled to forecast the rains, storms and cyclones incident to the season; when the pathologist discovered through the phenomenon of disease the functioning energy of certain remedial, chemical agencies to modify and assuage a disease; when the physiologist discovered the presence of carbonic acid in the glands of assimilation, and that this presence of carbonic acid was due to a condition of the blood in circulation, thereby changing the function of the gland and promoting its atrophy, as is witnessed in advanced human life, and in brief wherever any phenomenon of Nature's reactions have occurred, these same critics *have been loud in affirming* that "God operates through established laws *in which there is no shadow of turning.*" Now, when we affirm that this functioning tendency and power of Nature's elements control all cosmic process, and that Nature's elemental forces are infinitely spiritual, this cry of "materialism" is voiced from every theologically inclined mind. Our reply to all of this element is, that if your criticism be justly applied, then you worship at the shrine of a most short-sighted and inconsistent God, who, if he made the universe and functioned it with "unchanging and immutable law," should, in the material expressions and manifestations of his law, inadvertently have become the *author of materialism.* Most wonderful and inconsistent God, to function all cosmic process with "invariable law," and allow

man's soul and mental nature to be wrecked on the shores of immortality for the lack of the wisdom of his antecedents. But more than all else, *he was a most short-sighted God, not to have foreseen that if he delegated to matter the functioning power of his "immutable law," he, personally, individually and collectively, WOULD CEASE TO BE AN "OVER-RULING POWER,"—HE COULD NO LONGER POSE AS GOD, after he transmitted this power by the functioning of matter, as is witnessed in cosmic process.* What a grotesque, pagan platitude is this of a God, incarnating himself by immutable law, and becoming the author of materialism! What fetish of the Orient and its Gods, upon which the modern theologian seeks to clothe in garments of consciousness the correlated forces of infinitude, as an object of prayer and worshipful adoration! But history will yet write on the page of coming time, that all of these gods of an inconsistent and short-sighted intellect, together with the superstitious and mystery-worshiping idealists of the age that gave them birth, have receded from view before the penetrating rays of the search-light of scientific truth.

THE PHILOSOPHY OF MOLECULAR CO-RELATIONS, BASED UPON THE POLARITY OF MATTER AND ITS ELEMENTS

In the preceding chapter we postulated a spiritual universe, in which the elements now known or named as well as all those that may be discovered have a base of invisibility, and that the life principle—the active energizing force is a spiritual entity qualifying each element with a special functioning power. We also stated that a principle of polar affinity, divergent in each, belonged to, and qualified each element with certain attractive attributes; ren-

dering it capable of entering into combination with other elements and with other matter, thus promoting the vast phenomena of the visible world. This view of matter, spiritualizes nature and cosmic process, since spiritual elements in combination promote matter and form, and all of the changing phenomena of infinitude. Not a blade of grass ever developed, not a leaf or flower, not a single type of existence, but it was the result of the special functions and energies of these spiritual elements entering into, and promoting the various physical changes during its individual development. NO MORTAL KNOWS WHAT THESE ELEMENTS ARE. It is true that they have been named; some of them for supposed attributes, like oxygen, hydrogen, nitrogen, etc., but the most of them have been named, simply to designate their association with the combination of matter in which they were first discovered, or to specify their individuality. The chemist and physicist have discovered something of their characteristics and functional tendency, by their action and reaction in combining processes. He has noted their tendency to combine in the promotion of solids of rock and stone, he finds them in metals, in wood fiber of all kinds and in fluids and gases. He finds also that in their respective sphere of combining, they seem to be clothed with omnipotence. They are a part of the air we breathe, of the fluids we drink, and comprise the structure of the foods that sustain the physical process of the soul's evolution—the active life principle of man. Yet, we are as ignorant to-day as to what they really are, as when primitive man first questioned his relation to his environment. 'Tis true that we know to-day that the oxygen we breathe sustains the continuous pulsations of the heart, aids in the digestion of foods, accelerates the circulation of the blood, and performs a similar service for all animal life, yet, What is it? It enters also into the organization of all vegetable and plasmatic life—still, when its polarities are dis-

turbed by heat, or other electro-magnetic changes in the atmosphere we breathe, human life trembles in the balance of opposing forces. What is the relation that this element holds to the soul of man during the years of his earth life? If the soul is the animating life principle of man and is a spiritual entity, how can oxygen sustain the vital process of this spiritual entity, how co-related to it, unless the life principle of this element is also spiritual in its essence? How can foods sustain the various physical expressions and development of the soul, unless the food is composed of spiritual substances? How could the soul of man vivify every part and fiber of the human organism, unless that organism had been structured and moulded by spiritual forces, and sustained by spiritual elements? How can there be co-relation between things of unlike nature? How can there be affinity? These are very important questions to be settled; for, upon their solution depends the integrity of the very premise of physical science and natural philosophy, no less than the knowledge of the final destiny of man. If there be no co-relation between the soul and man's physical organism, how does the soul exist in it as a life energy, and how does consciousness as an attribute of the soul have sensation through the ganglionic system and the sensory process? If there is no unity of association between the soul and the physical body, how does volition, —the servient attribute of consciousness—operate upon certain motor centers of the brain, and stimulate into action the movement of the arms and limbs, the eyes and the vocal organs of speech? Now, if this co-relation does not exist between consciousness and the physical organism, *the postulates of physiological science are not true*; the theory of conscious sensation, and of the so-called five senses of man have no foundation in fact, and theories of molecular affinity have no foundation in known data.

But the great truth that NATURE IS INFINITELY SPIRIT-

UAL IN ALL OF HER ELEMENTS AND FORCES whether originally functioned by a God, or, *self-existent* and dominated by eternal principle, dissipates past errors of human opinion, and reduces to easy analysis and comprehension much of the data comprised in her vast laboratory of cosmic process. Spiritual elements enter into and comprise the structure of matter. Therefore, matter in all of its forms is infinitely spiritual. Every form and type of vegetable and plasmatic life has a spiritual origin. All life, whether plasmatic or bio-plasmatic, is sustained by spiritual elements found in atmospheres, fluids and foods. All co-relations in nature are spiritual, and invisible and known to science as "invisible modes of motion"; hence, all relations existing between elements and forms of matter and forms of life, are psychic and molecular. The affinities locking into form a rock, a stone, a metal, a fiber of wood, or a blade of grass, are psychic and molecular. All reactions found in chemical combinations are psychic and molecular. All changes taking place in the animal organism are psychic and molecular; and all impressions upon consciousness through the centers and avenues of sensation, and all impressions of consciousness upon its own motary system, or upon the sensory system of other organisms, are of the same character. The universe itself, is a vast combination of psychic forces expressing themselves through the elements of nature, and manifesting their functioning power, their tendency, and their omnipotence in the diverse phenomena of infinitude. The psychic character of nature's elemental forces and energies with their inherent molecular attributes, are just beginning to be understood. Let us amplify this truth.

WHAT THE TERM PSYCHIC MEANS, APPLIED TO NATURE'S REACTIONS.

The term "psychic" is from the Greek, and means as a noun, "a breath"—"a soul." As an active verb it means "to breathe upon," or "the act of breathing upon." The term "soul," as applied to man, has reference to "the animating life principle," "the immortal substance," "the intellectual understanding of man." As applied to matter it means "the life energy," "the spirit," or "the essence" of the form or type of matter or substance it vivifies and actuates. Science calls these invisible life principles of matter and substances "modes of motion," which as a term refers to the especial invisible energy of each element or form of matter and its method of action. Thus, the life principle of nitrogen is its soul, and this soul is psychic in its action upon the elements that it combines with. The life principle of oxygen is its soul, and it is an invisible psychic energy. The active energy of carbon, is an invisible psychic mode of motion,—a soul of spiritual character. The life principle of any form of matter is the invisible energy that is quickened into expression by the formative processes evoking the form *per se*, and is an invisible, spiritual force and entity, psychic in its sphere of action or of being acted upon. Each element of nature possesses an active soul principle, spiritual in its attributes, and psychic in its method of action. The psychic character of nature's principles can be demonstrated by a simple experiment with an electropoise and magnet. (See cut.) Our electropoise for this experiment consists of an Orstedts apparatus with the steel bar or needle poised on the top bar of the mechanism. If we take our horseshoe magnet and hold the positive pole of the magnet near the positive end of the steel bar, the reactions set up by this combination of positive with positive, drives the bar away from the magnet.

This action is psychic—an invisible energy seems to *breathe upon the steel bar*, from the magnet,—driving it away in accord with principles of magnetic repulsion. If we hold the positive pole of the magnet near the negative pole of the steel bar or needle, *a mutual breathing of selective assimilation obtains*, and the bar is drawn towards the magnet in accord with principles of magnetic attraction. The psychic character of nature's chemical actions and reactions is also noted, as we shall point out on a succeeding page, in the phenomenon of the barometer and atmospheric pressure, in the thermometer, the galvanometer, the radiometer, the equipoise, and, in brief, in every department of experimental physics and natural philosophy. No action or reaction can take place in nature or cosmic process, that is not induced by psychic co-relations helping to develop the vast phenomena of time.

We stated on a former page that all *psychic* action was *molecular* in its characteristics and forms of expression. In order to make our readers familiar with the application of this term, it will be necessary to demonstrate its meaning as applied to modern systems of natural philosophy.

WHAT THE TERM "MOLECULE" AND "MOLECULAR" MEAN AS APPLIED TO NATURAL PHYSICS.

Formerly the term was understood as meaning "One of the invisible particles *supposed* (italics ours) to constitute matter of any kind."—*Webster*. The experiments of GALVANI in electro-magnetism, discovered an invisible relation existing between particles and atoms of all kinds of matter, and this relation was called by common consent of the world's physicists "molecular." As the atomic theory at that time was the accepted premise of matter, a molecular codicil or theory was supplemented to this atomic theory, based upon this new discovery. In this new associ-

ation of ideas a molecule of matter was hypothecated to comprise two or more atoms in association or conjunction; and the invisible relation existing between these atoms was called molecular action. A little later on Dr. Kirkland, of England, pointed out the fact that the real energy manifest between two atoms might be the product of each atom as seemed expressed in their inter-relations; and if this were true, then the term molecule *would apply to the invisible energy of a single atom of matter.** He did not, it seems, pause to reflect that this invisible energy of a single atom, which he called "a molecule," coincided with Democritus' theory of "a primary motion" inherent in all atoms of matter—and that in reality there was no difference in these opinions save in name.

But "old errors die hard," and the errors of the atomic theory are no exception to the rule. Indeed, we shall be able to prove later on, that the atomic theory became a necessity to the system of Christian theology. Materialistic atoms of "crude, inert and dead matter," for an omnipotent God "to mould into form," are a necessity; for the beginning of miracles,—a premise for "design in nature," and for a designer with omnipotent functioning power.

But when we accord to matter and its factors an inherent, self-existent, primary motion, and the molecular co-relation of these various energies of elemental life, the functioning power of these spiritual forces to evoke form and shaping

*In the light of all of these discoveries of the invisible molecular attributes of matter, as being the real actuating energy of atoms, it seems incredible that the atomic theory should for so many thousands of years have remained a fundamental postulate in chemical physics. As the invisible spiritual life energy of a single atom is the real operative force with which the chemist-physicist has to deal in all of his experiments, the term "*chunks of matter*" or "*bushels of matter*," would be as consistent an expression as atoms of matter. The atomic theory will die with ecclesiasticism. The metamorphosis of crude, dead and inert matter into forms of life has been a miracle ascribed to all of the gods known in the calendar of time.

principles, which heretofore have been ascribed to each and all of the gods known to time, will be found to be *an eternal, self-existent attribute of elements and matter in cosmic process*. Great truths develop on the canvas of thought, to take the place of the fading errors of the present, and so "THE MOLECULAR HYPOTHESIS OF NATURE," based upon the spirituality of nature's elements, and their electro-polar co-relations in cosmic evolution, will eventually supersede the crumbling and untenable theories of atoms and a materialistic designer. These fallacies are the birthright and fruitage of pagan superstitions.

As we are to outline and demonstrate the hypothesis of molecular co-relations of nature's elemental energies, based upon their inherent polarities, it will be necessary to make a clear and concise statement of the data upon which our postulate is to rest.

POSTULATE.

The active life principle of an element being its soul, it follows that it is a spiritual energy and entity, functioned with positive and negative polarity which capacitates it to act or to be acted upon when in combination with other elements or forms of matter, hence its affinities are expressed in psychic attraction. This soul principle of an element is invisible to the eye, and manifests its energy in electro-magnetic volumes, therefore is molecular in its tendency and form of action.

The term "molecule" in this connection is used as a unit of measurement of a volume of energy of any element; a term expressive also of *potentiality, quality, character and tension*, and is applied either to simple elements or compound forms of matter; also to any energy, form or propulsion that operates through matter. To illustrate what it means as a unit of measurement. A molecule of

any compound form of matter is the smallest particle of such matter that contains the exact and precise proportions of the spiritual elements of which the matter is composed. As the spiritual elements comprising matter are not divisible by any process known to chemical physics, we are obliged to resort to spectrum analysis for a thorough comprehension of the term "molecule" as applied to elemental substances composing matter. It is a well-established fact in spectrum analysis that every element of nature has its special order of color spectra, and that these are as divergent as the vibrations of the different strings of a piano. Hence a molecule of any element *is the smallest volume of an element producing the same order of color spectra, found in a larger volume of the same element.*

With these definitions of a molecule of matter and molecules of elemental substances composing matter before us, let us proceed to point out some peculiar features and attributes qualifying and modifying molecular co-relations.

MOLECULAR CO-RELATIONS.

The term "molecular co-relations" has reference to the perpetual partnership of molecules in the evolution of matter and form. Not only is the associated partnership noted in the combination of elemental substances, but the constant continuation of this partnership is found in every cosmic process, simple or complex. From pedestal to dome, nature is a vast laboratory of associated energies, uniting their forces in the development of all that is visible, and much more that is invisible. A single grain of sand may contain the life principle of many molecules of elemental substances, requiring ages of time to develop; yet each molecule was drawn to its work when the combination commenced, and still maintains its grip of affinity, with the fidelity of constancy. Nothing but the friction of the at-

mosphere with its chemical influences, the action of the sun's rays and chemical heat, or the constant washings and reactions on the shore of time will ever break up the correlated partnership of the crystallized tiny structure. And when in the process of aeons of time its elements may be liberated, they will be attracted to other forms of matter in process of development or rise to blend with the ethers of space and ready to take a hand in atmospheric reactions. Or they may be carried by a beam of sunlight into the plasmatic cells of a flower to be materialized in the seance chamber of night by a change of its chemical spectrum into an expression of floral character. Molecules of elemental substances or molecules of matter are never at rest. Whether found in primordial form, or in associated form, they wield a mighty influence, omnipotent in their sphere of action upon reciprocal nature. Active, energizing, restless, their combined activity evokes cataclysmic reactions in the bosom of the earth, tearing rocks from their fastnesses and piling them in confusion mountains high, or arousing by their psychic combination a tornado to sweep in tempestuous fury through forest and glade, thundering into awe the denizens of earth. Assuming again a constructive force, in the form of oxygen compounds, nitrogen compounds, hydrogen compounds, or ammonial compounds, they function into vigorous action the growth of cereals, plants, flowers, shrubs, and trees of the forest where birds twitter and sing their song of domestic reality, while molecules of sunshine kiss into a flutter the sensitive leaves of twigs and branches in this great panorama of wood and shade. Molecular action and reaction are omnipotent and omnipresent throughout the vast changes of extended space and endless duration. Here building up their forms of matter into grand equations of cosmic art with the beneficence of a Vishnu, or tearing them down with the relentless diplomacy of a Siva, that they may build over

the wreck, other equations of more auspicious character. In order that our readers may understand more fully how this building up and tearing down process is carried on by molecular combination in cosmic process, we will point out some special attributes of molecular association.

ALL SPIRITUAL ELEMENTAL SUBSTANCES AND ALL FORMS
OF MATTER POSSESS THE ATTRIBUTE OF POLARITY.

This truth was not known in the time of the early philosophers, and its discovery has had a modifying influence upon the popular mentality of the age, in showing that *an inner-ruling principle of nature* controlled all formulas of accretion, growth, and development, instead of "an over-ruling mind." Formerly the term "adhesion" was employed in physics to indicate the power that holds together heterogeneous substances, and "cohesion" the force that unites homogeneous bodies. These forces were supposed to be separate and distinct energies, or powers, until Faraday pointed out that *all attractions in nature, and all repulsions have their base in principles of polarity*. Thus, a sponge will attract out of damp atmosphere *moisture*, which attraction is due in part to the peculiar structure of the cells of the sponge, inducing specific changes in the circulation of the air, but more precisely the attraction is due to the structural character of the silex itself, of which the sponge is composed, which contains a combination of silicon with hydrogen, possessing strong polar attractive power for moisture wherever found.

But, *what is polarity?*

Polarity is an attribute of nature and matter, by which each form of element and type of matter inherently possesses poles of attraction and repulsion in keeping and accord with the earth's electro-magnetism. As all nature and the earth

possess this attribute, it will be seen to be a logical deduction that every particle of matter and elemental energy comprising the earth, will manifest the same characteristics.

With this inner ruling principle or attribute of elements and matter, dominating, it will be comprehended in a measure, how each factor is capable of acting and of being acted upon in chemical combination. Without polar attraction there could be no molecular affinities, *and without polar repulsion there could be no special formative processes in nature.* If matter of any form did not possess polarity, *it would in reality be dead*, since it could neither act nor be acted upon. Reciprocal polarity is the co-operative partnership of infinitude, the basis of affinity, and the central truth upon which the infinite co-relation of nature's forces in every realm of motion is established. Let us examine this fact a little more analytically.* Water is composed of oxygen and hydrogen, and its present symbol in chemical physics is H_2O , which has reference to its combining proportions by volumes. Formerly, however, its combining proportions were estimated by what was called "its atomic weights." As the last mentioned formula will better enable us to explain and amplify the principles of polarity involved in the evolution of water, we will employ it. It has been found by continuous experiment, that it takes $88\frac{9}{10}$ parts of oxygen by weight, and $11\frac{1}{10}$ part of hydrogen, to evoke water. We stated on a former page that each element of nature had its own polar characteristics. We see this truth demonstrated in the evolution of water, since we note that it requires just the mathematical proportions

*The author frequently refers in his writings to the analysis of water, as it is one of the least complex compounds and more easily understood by the reader, who may never have had opportunity to witness any phenomenon of evolving visible forms of matter from invisible gases or energies.

enumerated above to induce the phenomenon of water. Hence, we reason that it takes just the polar attributes of $88\frac{9}{10}$ parts of oxygen to overcome or change the polarity of the $11\frac{1}{10}$ part of hydrogen, and in the reaction of the hydrogen, it takes just $11\frac{1}{10}$ part of this gas to overcome or change the polarity of the oxygen. The polar tension of each element being overcome *by this precise weight and proportion of each element*, a new order of polarity springs into expression, bringing with it or evolving the phenomenon of water.

The importance of these data must not be overlooked by the reader or investigator, since all equations of action and re-action induced by the polar attributes of matter, and elements, *comprise the real character of THE CHEMICAL BALANCE; and is the real base of all combining proportions*. It will be seen that the Chemical Balance discovered by the renowned Lavoisier, was no miniature hay-scales to ascertain that the combined weight of elements was exactly equal to the compound formed by the combination, but was a concept of very different character, since it verified the hypothesis that "action and reaction are equal," in chemical physics, by showing that the real balance or equation *was the result of polar resistance* qualifying elements; and that when this polar resistance is materially overcome by combining factors, we see the evolution of a special form of matter. We cannot overestimate the value of this induction, for in the evolution of water we are obliged to note that until we had the polar resistance of $88\frac{9}{10}$ parts of oxygen on one side of the balance, overcome by the direct action of $11\frac{1}{10}$ part of hydrogen on the other, and the converse action of the oxygen upon the hydrogen, we had no phenomenon of water formation. The constant recurrence of these phenomena in the evolution of water, lead us to affirm that, *the function promoting this development exists IN THE COMBINING FACTORS AND*

THEIR DECIMAL PARTS; *and not in any "over-ruling power."* It is in such experiments as this and all others that can be made in chemical combinations, that we sense the spiritual omnipotence existing in nature's elemental factors and energies; for it is here we see that no element of nature possesses intelligence *per se*, since it is not the intelligence of one element that combines with the intelligence of other elements, neither is it the intelligence of an element that makes or forces combination, but an inherent principle of polarity. If intelligence *per se* existed in all forms of matter, as many claim, then the largest combination of matter would possess the largest and most diversified amount of intelligence; hence, a horse would have more intelligence than a man, and an elephant more than a horse, and a mountain more than all put together. Such loose and careless ideals regarding nature and her attributes as "intelligence in matter," are lacking in logic and common sense.

PRINCIPLES OF RECIPROCAL POLARITY EVOKE FORM AND FUNCTION.

The evolution of function by a change of form has been, and is, a phenomenon over which there exists a variety of opinion. This diversity of thought has obtained largely in consequence of the precept of the theologian that "God as an omnipotent, over-ruling power had established the functional character and tendency of every type and form of matter, as expressed in each element, or combination of elements and matter, or as manifest in every phase of sentient and non-sentient existence." This short-sighted declaration would make God the author and abettor of idiocy and insanity, of murderous frenzy and remorseless crime and agony. It would function the human system with intolerant hate, and arm destructive zeal with a

concealed dagger. Criminal incentive and low-browed lust with the functional power to develop and promote human agony, pain and suffering, would emanate from the same fountain of God's omnipotence as the edict of "love and peace to all mankind." The author of all good would appear as the author of all evil—"THE CREATOR OF ALL THINGS."

In direct opposition to this vulgar and popular concept of God's omnipotence, as voiced by the theologian, so many discoveries in the attributes, tendencies and functional characteristics of elemental energies, have been noted, analyzed and demonstrated, since the time of Sir Humphrey Davy, as to free from calumny and double-dealing the God the theologian pretends to honor and worship. It is growing to be *an open secret*, that the theologian is the first *always*, to blackmail and perjure with malignant caprice, his own God, whom he sets before the popular mind as a God of infinite love and justice, yet, at the same time as omnipotence he functions the universe with evil, and the soul of man for damnation.

In order that our reader may note upon what basis of truth these discoveries of nature's attributes have been postulated, which so completely refute the theological precepts and platitudes, it will be necessary that we understand the true meaning of a term representing that department of NATURAL PHILOSOPHY known as "Chemical Physics." This term means in its full sense "the science of nature" as "the study and knowledge of natural things." It comprehends whatever can be discovered of the nature and properties of bodies, their causes, effects, attributes, operations, phenomena, and principles." "It is a science the object of which is to discover the nature and properties of all elements and combinations of matter and bodies," and their analysis and relations to other bodies or forms of matter. It is the science that explains the inherent *mutual action*

and reaction of all bodies." It might also be called the inductive method which examines the composition and structure of elemental substances and *the permanent changes of constitutional function* which their mutual co-relations produce. It also "treats of those events and changes in all bodies which are not induced by sensible motions." But particularly does it relate to these molecular activities *by which the inherent nature of elemental forces or composition of matter is changed.* And the continuous demonstration of this truth proves that THE EVOLUTION OF FORM AS WELL AS FUNCTION, is the result of the reciprocal polarities of matter and elements in combination. Let us amplify these truths. Water (*aqua*) is an evolution from two invisible gases. It has a *definite* form and specific functions as the result of the combination of oxygen with hydrogen, the chemical formula of which is H_2O . Its form and its functions are the result of the combined polar attributes of the two invisible gases which evoke it, and it has a molecular weight of 18. It must be remembered that molecular weight has reference to the specific gravity of an element or compound form of matter; and *specific gravity* to the polar attraction that any form or combination of substance or matter has to the earth's electro-magnetism.

Acidum Sulphuricum.

Sulphuric Acid. *Formula* H_2SO_4 .

Molecular weight, 98.

This compound is sometimes called *the oil of vitriol*. Its preparation from sulphur or iron pyrites is a most interesting process, which we invite our readers to investigate. The number of chemical transformations occurring during the evolution of the acid, will impress any thinker with the functioning characteristics of each process. The diverging forms obtaining as the successive stages advance in chemical attributes, demonstrate beyond doubt the formative

character of elements of nature in their various phases of combination. A close investigation of the symbols representing the stages of combination in the preparation of the pure oil of vitriol, will convince any unbiased intellect that function and form and formative tendencies *exist in the molecules of combining factors*, and not in any over-ruling power outside of these reactions.

Our common commercial sulphuric acid is a dilution of two ounces of the pure oil of vitriol with fourteen ounces of water. The former has a specific gravity of 1.843, and the latter of 1.082 U. S. The varied functions of these two forms of sulphuric acid are easily ascertained in experiment. They manifest different color, possess different specific gravities, and different attributes, as the result of some latent spiritual energy belonging to, and qualifying their diverging molecular organization.

Aurum—*Gold*,

Symbol, Au. Atomic weight, 196.7.*

Gold is numbered among the elements of nature and is found in a metallic state, frequently in its pure form, but more frequently in combination with other metals or in combination with native sulphurets. It can, like all other solids, be reduced to vapor, and this vapor mixing with atmospheric air containing oxygen, nitrogen and carbonic

* Atomic weights differ from molecular weight in this respect: Atomic weights have reference to the combining proportions of elements by weight; whereas molecular weight relates to principles of specific gravity. In atomic weights, hydrogen being the lightest gas, is taken as a unit of measurement or comparison. In specific gravity water is taken as the unit. The theory of atomic weights received general approval as revised by Berzelius in 1860, and in turn has been modified by modern physicists. The inaccuracy of the system of atomic weights as well as that of the general atomic theory will become more conspicuous as the experimenting chemist comprehends the real principles of the "CHEMICAL BALANCE," and combination by polar selection.

acid gas, upon being caught and retained on a glass receiver, is found to contain special chemical features of distinctive character and function. If caught and retained upon metallic surfaces its chemical reactions vary with the molecular structure of the metal surface to which the vapor is affined. It is also easily reduced to fluid form, by being submitted to the reactions of nitro-muriatic acid, and in this form is easily changed into chloride of gold, ammonia chloride of gold, iodide of gold, cyanide of gold, or oxide of gold. The development of each of these forms evolves distinctive attributes, with varying appearance, color, motion, specific gravity, and functional properties.

Here again we see in the molecular combination of chemical elements and matter, *omnipotence in the evolution of form*, with variation in structure and general character. To affirm that these forms of gold and their respective qualities, are not the result of molecular polar changes incident to the evolution of each form, is to deny a demonstrated truth. Every order of crystallization in rock, stone, metal, wood, bark or fibre, is the result of the changed polarities of the elements combining to evolve the form of the crystal noted. As forms of crystallization differ in the various expressions of matter, it follows that each form is the result of a formative process aroused into action by the polar disposition of each element entering into the combination. We shall later on be able to demonstrate that sensation and physical motion are also an evolution from nature's infinite laboratory of spiritual elements. Let every thinker dare to think and investigate.

THE SPIRITUAL ELEMENTS OF NATURE DEVELOP FUNCTION AND FORMATIVE ENERGIES, WHICH ARE THE SOULS OF THINGS.

In the preceding chapter we called attention to this universal truth as is witnessed in all forms of cosmic evolution, but as it is one of the great facts that seem to have escaped the attention of writers and thinkers in all departments of biological and physical science, we desire to enlarge upon this truth and present its data in such way as to impress the reader with the value of this scientific induction in a careful analysis of nature's processes and potencies.

In order to present this modern discovery in a clear and concise way, it will be necessary to re-state the fundamental postulate of chemical physics, which is the acknowledged premise of chemical combination, in every scientific school and college in the world. It will also be necessary that we understand the meaning and application of the terms, "*scientific induction*," "*chemical spectrum*," and "*change of chemical spectrum*," as employed by writers and experimentalists in chemical physics and natural philosophy.

First, let us present and amplify the universal and accepted hypothesis of chemical combination. It is this:

"The central tendency of all elements in process of combination, is to unite in the evolution of something in form and character entirely unlike any of the elements entering into the combination per se."

In other words, the compound evoked by a combination of elements, has none of the essential characteristics in form or function of the elements of which the compound

is made. Thus water is entirely unlike the gases of oxygen or hydrogen which comprise its structure, either in form, functional character or appearance. Cane sugar is thoroughly unlike carbon, oxygen or hydrogen, of which elements it is composed, in its appearance, chemical characteristics and formation. We noted in a former chapter how sulphuric acid (*oil of vitriol*) was changed in form, function and character, by the various transformations incident to chemical combination. As the physicist notes these formative tendencies with corresponding functional change in every variety and expression of chemical combination, he affirms the universality of the postulate above stated as a truth inherent in nature's order of evolution, qualifying every realm of nature in cosmic process. Let us again emphasize that all of these varying forms, and functions and appearances of matter *are the direct result of principles of polar change in combining process.*

LOGICAL INDUCTION AND PHILOSOPHICAL INDUCTION.
WHAT THESE TERMS MEAN IN SCIENTIFIC RESEARCH.

The term INDUCTION, is the name of one of the concise formulas of reasoning, and of scientific discovery and proof. Stuart Mill holds that it is the operation of discovering and proving, general propositions; while "deduction on the other hand is the method of applying general propositions once discovered to particular cases considered to be included within their scope. To illustrate: by induction science establishes the principle that heat expands certain metallic bodies; by deduction we apply it to explain why a clock runs slower in summer than in winter, owing to the changes in the length of the pendulum.

Scientific induction is claimed to be "the only process of *real inference*,"—for by it "science traces from the known to the unknown," or "from a limited range of facts

we affirm what will hold true in an unlimited range of the same facts." All knowledge that we do not have by actual trial or visible demonstration, "we know by inductive formula." It will be seen that in this sense deduction is not real inference. Let us explain. Every deduction must contain two or more inductive facts, and in what is known as syllogistic reasoning "every step of a deduction is also an induction." Before we can deduce that a clock runs slower in summer than in winter, we must have the inductive knowledge that "heat expands certain metallic bodies." Before we can deduce that there are 144 linear inches in a line twelve feet long, we must have the inductive knowledge and agreement that twelve inches linear measure are equal to a foot in length. Thus it will be seen that before we can have "real inference" our premise must contain an induction either philosophical or demonstrative. It is a common oversight with a certain class of metaphysical speculators to affirm the superiority of deductive methods of reasoning, and while every careful thinker and experimentalist will admit that a very large proportion of human knowledge is of the deductive order, the consistent reasoner will not overlook the fact that deduction without an inductive premise would never solve a problem or establish a truth in nature. Thus mathematics is a vast system of hypothetical inferences and comprises a deductive science only, when it can be applied to the measurement of extension, duration, or to length, breadth and thickness, or to some factors, functions, conditions, characteristics and qualities of an external order of nature, or of its internal attributes; *and these comprise the realm of inductive knowledge, and without this realm of real inference, all systems of deduction would be valueless.* Therefore the realm of an inductive order or formula of reasoning from particulars to generals, and of the deduction which reasons from generals to particulars, can never be overestimated,

since the two methods of premise and conclusion belong together. But in matters of research and natural philosophy a scientific induction, and demonstrative fact or two, will be found a valuable premise to which we may anchor consistent reasoning, in our search after truth.

A very large class of inductive data is the result of experimentation and scientific analysis. Bacon's "*Experimentum crucis*" established the value of demonstrative data as a premise for investigation. To illustrate. It was ascertained at a very early time that mercury would expand uniformly under the influence of heat when confined in a small glass tube with a bulb base. But continued experiment discovered that the expansion varied with different atmospheric pressures as was witnessed by trial at different elevations, or with a uniform heat confined within a certain radius of the bulb. This led to experiments with the thermometer in connection with the barometer when it was ascertained that with a uniform atmospheric pressure of 14.73 pounds to the square inch that water boiled at 80 degrees *centigrade*, and the point of its freezing was made the zero point. The tube being divided into 100 equal degrees, it became an easy matter to establish the varying degrees at which different fluids congealed or boiled.

In the scientific application of these inductions or discoveries, it was ascertained that alcohol boiled at 70 degrees C. and mercury at 600. By using a spirit thermometer to note the freezing point of mercury and fluids containing alcohol, it was found that inasmuch as pure alcohol had never yet been frozen, that it was an easy matter comparatively to indicate the degree below zero C. at which all fluids, with few exceptions, froze.

It is in such experiments as these that we see the value of inductive demonstration to applied science, enlarging the field of discovery, and enriching it by concise verification. But there is a department of inductive philosophy differing

in some respects from the above for which Bacon wrote a special canon: "*If an instance in which the phenomenon under investigation occurs, and an instance in which it does not occur, have every circumstance except one in common, that one occurring only in the former, the circumstance in which alone the two instances differ is the effect, or cause, or a necessary part of the cause of the phenomenon.*"

This system, however, is that of comparison and contains a deduction. To illustrate. Two piano strings made of the same metal, the same in size and molecular structure, one of them tuned to B natural the other to C natural, are found to differ only in pitch of tone, "the circumstances in which alone the two strings (instances) differ," is found to be that of *tension*, and a comparison of all of the facts leads us to deduce that with the same tension, the pitch of the two strings would be the same.

But "induction" applies to other principles than those of causation — namely, to *uniformities of co-existence*, which truth we shall have occasion to amplify in a future chapter, when it will be seen that "the uniformity of nature is a compound of many separate uniformities," all blending into a sublime unity of cosmic process. And this truth leads us to postulate "a Philosophical Induction" as "an inference or act of inferring, that what has been observed or established in respect to a part, individual, or species, may, on the ground of analogy be affirmed or received of the whole to which such inference applies or belongs."

Later on we shall apply this accepted postulate of inductive and deductive science, to the uniformity of the polar principles of infinitude and the co-relation of spheres of conscious intelligence, in a realm of life beyond the horizon of physical dissolution.

WHAT IS TO BE UNDERSTOOD BY THE TERMS "CHEMICAL SPECTRUM," AND "CHANGE OF CHEMICAL SPECTRUM" AS APPLIED TO COSMIC PROCESS.

The term "Spectrum," is from the Latin and means "a specter," a visible form," or "something to be seen." In the science of optics it "has reference to the several colored rays of which light is supposed to be composed" separated or divided by the refraction of a prism, and exhibited on a screen or "object glass" of a spectroscope. Formerly it was thought that the term "CHEMICAL SPECTRUM" had particular reference to "the rays of the solar spectrum which produce chemical effects as in photography, having their greatest influence at and beyond the violet rays." This thought prevailed because it was claimed that certain differentiated arrangements of atoms of matter in combination, induced surfaces of different refrangibility when submitted to the action of light; and this erroneous concept gave rise to the popular idea that color of whatsoever kind and character was only an appearance, a specter and an optical illusion. As early as 1874* the writer of this demonstrated that this theory was not true; inasmuch as in photography modes of color motion beyond the line of vision have an affinity for the sensitive plate evoking visible chemical reactions when the plate is developed. Since that time experiments made in a room from which all light was excluded revealed the potency of color motion as an electro-magnetic energy, inducing analagous phenomenal results in a dark room as in direct solar light. These phenomena are shown to be the result of principles of electro-magnetic induction operative between the article pictured and the sensitive plate, which leads us to conclude that color motion is an evolution the same as all other manifestations of nature.

*See Munn's Science Record of 1874, article, "Photometry of Colors."

X-ray photography, or more correctly speaking, *radio-graphs*, are a complete verification of this phenomenon of color motion of opaque bodies when submitted to the reactions of an X-ray light. The modern discovery of the Bolometer, demonstrating the presence of color motion in the solar spectrum far beyond the purple and below the red attest the fact that the spectrum is not a matter of seven primordial colors, but includes a vast number, only a few of which come within the range of optical vision. These data indicate that all of the octaves of color motion inhere in matter as one of the attributes of its expression; hence, become a factor of causing or evoking visibility within a certain range or gamut of vision, when submitted to the action of light. Inasmuch, therefore, as all visible nature is phenomenal, containing or expressing colors or spectra of infinite variety, only a few of which can be seen, and as these motions are attributes of matter and nature, it follows that any change in the molecular organization of matter will change the order of its spectrum. No fact is better established by the chemist-physicist than the easy reduction of any form or type of matter to invisibility. Whatever may have been its color motions, however solid and invulnerable it may seem to those unskilled in chemical reactions, it soon gives way to the touch of the magic wand of the reducing chemist and is lost to human vision. Its visible structure being broken up, its component molecules are transformed from those promoting visibility, to invisible form, and they will find their affinity in the ethers of space, or attracted and affined to other conditions of matter. This process is called, "a change of chemical spectrum." Could the molecules of the matter thus broken up be again recalled and the structure again take on form, *its appearance is a specter*, of visible character, and any change which the matter comprising the structure may

thereafter undergo, such change is known to the physicist as "*a change of chemical spectrum.*"*

With these facts in view, it will be seen that the solar spectrum in reality does not consist of seven primordial colors, but comprises perhaps an infinite order of color motions, of which only a very small number come within the range of ordinary vision. Experiments made with the Bolometer referred to, prove that the growth or development of visible plant life depends upon many modifications of color motion beyond the purple rays, existing in a spectrum of invisibility. And it was also proven that many rays below the red, possessed peculiar attributes, of electro-thermic character tending to modify, regulate, or change the conditions of plant life. Thus it will appear that invisible rays of this larger spectrum have a place in the evolution of the great variety of the spectra of plant life, and that all chemical changes in matter in the process of evolution are in reality a change of chemical spectrum. All changes from the invisible to the visible, or from the visible to the invisible, are changes of chemical spectrum, and the reactions inducing these changes, always take place in a molecular domain beyond human vision. We may see the specter of growth of a flower or plant, but the impact of elements upon the flower or plant promoting its growth by the action of light, of warmth and soil, takes place in an invisible field of combining molecules. We can see yonder mountain with its caverns and chasms, and we note the beautiful little lake that nestles at its base, surrounded with tree and shrub life, but the evolution of these factors of time all obtained in an invisible spectrum of co-related energies and elements, requiring ages of duration to evolve their structures and relations. From invisible nature, these

*It will be understood from the foregoing that the term "change of chemical spectrum," applies to changes where no visible spectra are seen, no less than to those inducing visible spectra.

have been evolved. Our photographer pictures this beautiful scene. The mountain with its caverns and chasms, and the lake with its surroundings of trees and shrubs are reflected upon his sensitive plate as color motions. Let us accompany him to his dark-room. As he takes the sensitive plate from the shield, not a vestige of a picture can be seen, but the entire surface of that plate has been impressed with an infinite number of color motions, each color making an invisible impression on the plate. How shall we prove this assertion? By development. We place the plate in the developing solution and slowly these invisible modes of color motion begin to develop the specter of visibility; and presently the entire scene of mountain and lake appears on our plate. How did this phenomenon of evolving the visible from invisible modes of motion take place? By a change of chemical spectrum. By this change of spectrum nature always materializes and makes visible her forms. And now, kind reader, with these definitions and explanations of the terms "Induction" and "Chemical Spectrum" more thoroughly understood, we are ready to introduce you to a class of phenomena and facts, *and to demonstrate them*, regarding the formative character of nature's spiritual elements.

THE DOMAIN OF NATURE'S SPIRITUAL FORMATIVE AND SHAPING FORCES.

In a former chapter we demonstrated the close similarity of the thought of the very ancient alchemists regarding the structure and evolution of matter, compared with that of Anaxagorus and Democritus, in which it was shown that the alchemist affirmed spirit, or spiritual substances, as the basis of organization, and Anaxagorus claimed a shaping spirit, or "Nous," to actuate matter into form, while Democritus entertained the idea that each type and

form of matter had a "primary motion" of its own, and that *specified quantities* of atoms containing these primary motions, were the true cause of organization of matter and form. We also suggested that with the modern discovery of "polarity," as the premise of combination of elemental forces, that each of these claimants stood upon the verge of an universal cosmic truth.

With these facts before us, we wish now to take our readers into a domain of nature's spiritual reactions where we may sense this order of the eternal relation and co-relation of her invisible shaping forces, based upon the polar attributes of matter and spiritual elements. Our research will require close investigation and experiment in a department of cereal evolution, and unless we have "a hot-house" at our command we will require the moderating temperature of spring time, when reviving showers and genial sunshine are nature's free gift to fields and flowers. For our experiments we will select carefully one hundred kernels of corn* whose symmetrical form and polished integument yield visible promise of the completeness of vitality and integrity of function stored within its cellular organism. We will need a sharp, thin-bladed, and narrow-pointed knife, a pair of forceps with thin points or blades, a good magnifying glass, a first-class microscope, and a clean operating-table in a well-lighted room.

We will begin our study of this cereal, by carefully splitting the kernel, at the point where it enters the cob. Our desire is to secure a little pear-shaped organ called the "*ovule*," which lies imbedded in the kernel at this point of

*The author selects corn as the cereal best suited for this study and investigation, as it is more easily examined during the period of its development than other forms of *phanerogamous* (having floral organs) seeds. Besides, it can be explained and understood with but little reference to the *generic terms* so mystifying to the unscientific student, who may desire to investigate for himself.

investigation. A little care and experience will enable us to secure this little store house where the shaping spirit or energy that grows corn has its germinal habitation. A careful examination of the environment of this little ovule, with our microscope, discovers an immense aggregation of cells of minute structure called "*cellulose*"; and these cells are filled with a compound of starchy character called "*lignene*," the entire kernel being covered with a tough glazy integument called the hull. The *ovule* under the lens of our microscope looks translucent and pearly; and there is something in its shape and general appearance that reminds us of a human female matrix. Let us carefully break it open, and examine its internal structure. What a multitude of minute cells appear in the field of microscopic vision! How ample and vigorous they look as they glisten in the reflected light of our microscopic mirror or reflector. But what are these little centers that seem to possess a divergent structure from the process in which they are imbedded? They are called "*nuclei or visicles*," and they play an important part in the evolution of corn life. These nuclei in connection with the ovule are known to the embryologist as germs or germinal centers. Are the ovules of seeds a vegetable matrix and these nuclei fecundating centers, you ask? This is a question which the vegetable physiologist and embryologist are not fully agreed upon; but there are strong indications that such is the fact. Let us plant our one hundred seeds in separate hills of one seed to a hill, where we can watch the development from day to day. This being accomplished we want a little time for close thought and reasoning as to the fact of the *functioning power* and *shaping character* of the energies enclosed in these seeds, and particular inquiry as to the invisible potency existing in the ovules and nuclei of the corn we have planted. Experiment has proven that if we extract the ovule ever so carefully from the kernel, that the kernel

will not grow; so we reach the conclusion that the function of development inheres in the laboratory of the ovule. If we plant the ovule by itself, it will not grow; and we conclude that the ovule requires the co-related assistance and support of the cellulose substance and the lignene enclosed in it, to aid the gestative process. Now we must bear in mind that the ovule and its nuclei are only germs as yet; the embryotic plant which will be born of this union, has not as yet developed. We must also bear in mind that the future of the corn life expected depends on the present potency of *invisible formative and shaping forces*, locked up in the kernel *per se*; and we must not forget that *these forces are of spiritual character, psychic in their inter-relations, and omnipotent in their sphere of action*. As this development of corn life goes on, we will be obliged to note that the success to be attained depends upon a variety of external factors existing entirely outside of the seed we plant, and first and foremost among these, is the soil in which our corn is planted. The soil must contain a certain degree of warmth, and must have interblended a nourishing amount of ammonial compounds, and a small degree of nitrogen compounds; and these must hold a certain specific relation during the entire time of its growth. That is to say, that as the specific needs of the corn are changed from time to time, there must be a corresponding change in the soil suited to the progressive development of the corn, in order to secure the most fruitful harvest.

The success of the development of the embryo, will also depend upon contributions from the atmosphere, containing hydrogen and oxygen compounds, with a rythmic degree of warmth and frequent moisture, to accelerate the actions and reactions constantly taking place *in the invisible spectrum of the shaping forces belonging to, and individualizing corn as a special cereal*. At no time after the embryo has developed leaves through the crust of the soil,

must the atmosphere contain molecules of frost in dominant form until after the corn in the ear has reached a certain maturity, otherwise this god of Oriental concept, as a real SIVA,* breaks up and destroys the *formative forces* of corn life, that gave promise of future fruitage.

In the successful development of corn, we must acknowledge the potency of sunlight as an electro-vehicle through which the atmospheric compounds are impacted upon the soil, and leaves when they break through the earth. This succor of sunlight and dominant heat are important factors from the time of the budding of the embryotic ear on the stalk, until the corn is fully developed on the cob. If this nourishment of sunlight and heat are wanting during this period, our harvest will be only nubbins or perhaps fruitless. Another factor absolutely necessary to the development of cereal life in connection with sunlight, and one that is constantly overlooked by many investigators, *is that of night*—NATURE'S GREAT SEANCE CHAMBER OF MATERIALIZATION, where the spiritual shaping forces of all types of life, take on form in an invisible spectrum of change, when the plant retains its carbon and throws off oxygen. Without this break in the electro currents of light—without this negative condition of nature, allowing specific chemical reactions to set up in the plant *per se*, you would never have a materialized form of seed, or fruit, or vegetable life. All spiritual materializations in nature have their inception in an invisible spectrum and grow into form and strength under the mantle of night. Let the scoffers at spirit materialization take a few lessons in field and forest, and their ignorance of these great spirit-

*The Brahmic Hindu affirmed Vishnu (the sun) as a god possessing sentient attributes, and that he was the god of pro-creation and of life-giving forces, while Siva was the destroyer of all forms of life. Hence all the forces of decay and disintegration in nature were the weapons of conflict employed by this deity.

ual truths will eventually seem to them *a hideous nightmare of superstition*. All changes in nature's laboratory of cosmic art, obtains in a spectrum beyond optical vision, and this truth is loudly knocking at the door of human consciousness for admission. But there is one more factor that must be enumerated in the list qualifying cereal evolution in its modern sense, and that factor is TIME. For without the succeeding steps of time, developing in sequential order each potency of nature necessary for the growth and maturity of cereal life, *there would be no harvest of corn—the life principle of the kernel would never develop*; NO CORN WOULD GROW, ITS SOUL WOULD BE INERT.

With all of these data present in our investigations can we safely affirm that the soul or life principles of cereals do not depend in their development upon these *co-related factors* enumerated above? Or, is it consistent to declare with the involutionist that "what is evolved must first be involved? that what is unrolled must first be inrolled?" Were the factors of soil, of atmosphere and sunlight with their various compounds ever involved in the germinal centers of a seed? Are the future reactions of soil, atmosphere and light, involved in the seed or plant today? Are they ever evolved? That is to say, are the compounds of soil and atmosphere and sunlight, as factors *per se* evolved? Are any of these factors *inrolled* in the germs or the embryo? And if not inrolled, how can they ever be unrolled? Are they ever unrolled? Who, ever saw ammonial compounds, hydrogen compounds, or soil or atmosphere, or sunlight and night, and the ladder of time *unrolled* from a hill of corn? Now the truth is, that what is involved in the sense of co-relation, *is never evolved or developed*. This pagan sophism is thoroughly antipodal to the fundamental premise of chemical combination, which affirms that "the central tendency of all elements entering into combination, is to form something entirely

unlike either factor." Now this postulate of chemical combination is universal and is accepted by every school of chemical physics in the world. Hence what is involved in combining formula *is never evolved*, and this erroneous platitude will cease to be voiced from pulpit and rostrum, when man is better acquainted with the principles underlying cosmic growth.

In this connection can we say from our knowledge and experience in cereal development, that God gave to corn life its soul or life forces? If so, why does he require the germinal centers found in the factors of ovule and its nuclei? Why does he employ so many chemical energies and compounds existing apart or outside of the seed, in a manner analogous to that of a mechanic employing tools? and why does he require four months of time for chemical reactions, when in the vigor of his first creative genius according to the Hebrew theogony, which modern ecclesiasticism accepts, "he spoke all planetary worlds into existence?" Why does he now operate all organic and inorganic life by the functioning process of chemical reactions, whereas, when he first commenced business, everything sprang into action by the mere volition of his consciousness? Now these are important questions confronting the physicist and experimentalist. Like "*an intellectual ghost*," they demand a rational and concise answer. We are told "that God operates now through established laws," and that "law" in this connection means, "certain established rules of action" as "found in chemical and cosmic process." To this assertion and oft-repeated statement we reply that, if God's power and omnipotence be transmuted to chemical and cosmic process, if the omnipotence once his, be delegated to the shaping and formative forces found in chemical combination, then he has given away his power and his omniscience; *and his authority over matter ceases*—HE IS NO LONGER GOD, OR OVERRULING INTELLIGENCE. Hence, all changes taking

place in nature, are the result of the automatic action and reaction of cosmic forces, as we see demonstrated every day.

But let us return to our investigation of the development of the embryo of cereal life where we came in touch with the omnipotence of nature's reactions. It is twenty-four hours since we planted our seed and we will carefully examine the phenomena of changes that have taken place in two hills of corn. We find upon examination that the kernels seem to be considerably swollen, and the glazy appearance of the hull has lost something of its glass-like brilliancy. An examination of its ovule shows that it also has commenced to undergo changes of peculiar character. Its external surface has lost its pearly gloss, and its internal cells together with the nuclei, have felt the impact of elements and compounds of the soil in which it has been confined. Under the magnifying power of a good microscope the result of these reactions are quite noticeable in comparison with the kernel examined yesterday. It seems to have caught the stimulating influence of some combination of forces calculated to arouse it into a higher field of action, and the first thrill of this changed incentive and tendency, is manifest throughout its organism. Even the cellulose structure and the lignene enclosed in it, enveloping the ovule, seem to be on the threshold of a mighty change. The cellulose cells are swollen, and the lignene in them is under some powerful influence that foreshadows a change from its former static condition. We will wait twenty-four hours more and see what further development awaits our investigation.

Let us now ask an important question. Are these changes in the kernel of corn, due to something "involved" or "inrolled" in the seed *per se*? Or are they not the direct result of potencies *external* to the corn we planted? Were the energies inducing the swelling of the seed and its changed appearance due to something entirely within itself?

or to some combination of chemical influences co-related to it from without? If it is due to something within its own structure—to something “*inrolled*” in its plasmatic form, why did it and its associated ninety-nine kernels not have this appearance yesterday, or the day before? Can any advocate of “*the involution theory*” comprehensively answer this question? And is it not a grave error to continue to teach and advocate this theory of “*involution*,” when every plasmatic form of life in its evolution depends upon the external agencies of nature for succor and support during the entire process of development, the proof of which can be shown by cutting off this support of soil, atmosphere, sunshine, and the consecutive molecular changes incident to time? Forty-eight hours of time having passed and a genial shower having watered field and meadow, we will take another careful survey of the corn we planted, and see what molecular and structural changes have taken place since our former investigation. On removing the soil we find the kernels much swollen and enlarged. The hull at the point where the kernel entered the cob has burst open with some great internal pressure. We must now be careful in our dissection, for the ovule is soft and sensitive with the reactions obtaining from without and within. It has lost its firm translucent appearance, and its original form is rapidly undergoing a change. The nuclei have materially changed their form and position since first seen under the microscope. Their change of color and shape, together with that of the fine cell life in which these germinal centers were formerly imbedded, together with the enlargement of the ovule indicates that a mighty molecular change is occurring within these combined centers. The cellulose matter and the lignene also give evidence of the reactions of some potencies tending to change the entire character of the seed we planted. The cellulose and lignene once so firm and crystallized have softened, and traces of ammonial

compounds are now found, whereas none existed in the original kernel. Could human vision penetrate these psychic changes taking place every second of time, could we see the molecular reactions as they occur, could we once witness the ingress of the invisible potencies that have induced these wonderful transformations since we planted our seed in the soil, could we fathom these partnerships of cosmic forces and note the changing polarities of each element and compound as they enter into association with the germinal centers and the ovule with its associated environment, what a flood of truth, and light and knowledge would enrich the page of our pen, and place the divine attributes of nature in their true garb of expression, not to be worshiped on bended knee with the mouthings of a sycophant, but recognized with an enriched ideality of nature's spiritual formula of cosmic art, and an enlarged consciousness of the psychic rhythm of the universe. Alas, how little we know of nature and her divine realities, and how much we claim to know of the gods, their plans, their purposes, and designs. What a commentary is this on the human intellect, in a progressive civilization!

Three days have passed since we planted our cornseed, and the weather, judging from former experiences has been most favorable for its germination—just warm enough, just moist enough and genial to develop the sprouts indicative of a new embryotic life. A close examination now will afford us a view of the visible contrasts between the ovule in its present condition from that of the kernel first examined. In the unplanted seed the hull is smooth and compact, covering the enclosed mass with the deftness and skill only found in cosmic art. In the kernel just taken from the soil, the hull is split and broken at the point where the seed entered the cob, and little sprouts are

beginning to grow. The ovule itself, has nearly lost its identity and semblance. Its former pearly, translucent covering called "*the spermoderm,*" has thoroughly changed its form and appearance by the constant molecular and psychic reactions obtained from without and within its wonderful structure. Of the three visible nuclei discovered by our microscope in a former kernel, only one seems to have possessed proper fecundating power in this; and that especially favored nucleus surrounded a center of selective fertility containing properties of albuminous character. In the ripe seed, before we planted it, this albumen and the nucleus were seemingly an inorganic cellular mass, but they comprised the most important part of the seed. And while they were dormant, and might have remained so for years, yet within that apparently dormant mass, there lurked a potency of *formative character, a shaping energy*, which the popular mind in its ignorance of cosmic process and the nature of spiritual substances in combination, has called "Omnipotent" and "Intelligent" design. But the close student in cereal development will have occasion to note that in every instance where fecundation takes place, there will exist the necessity for the co-relation of many associated energies, before the "shaping force" enclosed in the ovule of a seed can materialize into form, the embryo.

Not only is the combined assistance of soil, atmosphere, moisture, warmth and sunlight necessary to this change, but the complete transformation of the nucleus and its plasmatic center into an embryo could not have taken place without the aid of these external factors. Here we see the exposition of the fundamental postulate of chemical combination referred to in the beginning of this chapter, that "the central tendency of all elements and forms of matter in combination is to evoke or develop something unlike either factor." How thoroughly this embryo is unlike the nucleus, and its associated protoplasm,

or the ovule or any of its environments. As the embryo, formed of these germinal centers continues to develop, the cell structure of the ovule which surrounds the nucleus, will gradually be converted into protoplasm by a wonderful and somewhat mysterious process of chemical reactions due to the associated energies operating upon it. And the cellulose structure containing lignene is rapidly being transformed into substances qualified to support the embryo until it can draw from the soil and sunshine special energies suited to its growth. With a suitable magnifying glass we shall be able to discern the descending axis or *root* of the embryo, and also the ascending axis or *plumule* (stem) with its *cotyledons* which attract nourishment for the new plant. The root differs from the stem in the character and ramifications of its structure. It sends out branches which "subdivide into fibrils," containing annular ducts or "spiral vessels" incased in wood-like fibre, and covered with a loose, cell-like covering or integument attracting from the soil those selective properties of nourishment suited to the growth of this kind of seed.

Corn belongs to a class of cereals called "*stalked*," to distinguish it from a class of seeds called "*sessile*." The stalk or stem is formed from a kind of umbilical cord called "*the funiculus*," or in some instances it is called "*the hilum*," and it is attached to the base of the kernel and is a development of the embryo in conjunction with the root. Why seeds have this change of structure in the ascending and descending axis will remain shrouded in obscurity until the functions of polar attraction are more accurately understood. That the soil possesses peculiar attractions, and that there must be some rhythmic associations with the *electro-magnetic* currents of the earth seems reasonable. All highly electro bodies are negative and reciprocal to magnetic reactions; and the earth seems to possess this negative virtue in a most wonderful degree, qualifying her

to become the *cosmic matrix* for every form and type of vegetable and plasmatic life. From her womb spring all forms and species of existence. She is the veritable Gaea,* the mother of all living things.

That such influence as is possessed by Earth and her soils induce an infinite variety of changes in form and character of the growths confined to her domain, is evident whenever it is understood how changes in electro-thermic reactions modify selective polar states. Hence the great tendency to variety and diversity of root growths. But the ascending axis of our embryotic corn life presents some features of structure worthy of special notice. It has but little if any of the features of the descending axis or root. Instead of the branches and fibrils found in the root, we note the development of two *cotyledons*, or funnel-shaped leaves, which open as the plant breaks through the soil. These cotyledons furnish for a time moisture, warmth and rain to the developing root, which in turn pushes the main stem or stalk upwards into the light of the sun and the invigorating support of the atmosphere. This combined influence of the sun and atmosphere is of a positive character, and while it is electro in the transmission of its energies it is magnetic in its action. However negative the earth may be, it could not grow a single leaf or root, without the magnetic and stimulating influence of the sun and atmosphere as a positive force. It is in such investigations as this that we see that there cannot be in the sense of development such a thing as "*a cause.*" Neither can there be in cosmic process "*AN OVERRULING CAUSE.*" If cause as a power represents action, there *must be something for power to act upon.* If power acts upon something, the something acted upon becomes a factor and likewise a cause in the thing produced. As the thing produced is entirely unlike

*In ancient Greek mythology Gaea—the earth—was called "the mother of all living things," and Cronus—time—was called "the father of the living and the dead."

either factor, it follows that there may have been a multiplicity of causes each of which *are omnipotent* in their sphere of action, in the development of the product.

We see these truths demonstrated in the development of the embryo of corn life before us. The earth as a negative factor, possessing in her laboratory of soils an infinite capacity for variety and an infinite chemical repository from which each plant selects at each moment of time what it can assimilate, and being stimulated into action by the positive action of the sun, in whose ethers and atmospheres are found another repository of infinite possibilities, from which the plant can select its positive and magnetic supports, we witness the phenomenal changes taking place from day to day as our embryo takes on the consecutive forms, incident to its wonderful development. But why, let us ask, do embryos of corn life always develop in the same way under the same conditions? With the universal tendency on the part of all of the elements entering into its structure to constantly change its character and form, why does it persist in its growth and maintain the dignity of its own individuality? Why does it not change into a sunflower or pumpkin-vine? Does some All Wise, Omnipotent and Overruling Power hold the development to the idea of a special design? Or, were there not stored up in its germinal centers potencies of *formative and shaping character* which hold and protect its individuality of life, from the encroachments of chemical reactions? If so, where did this soul of vitality and life come from? This is a very important question. If you say that the soul of corn life came from God, we ask, where did the soul of the nubbin of corn come from? Does God have nubbins of souls for nubbins of corn? If God gives life and souls and shaping designs to cereals, how does it happen that a June chill or an August frost kills this soul that was God-given? Is the frost and chill more omnipotent than God? Or, was

the frost a part of the "Omnipotent Design"? Does God give to the cereal life growing in immense tracts of country its souls, and then send a frost to kill out this functioning power of vegetable and cereal character? As an All Wise, Overruling and Infinite Intelligence, did he know that the frost would kill the soul and life principle of thousands of acres of planted seed, when he gave to these seeds their souls? Was this a part of "*Infinite Design*"? Do not such manifestations indicate a waste of Original Design and of "Infinite Intelligence"? Oh, what a nightmare of hallucination and fetichism possess the mental citadel of man! How pulpit and pen and popular opinion have become psychologized and led captive by the capricious sentiment of an All Wise and Infinite Intelligence who designs, and then changes his mind and counter-designs. Who "created all things in love," we are told, and then ruthlessly tears them down. Who gives to vegetation its life and soul, and then lays it in waste throughout vast empires and territories! Who "created man in his own image," and continues to function him with inconsistent and irrational mentality, degrading, mystery-loving and seemingly satisfied to worship at the shrine of pagan and ancestral superstitions. Alas, alas! what depths of mental degradation does the human reach in his worship of the ancient gods!

"*But where,*" you ask, "*did the soul of cereal life come from, if it did not come from God?*"

FROM THE PLANE OF THE EMBRYOLOGIST.

It comes from the fecundating centers of tassel and stalk enveloping the budding of the embryotic ear, as is witnessed in corn life. The development of the ear and tassel begin about the same time. There is a silk to every kernel of corn. Under the microscope each silk is seen to be a hollow tube, and at the end where it enters the cob there is found a peculiar structure of glandular character in

some respects analogous to the follicular glands found at the termination of the human hair where it enters the scalp. As the cornstalk develops the tassel and its flowers at the upper end of the stalk, the flowers in turn develop a peculiar shaped pod or sack, which at maturity contains a vast number of pollen seeds. When ripe these seeds are shaken out of their pods by the gentlest breeze, or the pod bursts and the pollen seeds are scattered over the silks of the developing ear. Formerly it was thought that a seed of pollen by some mysterious process got into the end of the silk and was drawn down to its base, but more careful examination of the silks indicates that this is impossible, as the silk-tube seems to be closed at the top or end of the silk, which would preclude the possibility of a pollen seed gaining entrance at this point. A more rational theory is that as the pollen itself contains a peculiar viscid acid, that the chemical action taking place on the surface of the silk by the mere contact of the pollen is sufficient to account for the impregnation by capillary attraction, as the magnetic energy of the acid being drawn down the tube by capillary or polar attraction comes in contact with the glandular structure found at the base of the silk, where impregnation takes place. This theory will account for the lack of impregnation of ears growing below the first ear on the same stalk, called secondary ears, or nubbins. The pollen not being sifted on all of the silks, develops an imperfect ear. The development of the complete kernel, containing its ovule and the ovule containing its nuclei or vesicles, is a wonderful manifestation of the formative and shaping principles locked up in the laboratory of a single kernel or seed. The reader will bear in mind that although impregnation takes place with the development of the kernel on the cob, yet this impregnation is of the kind that stores in the seed and its ovule, the germinal centres, which only develop into a complete embryo, when the seed is planted and has come under

the fructifying influence of soil and light and moisture, as we outlined on a former page. With all of these facts before us we affirm that the soul life of all seed inheres as a shaping energy in the germinal centers comprising the ovule and its vesicles, and that this soul life and shaping force was transmitted to it from its parent seed, and this transmission by development and natural selection is nature's order for all types of vegetable and plasmatic life. But here comes a question from a chorus of mystery worshippers, "Where did the original corn come from? that's what we want to know." All cereal life is an evolution from a lower order of seed. The origin of corn, of wheat, oats or barley, was from a lower type of these seeds. Their present form is not from a Creator's hand. Each and all are a development from a simpler form, requiring ages of time and cycles of evolutionary process. What any seed was in its primary form is not known. That it came from some phase of cereal tendency is certain—its origin, however, was not that of a seed *per se*, but of vegetable character out of which through long cycles of time and polar changes taking place in soil and atmosphere, developed the function of seed evolution.* That plant life is a development of the spiritual forces of nature is no greater phenomenon than the evolution of water from two invisible gases, or the evolution of the function of salt from *chlorine* and *sodium*, or the characteristics of lime with its caustic alkaline properties and its functional resistance to heat. All properties, all functions, all attributes of matter no less than formative tendencies, are the result of spiritual essences called chemical reactions, stored up in polar combina-

*Many pseudo-scientists who never look beyond the surface are continually asking, which was first, the seed or the plant, the egg or the chicken? The development of flowers and seeds in grasses and grains, is an evolution. The development of an ovary and an oviduct is likewise an evolution, being the result of the persistency and influence of environment.

tions and manifest in infinite variety in cosmic process. Hence all life, and function and formative tendencies have their origin in the spiritual laboratory of infinitude, which is self-existent, was never created, had no first Great Cause, and is dominated by the co-related principles of cosmic process, and not by an Overruling Intelligence. *There can be no "First Great Cause," no Overruling Cause or Intelligence, in nature's laboratory of infinite co-related causation.* There can be no action *without something to act upon*; and the thing acted upon becomes a factor of causation in all cosmic processes.

AN ANALYSIS OF THE TERMS, "MODES OF MOTION." WHAT THEY MEAN WHEN APPLIED TO COSMIC PROCESS.

It will be necessary as we proceed that we have a thorough understanding of all of the terms employed by science which are in common use in order that we may comprehend each other and what is to be understood by their use. Among the many terms commonly employed by the scientific writer, perhaps there is none so thoroughly misapprehended as the term "Modes of Motion" by the average reader, hence much that is intended by these writers and thinkers is lost, or seems to the common reader to be ambiguous and mystifying, which, if understood, would seem rational and consistent.

Our analysis of this term begins with a recognition of the so-called five senses of man; and it will be well for us to understand by the five senses of man, five avenues of sensation, connecting human consciousness, which has its seat in the citadel of the brain, to objective nature. In other words, the so-called five senses of man are different systems of sensation, which objective nature arouses in

the sensorium of human consciousness. This will appear clearer as we proceed with our analysis. The eye is the organ of vision, connecting the conscious principle of man to its environment through this avenue of sensation. Seeing consists of a series of vibrations—or more accurately expressed—of a series of molecular impressions made by the object we see upon the retina of the eye, which impressions are communicated to the connective tract of vision and consciousness. *Consciousness*, a sentient attribute of the soul of man, is the only factor of sensation in the human organism. There can be no sensations that are not conscious sensations, hence, seeing consists of definite molecular impressions on consciousness, which impressions arouse within consciousness a sensation which is called seeing. As the vision of different objects arouses different sensations in consciousness, vision or seeing is called "a mode of motion," which means the method of action that is induced upon consciousness by the thing that is impressed upon it, or seen. Thus if we see Jones across the street, certain molecular impressions are carried by the eye to the seat of consciousness which arouse certain "modes of motion" in that center, enabling us to recognize our old-time friend. Soon Brown comes along and his form and personality are likewise impressed upon our consciousness by different "modes of motion" through the optic tract, arousing the recognition of another friend. We see a range of mountains, and a very different sensation is evoked in consciousness by this molecular impact, which means that different "modes of motion" in the optic tract induce a different sensation from those by which we recognized Jones and Brown. As every different object we see arouses different molecular action upon consciousness, Science calls vision "a mode of motion," meaning that *the impression per se*, of the thing seen is "a mode of motion" since we cannot see the molecular changes taking place

along the line of vision, or within the structure of the eye, by which the sensation of vision is evoked. Vision consists then, of an extended scale of impressions which consciousness is capable of noting through the avenue of sensation called seeing, each thing seen being a special mode of motion in its action upon the eye and optic tract. But vision is only one of the avenues of conscious sensation, of human environment. Hearing, comprises another, and the auditory tract is a wonderful telephonic apparatus, connecting human consciousness to its surroundings by another "mode of motion," called sound. This avenue, like that of vision, connects to consciousness, and like vision, its capacity depends upon the fineness and accuracy of its mechanical structure to receive sound vibrations. These vibrations reach the external ear in what is called sound waves. But accurately speaking we have no sensation which we call sound, until the molecular impact of the wave reaches consciousness, where the sensation is evolved. The ringing of a bell induces the sensation of hearing only when the vibration has traversed the auditory tract, and impressed consciousness. The molecular changes taking place in the auditory centers are beyond vision, but that these changes in their relation to consciousness induce hearing is evident from the expression of the phenomenon itself. Hence the impression of the waves evoking the sensation we call hearing, is called "a mode of motion" for the reason that every different sound we hear is the result of different molecular changes taking place in the auditory centers where the sensation of hearing has its inception. So it will be understood that the sense of hearing like the sense of seeing has its scale and its limitations in the divergent structure of auditory ganglia as found in different organisms. But whatever may be its limitations or its possibilities, each and every sound *is the result of the method of molecular action or mode of motion* induced upon the centers of hearing in

that department of the brain associated with consciousness.

Thus it will be seen that the senses of "touch," of "taste" and "smell" are likewise the result of invisible molecular changes taking place in these centers of sensation co-related to the conscious principle of the soul of man and animal existences. In many forms and types of animal life, some of these senses are more acute and more highly tensioned than in man. We shall be able to see later on that nature's associated processes are those of invisible modes of motion only, and that she has no other method of association. We have traced thus far the analysis and application of this term to the methods of sensation called the five senses of man. Let us now note its application in a larger field of scientific research. We stated on a former page that of the seventy-two elements now known to science, no chemist claims to know what any of these actually are, or where they came from. No mortal has ever seen pure oxygen or hydrogen in their elemental form. We only know of their presence by the action or reactions they promote in combining processes. We witness the phenomenon of combining, but the molecular changes causing the phenomenon have taken place in a spectrum beyond our vision. So the scientific philosopher not only calls the combining process "modes of molecular motion," but he calls the life principle of the element,—its spiritual substance,—"a mode of motion," which means that its molecular attributes are only comprehended or recognized as an invisible energy of motion. Democritus was right when he affirmed that "every element had a primary motion of its own," and its method of action as "a mode of motion," determined its individuality. When these concepts regarding the elements of nature are recognized by the world's thinkers and philosophers, it will follow as a logical deduction that all chemical reactions, all chemical

combinations,—since the combining molecules cannot be seen, are best known under the term, “mode of motion,” which simply means, *method of action*, whatever the method may be. All changes taking place in cosmic process, all relations, all inter-relations, all communications and transferences are carried on by invisible psychic processes. The relation which the earth holds to the sun and to stellar space, is that of an invisible method of action. Thought itself is an invisible mode of mental motion. These truths have always existed, yet how meagerly are they understood by the general public mentality.

THE EVOLUTION OF MOLECULAR EXCITABILITY, SENSITIVENESS, MOTION AND SENSATION.

Democritus affirmed that “every element of nature had a primary motion of its own,” and this induction has met the approval of every unbiased modern investigator. Indeed were it not for this inherent attribute of elemental substances and an inner ruling function of polarity, there could be no combination, no evolution of form or of a formative principle. This indwelling motion is the basis of the life principle of the element, the premise of the physical expression of organized life, and the foundation of molecular excitability, sensitiveness and sensation. A large number of elements and compound forms of matter are extremely sensitive to the action of light, electricity, and to the presence of other elements or their impact. Thus a polished plate of silver is very quickly blackened by the presence of the fumes of sulphuric acid, and a few grains of *Argentum Nitras*—nitrate of silver—dropped into a bottle containing common water, will soon make the water turn red or brown if it contains the least particle of organic matter. The various forms of silver in solution employed in pho-

tography in connection with cadmium, potassium uranium, etc., attest the truth of the molecular excitability and sensitiveness of matter. Heat expands some metals and tissues, and contracts others. Electricity contracts fiber and fibrous tissues and arouses molecular agitation in nearly every form of matter known. Tungstate of Calcium when coating the inner lining of a fluoroscope, enables us to see through many forms of opaque matter when the matter thus investigated is flooded with the cathodic light of an X-ray apparatus. Two electrical fields a hundred miles apart induce the phenomenon of wireless telegraphy when the apparatus for this art is properly adjusted. There is no end to the phenomena of excitability and function that matter and elements are capable of expressing in different associated forms. Any close observer of these attributes of elements and matter, will be surprised at their functional manifestations as can be witnessed every day, if we go with our eyes open and our intellects willing to investigate truth. The term "molecular excitability" is one of comparatively modern coinage to express a phase of chemical reactions which hitherto has been known under the term "irritability." The term irritability would seem to imply a conscious sensation induced by the motion itself; whereas, the term "molecular excitability" may apply to non-sentient reactions, or to those that are the result of chemical combination. Thus many plants possess the power to fold their leaves and flowers when daylight recedes and on account of this tendency and manifestation, such plants are called "sleeping plants." It is a debatable question whether the *formative force* of a flower, or the protoplasm which comprises its physical structure requires rest, analogous to the sleep of man. And this question becomes one of greater interest when it is known that this *formative, shaping force* is as active at night as in day light, when the processes of accretion take on visible form through the change of chem-

ical spectrum induced by the withdrawal of the positive action of light. This phenomenon of closing the flower and folding the leaf, has been attributed to irritability of the tissues of which the plant is composed. But more modern research discovers that it can be accounted for upon data of chemical reactions. Light is a very powerful stimulus of positive character to plants; and when this electro-magnetic force is withdrawn those reactions set up within the plant that induce closing of the leaf and flower, and will be more thoroughly understood under the term of "*molecular excitability*." This will become more apparent when it is known that some plants open and close at particular hours of the day. Some are morning flowers, some evening, and a few open only at night. All of these phenomena can be attributed to some function of the formative and shaping force within the flower as it is acted upon by the various elemental energies surrounding it. It is true that flowers possess some physiological attributes and functions analogous to those of mammalian life, and among these are what approximates very closely to the structure of special glands, possessing physiological function of definite character. This fact is not only witnessed in centers and glands of reproduction, but in the phenomenon of special motion of physical character. A plant in India known as the "Moving Plant"—*Desmodium gyrano*—manifests some peculiar physiological characteristics, which indicate the presence of special centers of motion at the base of its leaves. The leaves are described as "ternate, the lateral leaflets being much smaller than the terminal one." "The lateral leaflets are constantly in motion, elevating themselves by a series of little jerks until they meet above the terminal leaflet, and then moving downward by similar rapid jerks until they reach the leaf stalk." "At times only one leaflet is in motion while all the others are at rest." "Sometimes only a few may be seen moving, while there is a partial cessa-

tion in the other leaves of the plant." "A high wind causes this sensitiveness more than anything yet known; the movements being more languid on a very hot dry day; but their movements are seen in their highest perfection in warm moist weather." A marked feature in these motions is that "the terminal leaf does not remain absolutely at rest, but its movements are not like those of the lateral leaves, but it oscillates from one side to the other." We are informed that "there are several species of the same genus remarkable for the spontaneous motion of its leaves." As these movements almost cease in dry hot weather, and attain their greatest perfection in warm moist weather, it is plain that the action of cosmic forces without the assistance of an overruling Infinite Intelligence will account for the evolution and manifestation of these remarkable phenomena. Self-existing matter and motion of spiritual character are *the real omnipotent factors* evoking these motions in vegetable life. But there are many plants that possess something more than molecular excitability, plants in which we note a degree of sensitiveness of high order of expression. Among these are found several species of "*Mimosa*" which exhibit a remarkable degree of sensitiveness upon being touched. These plants have a great number of small leaflets which close in pairs upon being handled. If more vigorous handling obtains the leaflets of adjoining pinnæ close, and sink down and at last the stalk and leaves hang as if withered. In brief time, however, they regain their normal position. These phenomena disclose the subtlety of touch even, in its action upon the plant, and they prove that *sensitiveness* is a special feature of certain phases of organic life, which characteristic can easily be traced to function as expressed in structure. This function of sensitiveness is noted in a superlative degree in a plant found in marshy places in North Carolina. It is sometimes known as the "Venus Fly Trap." It belongs to the order of *Dionæa*

Muscipula. It is described by Charles Darwin as follows: (See *Insectivorous Plants*.)

“This plant is remarkable for the irritability of its leaves. The leaf stalk is elongated, winged and leaf-like, and bears at its extremity an orbicular leaf, set round at the margin with stiff hair-like “spines” and having on its upper surface many small glands and three delicate irritable hairs on each side, so placed that an insect can hardly traverse the leaf without touching one of them, when the two sides of the leaf immediately fold together upon it, and lay hold of it, the marginal bristles crossing one another, and preventing the possibility of escape. The leaf does not open again till the whole substance of the insect has been absorbed by the plant, and nothing but the skeleton of the captive remains. For this purpose, the plant exudes a secretion of a character somewhat similar in its digestive properties to pepsine; and under the influence of this, the material of the insect capable of yielding nourishment to the plant, is digested, and ultimately absorbed, by the same glands that secreted the fluid. This process of digestion and absorption sometimes occupies three weeks.”

Here we see the expression of vegetable glands which are not only sensitive to the magnetic presence of a fly, but possess the power to arouse mechanical motion in these delicate hairs sufficient to fold the leaf and hold the prisoner with a precision of action as though under the guidance and control of the volition of conscious sensation and action.

Very many plants are of sensitive character and seem to be as thoroughly disturbed by the touch of any foreign body as if possessing conscious sensation, and may we remark that all of these characteristics belong to the spiritual attributes of nature's elements in process of cosmic evolution. Function is expressed only through structural organization, and any special function requires a special structure

through which the function is revealed. This truth is seen not only throughout the field of floral nature, but is manifest in every form and combination of elements in all cosmic evolution. Nature would not be infinite in her capacities did there not exist in her powers of development the various forms and types of life of vegetable and animal character that have been evolved in the past, together with those that belong to the present, or may exist in the future. Nature would not be infinite in capacity if this evolutionary process should cease at any point of duration. Nature would not be infinite if the life principle of any form of life ceased with the dissolution of the form, since such annihilation of life would rob her of her highest attributes and make matter through which form has its birth more enduring than the life evolved from its matrix. But let us extend our research in the field of sensation in another department of cosmic life.

THE HOME OF THE POLYPI.

The formation of Coral and Coral reefs found in seas and oceans of warm latitudes has attracted the attention of the naturalist for many years past. Perhaps there are few forms of zoophyte life more interesting than that belonging to coral structures. The name coral is given to the structure or home in which the Polypi lives. The Polypi is a peculiar individuality. It belongs to a very ancient family known as *anthozoa*, and is a genuine autocrat in its sphere of life. Its home—*polypidum*—is a calcareous deposit made of the chemical reactions of its own secretions in conjunction with salt sea water; and it contains carbonate of lime and a trace of calcium belonging to the water of the ocean. It has an oval-shaped body of gelatinous character, which it is capable of projecting out of its home, and to withdraw it at pleasure. It has a mouth in the anterior or fore part of its body, which is surrounded by a fringe. This

mouth is the only opening of its digestive system. Its food is sea water and the microscopic forms of life it contains. A close analysis of its body, discovers protoplasm, oxygen and hydrogen, calcareous substances, and a trace of calcium in solution. It reproduces its kind by *gemmation* (*budding*). Yet it is a strange mixture between calcareous, plasmatic and bio-plasmatic life; for in the germinal sacs of one variety we find *ova*, and in another of the same species, *spermatozoa*. With all of these peculiar and phenomenal attributes it possesses *sensation* in a high degree. When hanging out of its doorway enjoying its morning meal of salt water and its contents, it withdraws into its home at the approach of an intruder. Change the character of the salt water, and particularly of the calcium it contains, and Polypi loses the function of sensation—it becomes paralyzed and finally dies. It has been an open question for some time past with naturalists whether a low form of animal life could have sensation *per se*, without having a ganglia through which sensation is developed. The question arises, does the polypi withdraw into its home at the approach of an intruder because of the automatic action induced within its organism by the magnetic impact of the newcomer,—in manner like that of the pole of a horseshoe magnet repelling a similar pole of the needle? Or is the withdrawal the result of a real sensation aroused or induced by the higher polarities of organization? We have shown on a former page that polarity is an inherent factor of all forms and conditions of matter, and hold to the view that the higher the degree of organization, the more sensitive the organism to attractive or repelling forces, possessing certain characteristics; and that in many forms and types of life that this sensibility takes on the function of sensation. The common Oyster, a class of *acephalous mollusks*, although said to be one of the lowest and simplest of mollusk life, is a more complex organization than the coral,

and some varieties of them possess the power of locomotion, of swimming and of burrowing in the sand. "Its food, like that of the coral, consists of animalcules and vegetable particles brought to it by the water, which is drawn into its mouth by the action of its gills. In the central part of its organism is found the *adductor* muscle for opening and closing its valves." "Toward the hinge of its valves is the liver, which is very large, and between the adductor muscle and the liver may be found the heart, which is noted by the brown color of its auricle." It has no head, and its mouth is situated beneath a hood, formed by the union of the two edges of the mantle near the hinge. The gills are found in four rows when the shell is opened, and it is through these respiration takes place. Nearly all varieties are sensitive to the action of light, and some naturalists claim that some varieties of oysters have eyes which can be seen on the small red spots on the fringe of the mantle. Some varieties have organs of hearing and the labial tentacles are thought to exercise the sense of smell. "As stupid as an oyster," is a common saying; and yet when the oyster is thrown by the waves or tide up onto the sand of the beach, he knows enough to close up his habitation at once. So also when the presence of some marine animal disturbs it, that feeds upon it when it is caught with its shell open, it instinctively closes its doors. If the oyster has glands like the heart and liver, and ovaries for reproduction, if it has eyes or some structure that makes it sensitive to the action of light, if it possesses in a low degree the sense of smell and hearing, and there can be traced no connective ganglionic tissue, no visible plexus of sensation and yet it has sensation, or seems to have it. May it not be possible that other avenues inducing sensation exist in the structural process of its organism instead and in place of those usually associated with sense perception? The line of structural organization between molecular excitability and a high

degree of sensitiveness seems to be one of blending, wherein the change from the former to the latter can best be comprehended in its evolutionary sense. In an analogous manner the evolution of degrees of sensitiveness into special modes and channels of sensation, seems to be nature's order of developing function and expressing it from the plane of chemical reactions and excitations, to the higher unfoldment of perception by the development of special ganglionic tracts in the sensory system of man. The great variation in degrees of molecular excitability and sensitiveness in plants and other forms of life can be traced to divergence of structure, and divergency of structure is the result of a formative or shaping force of the plant, flower or tree, in connection or association with its environment.

The struggle for existence on the part of a plant in a soil made uncongenial by any circumstance of climatic character, or by any unfavorable states of sunlight and weather, will account for the changed appearance or expressions of the plant *per se*. If man really believed in some special OMNIPOTENT, OVERRULING INTELLIGENCE who gave a special life to each existence, and who saw it struggling with the vicissitudes of its environment in which he had placed it, and finally succumbing to it, would it not seem a grim commentary on God's wisdom and on man's belief. The farmer who would plant a field of beans and then sow upon the field chemical compounds which he knew would jeopardize and perhaps kill his beans, would be regarded by all consistent thinkers as a man suited to a home in an insane asylum. When the truth that molecular co-relations will account for the various divergencies of character and functions expressed in organic life and matter are thoroughly known, God will seem less capricious, vengeful and heartless, than his followers now picture him to be.

Thus far we have called attention to some data upon

the evolution of molecular excitability, sensitiveness, motion and sensation through the co-relations and changing polarities belonging to nature's spiritual forces in their processes of combination. We feel, before closing this chapter, to add some new data of vast importance which seems to indicate that life itself may be traced to special combinations of chemical forces. Important facts have already been gleaned by the genius of this age to indicate that the seeming mystery of vital force, which man during past ages has been inclined to attribute to some supernatural power, inheres in chemical combinations of known attributes. The experiments and discoveries by M. M. Berthelot* of Paris, France, set the note for still greater discoveries by Professor Norman and Professor Loeb at the Wood's Hall Laboratory in a little village on the southeastern shore of Buzzard's Bay, Mass. It seems, according to the statement made in *The Chicago Chronicle*, that Prof. W. N. Norman of the University of Texas made the first startling discovery that "*chloride of magnesium*" would develop the unfertilized eggs of a low form of marine animal known as "*The Sea Urchin*." But Norman's experiments came to an end by his death, when Prof. Jacques Loeb of the Chicago University took up the experiments and carried them to a successful termination. *The Chicago Chronicle* thus describes Professor Loeb's work.

*"Before Berthelot's time, it had been announced by chemists that the so-called organic substances were the products of a mysterious 'vital force,' that they were quite incapable of reproduction by physical agencies acting under mechanical law. Berthelot set out to prove by actual experiment the hollowness of such assumption. While acting as M. Balard's assistant at the College de France, he succeeded in producing alcohol from illuminating gas and water. This was followed by a series of important experiments, known to chemists as the synthesis of the carburets of hydrogen. From mineral substances he was able to produce compounds that had been regarded by the earlier chemists as the exclusive handiwork of Nature.—"*From The Review of Reviews of January, 1902.*

“REPRODUCTION OF YOUNG SEA URCHINS BY CHEMICAL
TREATMENT.

“For the purpose of his experiments Professor Loeb secured eggs from a female sea urchin which he was certain had not been fertilized. These eggs he placed in water containing solutions of various salts. Calcium, sodium, potassium, and magnesium were used. He found that when he put the eggs in calcium, no result was obtained. When potassium was used they developed slightly. In sodium they slowly evolved into blastular, but in magnesium solutions these later forms were produced in two hours, and within twenty-four hours these blastular having been placed again in normal sea water developed into active and vigorous pluter. The experiments were a complete success and chloride of magnesium the successful medium for development. Not content with these experiments that the eggs were entirely unfertilized Professor Loeb took from each group used a portion which he immersed in sea water to develop in the natural manner, and in each case they remained unchanged, showing no growth. Having succeeded in developing the eggs by chemical means, he began experiments to learn why they did not normally develop in sea water without requiring to be fertilized. He added to his solutions various other ions and found that as the amount of calcium or potassium in the water was increased, it became more difficult and at last impossible to develop the eggs. The fact was plainly established that the milt needed to carry to the eggs for fertilization nothing more than certain ions to counteract the restraining elements in the sea water. Subsequent experiments made upon star fish resulted as successfully in the reproduction of young star fish by chemical fertilization of its eggs as with sea urchins.” That these discoveries and others that are sure to follow will thoroughly change the theories of the past as to the part that God plays in the evolution of life, the leading ex-

ponents of science and natural philosophy do not hesitate to declare. And they affirm "that when the chemical theory of life is definitely formulated," that "it will startle the world *as it has not been startled since the time of Darwin.*"

THE REALM OF CONSCIOUSNESS.

HOW THE HUMAN HAS SENSATION, THOUGHT AND MIND.

In a former chapter we briefly outlined what the scientific intellect understands by the terms "Modes of Motion," as applied to the five senses of man in processes of conscious sensation, also to the invisible relation existing between elements and factors in process of chemical combination. In this chapter we desire to enlarge upon and analyze more closely, the data and principles belonging to and qualifying mental processes in the realm and scale of its evolution. We have noted in plant life the development of "molecular excitability," as expressed in several different varieties and manifest through the evolution of special plasmatic glands. We also called attention to a higher manifestation of sensitiveness amounting to apparent sensation, as noted in the life and habits of the polypi and oyster. These diverging phenomena of molecular excitability, sensitiveness and sensation manifest in low organic life have occasioned considerable controversy among physiologists, not only as to the causes inducing the divergency of its expression, but as to the relation, if any exists, between the lowest form of molecular excitability and conscious sensation.

Dr. Todd, in his *Cyclopedia of Anatomy and Physiology*, defines sensation to be "the perception by the mind of a change wrought in the body." Dr. Carpenter, in his treatise "On the Functions of the Nervous System in

Human Physiology," calls attention to the fact that "the ganglionic centers, which lie at the base of the brain in man, are in direct connection with the nerves of sensation;" and that they "appear to differ entirely in their functions from other parts of the encephalon." And not only do they differ in function from other ganglionic structures in the individual encephalon, but they differ in character and function of sensitiveness in different people.

This fact of the divergency of structure and function of the special centers of sensation being understood, it follows that the same object in the field of vision would induce a variety of sensations, as expressed in the mental impressions of different cerebral organisms. Weber undertook to test this varying degree of sensibility of the human body, not only as manifest in different persons, but upon different surfaces of the same body, by touching the skin with a pair of compasses tipped with cork, and by varying the distances of the points.

But recent discoveries of the functional qualities and characteristics of these special centers of sensation, have had a tendency to modify the opinions and conclusions reached by former distinguished investigators. The modern physicist and physiologist traces a continuous scale of increasing sensibility from the point of purely molecular excitability to that of conscious sensation. He affirms that there is a vast physiological and functional difference between sensations that are apparently automatic in their action, and those that evoke direct impressions on consciousness. In other words, he affirms that molecular changes inducing apparent consciousness is one step in the scale of conscious evolution, whereas to be conscious of consciousness, and to act in accord with sensations arousing conscious volition, is an expression of function of a higher and different order. Hence it will follow that sensation *per se* may be an evolution from a state of molecular

excitability to that plane of sensitiveness where we note the development of special ganglia inducing the highest order of sensations within the citadel of consciousness. To illustrate. The vigorous repulsion and attraction manifest between a balanced steel bar and a magnet as the poles of each are brought in near contact, can safely be taken as a phenomenon of molecular excitability. The folding of the leaves of a sensitive plant and the wilting of the stem upon repeated handling is also an indication of molecular repulsion. Certainly there can be no molecular attributes in the steel bar, or in the plasmatic structure of the sensitive plant that suggest a mental process taking place within their respective material forms. The "Moving Plant" of India, to which we referred, is a special illustration of molecular excitability, with its phenomena varying in proportion to the conditions of the weather, which seems to be the principal cause of the various changes taking place from day to day within its organism. Thus far we are referring to a phase of excitability which may be aroused by chemical or polar reactions. But what shall we say of the plant *DIONÆA*?—*Venus Fly Trap*? Here we see an evolution of sensitiveness and special function indicating the presence of some attribute almost akin to mental action. When a fly lights on the leaf and touches one of the delicate hairs attached to each side of the leaf, it immediately closes up and makes a prisoner of the fly. The fly then becomes the food of the leaf. If we concede that the plant has a mind, as that term is used, then the plant has sensation; and Dr. Tood's definition of sensation referred to, would apply to this plant as well as to higher forms of conscious life. Now the fly or insect is a sentient existence, and the lowest form of insect life possesses special ganglionic centers of sensation, evoking vision, hearing, smelling, touching, and perhaps tasting. The fly or insect also has the power of locomotion unfolded to a high degree. The plant *Dionæa*

has none of these sentient characteristics so far as is known; but its leaf, on the upper side has many small glands of peculiar form, suggesting some special function stored up within its centers. But the question will be asked, "If the plant has no mind, or no sensations arousing mental action, why should the fly or insect which evidently possesses superior attributes and special faculties and sensations, *become the prey of a non-sentient plant?*"

To this inquiry we reply that principles of automatic magnetic attraction induced in the leaf by the presence of the fly will account for it, and for all analogous phenomena. The fly or insect is seeking food. Its conscious instinct is limited to its physical needs, hence is purely sentient in its character. It did not apprehend the characteristics of the plant to fold its leaves and make a prisoner of it, when it came in magnetic touch with its sensitive hairs and leaf. The plant is an automatic mechanism, ready to secure its food when certain magnetic reactions indicate its presence. The fly or insect possesses these polar attributes to which the plant is reciprocal, and being reciprocal to the magnetic polarities induced by the presence of the insect, it closes its leaf and spines in accord with the universal principles of magnetic attraction. That these attributes of the plant are automatic is shown in the action of the same glands which exude a fluid similar to pepsine, which decomposes the insect, and afterwards assimilates the mass of matter of which the insect is composed. Animals possessing high degree of sentient consciousness will, while in search of food, venture into localities and miasms fatal to life. Cattle and domestic animals of every grade in search of physical sustenance, frequently run into mire and quicksands, or drown in the water. Even man, seemingly as unconscious of danger as the insect, will locate in malarial districts and lose his life. Furthermore, he will persist in eating, drinking and smoking pernicious elements, to gratify

his appetite even when he is seemingly aware of impending fate. With all of these data of sentient life manifest in degrees of sensitiveness and sensation, it is a question with naturalists, physicists and physiologists, as to what point in the structural evolution of animal life that conscious sensations are evolved; also, at what time in the evolution of man he becomes conscious of his consciousness.

Nearly all animals refuse to eat food that is poisonous to them, and we call this refusal, instinct. The question arises, is this instinct to reject unsuitable food the result of some mental process carried on in the fibres of conscious sensation, or is there something repellent in the magnetic character of the food stimulating an instinct in the animal organism to shun it? If the latter, then it will seem that in many avenues of animal life that instinct is superior to the reasoning powers of man. If the former position be held, then we shall deduce that some states of conscious sensations in animal mental processes, are superior to the mental inductions of men, since the animal consciously avoids poisonous foods, while man to gratify an abnormal appetite will run the risk of fate. Eventually it will be seen that instinct and intuition are terms implying a class of sensations that are analogously alike in animal and man; and are the result of impressions arousing conscious sensations that do not belong to the avenues of the so-called five senses. We use the term instinct when speaking of the attributes of animal life, and intuition when applied to certain automatic phases of perception as applied to the human. These allied faculties we believe to be automatic, involving special ganglia and were first in the process of evolution in the sensory system of both animal and human life. All animals have more or less instinct in the preservation of their life, and that of their young, and in providing for future necessities. Primitive man had intuition before he was capable of reasoning, and this

attribute, modified by his fear and his environment, was his principal teacher in connection with his experiences. Both instinct and intuition are capable of evolution and development, as is witnessed in the capacity of animals to be taught and schooled in many ways. Intuition likewise develops with the ascending consciousness of man. It is of low and sluggish expression with some races of the human family, but keen, acute and sensitive with the higher order of civilization. Neither instinct or intuition employ processes of reasoning. They induce action without reason, because both instinct and intuition are the immediate result of molecular and psychic impressions upon consciousness, independent of the five senses. While it is true that the action or sensation of either of the five senses might stimulate instinct or intuition, yet these attributes and factors of consciousness do not necessarily depend upon them. Its action and expression depend, in a measure, upon the structural development of a special ganglionic tract extending from the medulla oblongata to the brachial plexus of the spinal system in man, and their ramifications, cover the shoulders and trunk of the human body through the plexus indicated. These nerves are known to the anatomist and physiologist as "special nerves of sensation." In addition to the above special system of sensory character, every ganglionic tract in the human organism contains matter of high electro tension conditioned to psychic modes of motion and evoking instinctive intuition. Very much of the every-day life of the human is shaped and disciplined by the psychic sensations of his environment, which are of an intuitional character. We affirm that the evolution of these ganglionic centers evoking instinct and intuition, precedes the evolution and functioning of the five special tracts of sensation. That is to say, that instinct in animal life commences in a state of sensitiveness, as is witnessed in the polypi and oyster, and reaches a high development

of conscious sensation in the more complex nerve structures of animal life. Likewise intuition was for ages the protective shield and guard of primitive man. And its evolution, keeping pace with the growth and development of civilized life, makes it a valuable psychic thoroughfare, connecting man to his environment, and a monitor and ward in times of danger or menace. A careful study of the life and habits of domestic animals, and a critical examination of the data of mental processes involved in the evolution of man, will confirm any investigation of the evolutionary character of instinct and intuition. If there be, then, in nature's order of evolution a gradual development of states of molecular excitability, as is witnessed in vegetable life, to states of molecular sensitiveness expressed through plasmatic glands, as is manifest in several species of the plant *Dionæa*, of North Carolina, and if this evolution evokes higher manifestation of sentient sensations arousing a limited degree of consciousness, as noted in coral and low forms of mollusk life, it will follow as a logical sequence that degrees of consciousness and sensations involving special ganglia as centers of sensation, are an evolution.

From these well-established facts in natural history, we shall deduce that between the automatic expressions of the low forms of sentient consciousness, to the higher forms of sensations inducing conscious emotions, there is a gradual ascending scale of its manifestations. And that from the plane of sensations evoking conscious emotion, to the plane where consciousness is conscious of its existence, there is still a higher scale of development manifest through the heterogeneous structure of ganglia and cortical centers of the human sensory system. To demonstrate this evolution of states and degrees of conscious sensations, it will be necessary for us to invite our reader into the domain of cerebral mentology, where we can trace the structure of

the physical ganglia connecting consciousness as the entity and factor of sensation, to its environments.

THE EVOLUTION OF DEGREES OF CONSCIOUSNESS, EVOKE SENSATIONS, THOUGHT AND MIND.

In a preceding chapter we instructed that the soul of a rock, stone, vegetable, shrub, tree, or animal of whatsoever type, is its formative or shaping force—an inherent, indwelling life principle, which directs and promotes the individuality and integrity of the form, and preserves the type and genus to which it belongs. That it is an invisible magnetic energy of formative character and tendency, no close observer can doubt. That this formative principle differs in the divergent varieties, species and personalities, is evidenced by the form to which it belongs. That it is spiritual as an energy promoting growth and development, and susceptible to molecular or psychic impressions, all nature testifies. That as a shaping force it is polar and reciprocal to elements and compounds suited to its evolution, and is capable of repelling encroaching and unsuitable elements, is witnessed by the perpetuity of the form to which it belongs. These facts being self-evident to the close thinker and investigator, it will follow that whatever of molecular excitability, sensitiveness and sensation may be manifested in the structure under investigation, that these attributes, faculties and sensations belong to the soul or life principle we call the shaping or vital force. That this vital soul force occupies and ramifies every part and particle of the structural organism to which it belongs is a fact always in evidence. Hence any phase of molecular excitability, sensitiveness and sensation that may be manifest, is due to the reactions of the soul force or vital principle of life which is being acted upon. This evident truth

applies with equal force to all the divergent forms of life and activity known to cosmic process.

Molecular excitability and sensitiveness do not necessarily imply or indicate the presence of consciousness; but that a high degree of sensitiveness precedes the evolution of sentient life, there can be no doubt. In the low forms of sentient life we find the beginning or inception of conscious life. That we can attach the term *conscious* to the life activities of the low forms of *Articulata* there is room for grave doubts. These low forms of existence possess sensitiveness of high molecular character, but if conscious, it is scarcely perceptible. The nervous system of some of these primitive organisms consists of small masses of ganglia arranged in a succession of links along the central part of the body. But in the higher forms of articulate life, with the presence of a more complex nervous structure, there is witnessed varying degrees of conscious sensation. Especially is this true of those species having articulated limbs. In vertebrate life, with a still higher and more complex nerve organization, consciousness is manifest in a high degree, and some species of animal life are possessed of a nervous structure arousing conscious sensations more subtle than is found in man. It is universally conceded that nearly all wild animals have the senses of seeing, hearing and smelling unfolded to a higher degree than is found in the human; and in the domestic group of animals the horse, dog and cat have acute vision and hearing, while the dog and cat possess a remarkable development of the sense of smell. While it is true that all or nearly all mammalian animals possess a high degree of consciousness, it is a question with naturalists if they in any way are conscious of their consciousness. Some animals possess a degree of what seems to be reason and judgment, as is witnessed in their every-day life. Indeed, many insects develop a high order of associated effort, and work in concert

as methodically as though possessed of the faculties and powers of communication, and seem to agree to united and concentrated coöperation. It seems to be quite evident that the art of communication between insects and animals is largely of psychic character, and to what extent conscious life in these avenues of existences is vested with something akin to reason in their respective associations, is a matter of divergent speculation. The evolution of consciousness to the plane where conscious sensations, thought and mind are evoked, by impressions coming from without belong to the higher orders of mammalian life, and particularly to man. Not only is there a wide divergency between the low forms of sentient consciousness where a sense of self-protection is only aroused, and the higher manifestation where reason and judgment are called into action, but there is a wonderful development of consciousness in degrees of unfoldment, manifest in each human life of normal character. That this evolution of consciousness is due to impressions constantly being made in man's waking hours through the various avenues of the sensory system, and by the ability man has to reflect, to think and to balance the result of his sensations in his intellect, there is every reason to believe.

To enable our readers fully to comprehend this evolution of consciousness, it will be necessary for us to carefully analyze the processes through which it obtains, and to point out the precise relation that brain fiber holds to all methods of human sensation. On a former page we postulated that consciousness is an attribute of the soul, the knowing principle of man or animal. Its function includes in its higher evolution every sensation and emotion the soul or sensing principle of man can have. That it is capable of abnormal development, is witnessed in the dipsomaniac, the insane and the demented. That it is capable of higher evolution than now is manifest in the human, will be seen in the progressive civilizations yet to be. All sensations

man can have, are conscious sensations. Man can have no sub-conscious sensations. The employment of the term "sub-consciousness" is not only a paradox, but it implies a cerebral and mental inconsistency. *Consciousness must be conscious to express what the term implies.* In other words, the consciousness of a thing or event, without the accompanying sensation of it, is a mental inconsistency. If there be no sensation of a thing, there can be no consciousness of it. A condition of undeveloped consciousness is neither *sub nor super*. Memory may recall an event, transaction or scene, which at the time it occurred made only a momentary or fleeting impression on consciousness; but the recalling and refocalization of the intellect upon it, may evoke a distinct line of sensations, which were not experienced at first. These mental retrospects of the human, cover a wide field of natural experiences—they cannot be traced to a state of sub-consciousness which is not conscious.

A careful review of the data of conscious perception and mental process will demonstrate that conscious sensations, thought and mind are the direct result of impressions made upon the conscious principle of life itself. Consciousness is the central station in man toward which all modes of motion inducing sensation flow. The five special avenues of sensation in association with the ganglionic centers evoking intuition, comprise the avenues through which this central station is reached. Owing to the great variation in mental structure and organization, consciousness is manifest in degrees of great divergency from the low form where only an instinct of self-preservation is aroused, to the higher and keener sensations inducing and evoking the reasoning powers in the enlarged sphere of conscious existence. It will be seen in this connection, that conscious sensation must precede even thought or mind, hence to use the term mind as a concise synonym for the term

consciousness, is to transpose the data of mental process of cause and effect as taught and demonstrated in cerebral physiology. As man can have no sensations that are not conscious sensations, it will follow that consciousness must first be impressed before sensation is evolved. Therefore we reason that sensation of whatever character *is the result of such impression, and that thought and mind are natural sequences to impressions made on that attribute of the soul we designate as consciousness.*

Man can have no sensation, thought or mind of anything in his environment, until his consciousness is first impressed through some of the special avenues of sensation, or by the psychic impact of those modes of motion correlated to the ganglionic centers of intuitional sensation. In the higher manifestations of consciousness, sensations through any of these avenues evoke thought, and an aggregation of thoughts compiled in the balancing processes of the intellect, comprise what we call mind. Let us amplify this truth.

A. hands the chemist an ore containing elements and factors heretofore unknown with the question, "Mr. Chemist, what is your opinion or mind regarding its character?" The chemist takes it in his hand and after subjecting the specimen to his sense of vision and touch, trying to recall the ores with which he is acquainted, he says frankly, "My dear sir, I have no opinion and no mind about it—I never saw a specimen like it before." Certainly, how can a man have an opinion or mind about a thing which he has never before seen, and which in no concise way has been impressed upon his consciousness? "Well," says Mr. A., "I will leave the ore with you, and you may make for me as careful analysis as you can, and I will call in a few days to see what success you have." "I will do the best I can for you," replies the chemist, and he takes the ore to his private laboratory. Here in the quiet of his work-shop he

begins a careful investigation of the specimen left for analysis. The knowledge he has accumulated by former experiments in chemical analysis is of value to him. He compares this specimen with others with which he is better acquainted and finds only a few traces of precise similarity. He brings into use the microscope, and examines minutely the order of its crystallization in process of formation. His consciousness having been enlarged by experiment and research in the pursuit of his art, makes him more fully conscious of the general nature and character of ores, than when he first commenced his study in chemical analysis; and this evolved and enlarged state of consciousness enables him to sense that the specimen before him is unlike any with which he is acquainted in many ways. Carefully he prepares to decompose a portion of the specimen, and to make crucial tests for the elements entering into its formation. How minutely he examines every chemical reaction, and notes with mindful eye and bated breath the presence of elements heretofore unknown. Now he begins to form an opinion as to the character of the ore under investigation and that it contains elements or factors not found or known heretofore in chemical analysis. His consciousness has been impressed with sensations never before experienced, evoking new thought and gradually laying the foundation for consistent mind regarding the ore under analysis. Repeated experiments confirm his opinion as to the reality of the new elements found, and these new elements contain such marked function of radiance and positive chemical characteristics that he names them "*Radium*" and "*Actinium*." During all of this careful, patient research, we note the gradual development of "*opinion*," whereas in the beginning of his analysis he had none; and this *opinion*, with some modifications, merges into a mind as the result of his consecutive analyses and experiments.

Let us ask if during all of his experimentation was it

not his consciousness that had all of the varying sensations obtaining during the time of his investigations, and was it not this sensing and knowing attribute of his soul that led and directed in the analysis reached? And may we not conclude that his growing opinions and finally his mind were *the result of his investigations?* He began this analysis with a consciousness enlarged and widened by former study, research and experiments in chemical analysis; but he had formed no opinion, he had no mind as to the hidden factors and character of the elements contained in the ore. Man can have no opinion, no mind regarding something he has never seen, heard of, or has not been impressed with. And these impressions are always made on consciousness, in the citadel of sensations. This being a self-evident fact, we affirm that *human opinions and mind are the result of such impressions*, and that consciousness and the soul are an evolution.

Objective nature impresses human consciousness by invisible modes of motion through some of the avenues of sensation. In the higher forms of consciousness, these modes of motion through any of the tracts of the sensory system evoke first, sensation, then thought, then mind as a sequence to consecutive thought, aided by reason and the balancing factors of the human intellect. Hence it will be seen that mind is not the entity impressed in mental processes since it is always the result of impressions, and in the strict application of the principles of cerebral mentology, the terms "*objective mind*" and "*subjective mind*" are as inconsistent as the terms objective telegraphy, and subjective telegraphy, if applied to outgoing or incoming messages.

A schooled mechanic will not use an axe, when the saw more consistently is required. He will not use the gouge, when he requires the chisel. And we argue that an intelligent physiologist will not employ terms of "sub-

iminal" and "sub-conscious" proportions when no ganglia or centers of mental motion requiring the use of these terms, are known to any cerebral or physiological anatomist living, and which contain within their etymology a mental paradox. It will be a Red Letter era for human progress, when man can be instructed concisely how he knows that he knows. And this instruction can only be had by an analysis of the relation the conscious soul holds to its environment by the impression made upon it, through the various channels of sensation.

THE RELATION SCIENCE HOLDS TO NATURAL PHILOSOPHY; AND ITS CONFLICT WITH EVERY PHASE OF RELIGION.

The numerous discoveries made by scientific investigation during the last quarter of a century, have so far made its inductions popular, that now every divergent system of belief within the domain of sociology would fain employ it in verification of their respective claims. Nothing is more common than to hear an advocate of a dogma or creed cite some premise of science in confirmation of a creedal claim, postulated in the unknowable, which postulate, if acceded to, will have a tendency to impress the popular mind with the data and proportions of a scientific proof in the conclusions reached. The avidity and eagerness with which all of these assumptive speculators grasp at a scientific thought when it seems to promote the truthfulness or strength of their position, is only equalled by the unqualified zeal with which they will repudiate both science, and its formulas, whenever its inductions are antipodal to, and refute their claims. The prevailing looseness with which this class of superficial thinkers employ the term, is manifest in the fact that it is constantly referred to as a schism, and in an individual sense; when in reality the term science is a general term applicable to those formulas of research by which every branch and department of human knowledge is established. Hence, *it is the name of a method* by which natural philosophy as a sequence to scientific investigation is verified; and being the name of a method, it cannot be at the same time the name of the fact which it demonstrates. One writer affirms that "science is classified knowledge." Another that "science is reasoned truth;" and another that "science is the knowledge of nature, its laws, and functions;" and still another affirms

that "when man becomes spiritually unfolded, science and religion will be seen to be one and the same." To all of these thoughtless statements we shall enter a vigorous protest. *Science is a system of inductive and deductive reasoning.* It is a formula of demonstration, as applied to the inductive method, and of syllogistic reasoning as applied to the deductive; hence, it can never be employed as a synonym for knowledge, philosophy, or truth, since it is only *the method* by which knowledge and truth are established. To illustrate. Mathematics in its application is the science of quantity. But quantity *per se* is not science, but the result of mathematical deduction as applied to processes of reckoning quantities. A lumberman's rule is a scientific mechanism, so figured as to enable the dealer to tell at a glance when he lays it upon a board, or stick of timber, the number of square or solid feet contained in the lumber thus measured. But the rule itself is not science, neither is the pile of lumber measured science; nor is our knowledge of the square feet in the pile of lumber science, since our knowledge *is the result of a system of scientific deduction.* Electricity is measured in volts of energy, and ohms of resistance. But neither volts, ohms, or electricity is science, since volts, and ohms are only units of measurement, and electricity the energy measured. Chemical combination depends upon the reciprocal polarity of combining molecules, reckoned in volumes; but neither the volumes of the elemental energies that enter into the combination, nor their molecules nor the compound evoked, can be termed science, since chemical science is the system of analysis by which our knowledge of its data is made known by demonstration. These facts being in evidence, it will be seen that knowledge is the synthesis to scientific analysis—*the result of inductive and deductive reasoning.* By the term "scientific knowledge," we mean that superior order of understanding and comprehension, which scientific analysis

only can demonstrate. The invisible and primary motion belonging to, and individualizing each element of nature is at first only known through, or by the phenomena of its actions and reactions in combination with other elements; yet these phenomena have been so accurately tested and classified, that to-day the progressive physicist points out seventy-two, possibly seventy-four elements, that enter into, and become factors of cosmic evolution. It is the especial sphere of the student and experimentalist in scientific research to deal directly with the invisible attributes of nature, through the phenomena of the invisible. His thoughtful intellect first suggested the term "invisible modes of motion" as applicable to that psychic relation which one element or factor of nature holds to another; also to suggest that the five senses of man and his intuition, connects and relates him to his environment by these avenues of invisible motion. The flippant manner with which the careless thinkers refer to science as the name of knowledge instead of the method by which the data of knowledge and truth are established, and the reckless disregard they manifest for the real facts upon which the scientific intellect builds, is open evidence that their acquaintance with the formulas of science begins with a desire to conserve the name of scientific synthesis when it can be warped into the seeming support of some individual, or popular schism, and ends with zealous disregard for everything scientific when it is antipodal to their claim, or no longer conserves their speculative interests. Let us amplify this fact. After being taught in school and college that nature is a unit, that all of her forces and energies are eternally co-related, after listening to the declarations of learned pulpiteers that the entire universe is a vast system of harmony, a modern writer makes this counter statement. In speaking of spiritualism he says, "Spiritualism is truly a science. Mathematics is not more surely fixed as a science than is

the science of life here and hereafter, called spiritualism." But, this writer goes on to say "It is a spiritual science, differing from material science as widely as spiritual things differ from material things." So if the assertions of this writer are valuable, "nature is not a unit," and the universe is not a vast system of harmony, since it includes two antipodal systems of science; the one for the material, and the other for the spiritual world. Now the opinion of this writer, however opposed it is to the inductions of natural philosophy, will find a warm response in the mentality of many. That cosmic science has nothing to do with spirit or spiritual things, still lingers in the popular mind, a relic of past forms of thought, as instructed in the days of Calvin and Cotton-Mather. It will be a time of real emancipation of man from the fogs of ecclesiasticism—a real awakening from the hypnotic slumber of theological suggestion, when all of these expositors of ancestral beliefs become sufficiently awake mentally to sense the intellectual poverty of their methods of reasoning, and the tattered and torn logic and its sequences with which they seek to cover and bolster up their individual opinion, or some remnant of oriental phantasy. Eyes have they, but evidently they have not read that fully twenty-five hundred years ago the philosophic intellect of that time declared the spirituality of all elements and substances of which matter is composed, which affirmation *has never been disproved*; but grows more luminous with the discoveries of modern time. Ears have they, but they seem dead to the fact that in nearly every college in the civilized world a chair is endowed to instruct that all nature and her processes are eternally co-related by invisible formula called "modes of motion." These facts being in evidence, we affirm that science does not deal with material things in the general sense in which that term is understood, but with those invisible elements and energies which the thinker and philoso-

pher of every age have called spiritual.* Hence in exact language there can be no such thing as "a material science;" but we do have sciences of the formation of matter. Neither do we have "physical science," but rather sciences of the organization of physical structures. No one ever saw the life principle of oxygen or hydrogen, or that of any element or compound or form of existence, as they are invisible spiritual entities, and are known to the physicist as life energies. It is a ludicrous commentary on the consistency of thought of these critics of science, who affirming "God as the first great cause," "The Infinite Intelligence who created the world and all cosmic process out of his Holy Spirit," that he,—God—should have made a visible world; that he gave to oxygen, hydrogen, nitrogen and all other elements of nature their respective life motions, and established their combining proportions; that every form and type of life was "a Spiritual design;" and yet, this God, this "First Great Cause," this Infinite Intelligence, is in fact, accused in all of these short-sighted criticisms of being a *materialist*, as it is claimed he created the visible universe of material things. Strange

*The writer understands by the term spirit, a general cosmic term, applicable to the invisible life principles of the heterogeneous elements of nature. Hence nature in its essences and primordial substances is infinitely spiritual. He also employs the term spirit as the proper term to apply to the invisible magnetic life energies of formative character, that evolves the form and is the real entity that acts, and is acted upon in the development of every type and form of life. The life principle of oxygen, is an invisible magnetic spiritual energy whether it was made by the Hebrew God, or is self-existent, and it becomes a formative energy when in combination with other spiritual elements. The life principle of hydrogen is also a spiritual magnetic energy and entity but differing in its molecular attributes from oxygen. The life principle of a flower or of man is a spiritual formative energy. In the scientific analysis of the relation of one thing to another, we do not call an egg a chicken, we do not call water ice, we do not call oxygen and hydrogen gases water, neither do we call their life principles matter. Matter is the product of elemental substances in combination.

spirit of criticism that reflects the authorship of materialism in terms of reproach upon God, who is said to have made all things *from spirit* by the *omnipotence of design*. What an uncertain and irregular ideal of truth and consistency of thought to affirm God as a spirit, and that cosmos and its processes were made and evoked by his "Holy Spirit," and then to denounce in dogmatic terms the materiality of its visible forms, and co-relations.

Just think what a tremendous throb of spiritual volition and faith it requires to make one believe that God made twice two four, and that he established the theorems of mathematics, and the equations of chemical physics, and the combining proportions of the homogeneous spiritual substances of which God is like; and then to accuse him of infidelity in making a materialistic world out of his own spiritual substance, is, to say the least, unpardonable, and a libel upon Infinite *Intelligence*. How inconsistently the human glorifies God by talking about a "material science" for the material world which he affirms God made, and "a spiritual science" for a spiritual world out of which his God made the *material* universe. And yet, *this has been the method of glorification ever since the inception of Ecclesiasticism*. This almost universal method of imputing the "crudeness of materiality and material things" to God, comprises the fundamental idiosyncrasy of religious worship and belief. When critics and scoffers of science can get out of this rut of inconsistency, when they are no longer in mental conflict within themselves as to the relation between the visible and invisible expression of cosmic process, when they are able to disentangle themselves from the mental dilemma they are in by assuming spirit to be a motion of omnipotent energy in no way related to matter except by the domination of marvelous power; when they cease to assume "material laws for material things," when they can free their intellects of all

of this rubbish of pagan concept and modern superstition, they will at least cease traducing their God by reviling the material world which they affirm he made.

The term "pseudo-scientist," whoever or whatever it means, seems to be a convenient and common club in the hands of this constituency to belabor and malign all those who favor the scientific method of investigation, and who oppose the assumptive arrogance of an illiterate and dogmatic clerical theism. The use of the term in this connection, however, is a most unwise selection, for it fully indicates the lack of erudition and cogent common sense of those who employ it. The term "Pseudo," is from the Greek, and means "lying," and "false." Applied as a qualifying word to science, or to a scientist, it is a paradox. In the correct use of words and their application, there can be no such thing as a lying scientist, or a false scientist, so far as the term science applies to methods of demonstrating truth, and knowledge. But unfortunately for our critics, it does apply with strong emphasis to false and lying teachers, and instructors, and we will submit that any cleric or teacher who instructs that God, or "Infinite Intelligence" was the creator of INFINITUDE—that God was the creator of something that has always existed, such teacher is in every sense of the term, a *pseudo-teacher*. Any cleric or teacher who affirms that in the cosmic order of time that a God or "Infinite Intelligence" can be, or is "Infinite," is a *pseudo-instructor*, since God or "Infinite Intelligence" has not existed in the to-morrow. Therefore, we affirm that any God known to time, or to human imagination, who depends upon the never-ceasing ticks of the clock of time for his unperfected infinity, is as finite in the duration yet to be, as any other existence of time and space. And we furthermore submit that any teacher, or class of people who affirm God as the spiritual cause of all cosmic process, who instruct that matter is, or ever was "dead, and crude,

and inert," thereby assuming that to that extent God's spirit is dead, and crude and inert, and that his effort to make matter out of his spirit died in the material, *not only vilify and traduce the spiritual omnipotence of the God they profess to believe in and worship, but they are the greatest infidels of the age, since all chemical experiments demonstrate that there can be no such thing as crude and dead matter.* The antipodes are no further away from their opposites, than is the realm of cogent reasoning from the sphere of this ignorance and mental perjury!

It is this class of pseudo-teachers who are continually berating what they call the "finiteness of the human mind." Mind is the mental expression of the soul; and if it can be proven as our critics claim that the soul came from God, then it is as infinite as God. If it be held that the soul is an evolution, then it is as infinite in duration as the factors that evoke and sustain it, and its province as a progressive entity is to discover more and more of infinitude, hence in no sense is this clerical criticism true. Man's mind and intellect is limited in knowledge and in its capacity to acquire it, but as a progressive soul, man's mind is not finite. These pseudo-teachers not only instruct the finiteness of the human mind, but they continually criticise in terms of moral obloquy what they call "man's physical senses," seeming to be entirely oblivious to the fact that in the constitution of man as a spiritual ego, he can have no such thing as a physical sense, for the reason that all sensations emanate in the realm of consciousness, and consciousness is a sentient attribute of the soul. The avenues and tracts of the sensory system connecting the external world to human consciousness may seem to be physical in their visible aspect, but their function is of psychical character, since these tracts convey only invisible modes of molecular motion to man's consciousness, which upon being impressed has sensation in accord with the molecular structure of the

avenue through which the sensation is evoked. The states of mental hypnosis upon the public mind is consequence of its adherence to ecclesiastical beliefs, in connection with the prevailing ignorance of the cerebral relation of man's conscious principle to methods of sensation, and the general formulas of knowledge, give opportunity for all of this class of pseudo-instructors to belittle not only mankind, but even the very avenues through which alone he can have knowledge of his environment.

It seems incredible that any one claiming to accept the inductions of science and the higher life can continue to stake their morals upon the Bible of an adult-erous age, and the miracles of its numerous Gods. Affirming the central postulates of evolution, they instruct as the basis of literary ethics the Mosaic theory of Creation. Assuming in private and public the inductions of geology, and archæology as proof of the great antiquity of man, they continually refer to the Bible Adam as a fact. With the history of the various systems of theogony (the gods) of the nations of the past in every public library, they claim Jehovah—the Hebrew Yahve—a national and tutelary god of the Jews, as the Creator and First Great Cause of Cosmos. All tutelary gods and deities were the spirits of deified men, and are so accounted in all history and mythology. Now, when any thinker refuses to believe that the spirit of a deified man made the heavens and the earth, he is met with the epithets of "Atheist," "Infidel," "Materialist," etc., as an expression of public and personal contempt on the part of those in sympathy with this god of pagan idolatry.

That science as the formula of inductive and deductive reasoning can gain the recognition of those under the cloud and in the coils of this hypocrisy and hypnosis, will be rare phenomena. Whenever a man's zeal is so great that he can ask you to perjure

your intellect in the acceptance of the principles of his faith, such zeal is greater than the man's moral convictions of the value of truth. Science has always been of questionable value in the realm of religious faith. Indeed we can say with the greatest truthfulness, that religious zeal and faith unfit a man to be a student of science, for the reason that with belief and faith established a mind is disqualified to investigate those facts which have a tendency to dethrone his faith.

Religion postulates an unknown and unknowable God, either anthropomorphic, spiritual, or cosmic, yet possessing individualized intelligence and personal designs infinitely diffused through space and expressed in matter as "The First Great Cause" of infinitude—that which has always existed. Science postulates the eternal invisible elemental energies of nature, infinitely correlated by principles of polar attraction and repulsion, with an inherent tendency to evoke higher forms of existence in the evolution and development of cosmic phenomena. Religion affirms its "God, or First Great Cause," as an intelligence outside of matter that moulds it into form. Science affirms that the power and potency to evoke all forms of matter and types of life inheres in the elements of nature and in their combining processes. Religion claims matter to be "dead, crude and inert," requiring omnipotent power to quicken it into form. Science demonstrates that every molecule of the active principle of all known elements is an energizing life principle which in its various spheres of combination evokes form, and life of infinite variety of expression. Religion affirms "God, as the First Great Cause," as beyond nature, and superior to it, therefore supernatural. Science affirms nature to be self-existing, and eternal, hence there can be nothing beyond it. Religion pictures its God as possessing the characteristics and features of man with procreative function, and capable

of being pleased and displeased. Science finds no features of an anthropomorphic God in the analysis of cosmic factors—it recognizes only co-related elemental energies, each of which is omnipotent in its sphere of action. Religion formulates the term “Law,” in control and continuation of cosmic processes. Science affirms “eternal principle” as the order of nature, the factors of which were never made, nor can they be changed. All religions are based upon the concept of the duality of matter and spirit. Science postulates “spiritual infinitude,” the elements of which are manifestations of an infinite variety of primordial spiritual substances, each of which so far as is known has its own individual polarity, which fact is ascertained by its action and reaction in combination with other elements. Hence the student in the science of physics affirms the eternal unity of spiritual elements and matter, by the principle of polarity, matter being the product of the spiritual elements of nature in combination. Religion affirms that God moulds matter into form. Science demonstrates that the elements of nature combine upon a plane of “polar resistance,” which means that elements resist combination until their individual polarities are mutually overcome by the action of other elements upon them. With reciprocal polarities mutually changed, a new system of polar combination is evoked, bringing with it and inducing the phenomenon of the compound. Science affirms that this combining process does not depend upon a God acting from without or within the combining molecules, but upon the mathematical and polar relation of each of the combining elements by weight or volume. Upon the unvarying integrity of the data of chemical combinations are established the principles of the Chemical Balance, and Chemical Equations, and the application of these cosmic principles demonstrates nature to be automatic and self-existent. The facts upon which the equational character

of nature is established had their inception in the experiments of the immortal Lavoisier, and Sir Humphrey Davy, and with other facts subsequently discovered have been voiced in treatise on Chemistry and taught in schools and colleges for nearly a hundred years, and are still being taught, yet the infidels in the pulpits, the pseudo-teachers on the rostrum, and a large element of civilization "false" to the inductions, and demonstrations of its own Universities, continue to recite the errors and sophisms of ecclesiasticism and to accept its sorcery of the forgiveness of sin, its ordinations, consecrations, dedications, and installations, platitudes and formula of pagan idolatry when its system of theology and theogony and its religion consisted in the worship of its idols Phallus and Yoni.

That these low and sensuous ideals introduce Christianity and its ecclesiastical hierarchy, is witnessed in the recital by the evangels regarding the birth of Jesus. The historical fact that "Constantine the Great," a born pagan who was titled "PONTIFAX MAXIMUS," "EMPEROR AND SUPREME DIGNITARY OF THE PAGAN HIERARCHY," who lived and died a pagan, issued an edict in the year 321 changing the day of pagan worship from Saturn's day to Sun-day, and another edict in 325 calling in convention the Nicene Council which fastened upon future generations the story of the phallic incest of one of the tutelary gods of the Jews as is testified in the tradition in the New Testament of the immaculate conception of Jesus, is historical and logical proof as strong as the testimony of Mathew, Mark, Luke, and John of the pagan origin of ecclesiastical dogma. The fact that this monstrous dogma has given birth to 328 distinct hybrid schisms, each with its salaried priests, and sign-boards pointing out "the only true way," and each proclaiming the gospel of glad tidings that "I am the only true way"—all of the rest are infidels and sinners, is still further evidence of their pagan origin and of their persistent adherence to

pagan methods of demonstrating the superiority and divinity of their respective religions. That continuity of life can ever be established and proven by any of these schisms is an inconsistent sophism. That the time will ever come when science and religious platitude will be one and the same, is the idle dream of intoxicated religious zeal. All religions deal with the supernatural. Science investigates only the natural. All religions include faith in the mystical, the wonderful and miraculous. Science repudiates the marvelous, and the metaphysical, and resorts to thorough and consecutive analysis before it presents its truth. Religion asks only blind adherence to faith. Science demands demonstration. A religion that contains an unknowable postulate, is antagonistic to scientific investigation, and analysis. As all religions known to ancient and modern thought, do contain unknowable factors, there can never be a *scientific religion*, or the meaning of the word must be changed.

Spiritualism in its synthetic analysis has none of the features of religion, for the reason that its premise established in the infinite spirituality of all of nature's forces, affords an orderly and logical analysis of the natural factors by which we demonstrate in precise sequences the philosophy of the evolution of the soul of man as a progressive entity of nature. Hence, its philosophy is capable of the most careful analysis, while its synthesis will be found to be composed of logical sequences containing precise data.

In a general sense Spiritualism is the philosophy of the possibility, and capability of the spirit of the human after its disembodiment, to make its individuality manifest to those still in the physical form. Not only this, but it demonstrates how this mental association takes place, by an analysis of the natural co-relation of all cosmic elements and forces, which must include mental cerebral, and conscious modes of motion. While Spiritualism contains none

of the features of religion, its system of synthetic ethics transcends in beauty and eloquence of thought the progressive possibilities of the human soul in the realm of spirit life, far beyond that voiced in any religion, or outlined by mortal pen. Its representatives are too progressive in intellect to consent to worship forever at the throne of a pagan god, pleased with the adulations and praise of ignorant humanity. The gods of all religious cults are relics of a mythological and traditional past, and although voiced in Bibles and so-called sacred cosmogonies they had their origin when it was customary to deify great men and claim their spirits lived in the sun, moon and stars of Heaven, and to perpetuate their memories by voicing their caprices, passions and revengeful natures. Read the history of the fierce and revengeful character of the Jewish Jehovah as portrayed in the Pentateuch, and his tutelary nature will be seen in every chapter.

These gods of the sensuous past are fast disappearing before the search-light of science and archæology, and giving place to the broader and wiser view that nature is infinite in extension, automatic in its functional character, therefore will be unending.

Nature, then, as infinitude is the author and progenitor of all forms and types of life. The intelligent spiritualist and thinker argues that infinitude would not be infinite unless it contained all of the factors and elements, and all the possibilities, cosmic function and omnipotence expressed on the page of time. This omnipotent expression of the combined powers of spiritual infinitude as manifest in cosmic process, the intellectual thinker submits in place of the power a pagan age ascribed to its numerous gods, and that which modern theology so illogically calls "The First Great Cause" or "an Overruling Power." The consistent thinker affirms that there can be no First Cause to that which has eternally existed, or an Overruling Power in the infinitude

- of co-related forces. Such thought and claim is assumptive, inconsistent, dogmatic and infidel to the inductions of universities, colleges and a scientific age.

The Saviours of spiritualism are those who extend the boundaries of human knowledge, and brush away from the intellect the fogs and nightmares of ancestral superstitions. Its all-seeing eye is demonstrated in the fact that all modes of motion have a polar and mathematical relation to the phenomena which they evoke; hence mental modes of motion contain vibrations reciprocal and polar to matter and to sensitive states of conscious receptivity. These facts are demonstrated in the principles of the telephone, the graphophone, wireless telegraphy and thought transference; and in all the actions and reactions in chemistry and physics. The patriarchs of spiritualism are the unnumbered dead, who in their earth life discovered truths before unknown, and laid them upon the altar of human progression. Its apostles are all those in every clime who are continuing to make new discoveries in the various avenues of the sciences of cosmos, and who thus labor to make the to-morrow of mankind better by making it wiser. Its code of morals is good health, reciprocal justice for the here and now, and a thorough knowledge of man's needs in his environment. Its rewards a growing realization of the possibility of human improvement during man's earth-life, and continued existence and progression in a life beyond the grave—*nature's own free gift to every son and daughter of mankind.*

THE EVOLUTION OF SPIRITUALISM FROM SPIRIT-SCHISM AND SPIRITISM.

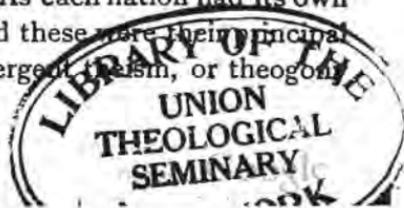
The great majority of people claiming to be spiritualists, no less than those who disclaim a belief in spirit communication, have never considered fully the great antiquity of the thought and belief in an intellectual association between the mortal and immortal spheres of existence. Neither have they examined as carefully as desirable the diverse application of this belief to the different epochs of time in which it prevailed. All forms of religious thought and all opinions of the human regarding a future state of existence, are subject to that process of modification and change which qualifies the deeper and wider view of nature and her attributes, incident to a progressive civilization. The realms of the unknown, of the mystical and mysterious, are largely the realms of ignorance; and in these realms have been born the supernatural and the supersensual concepts which cling so tenaciously to the human mind. This is the mental sphere where too frequently inconsistent poetical imagery and morbid sentiment breed schisms and obscure platitudes, and where cogent reasoning is lost in the confusion and babble of mystery worship.

This mystery loving tendency on the part of the nations of remote antiquity, not only introduced the SCHISMS OF POLYTHEISM, but it was the direct cause of its diverse growth and development. The term "schism," is from the Latin *Schisma*; and it means "*division and separation*," and is generally applied to the diversity of religious beliefs, and means in this connection a lack of agreement of those who entertain similar religious faiths.

As there can be no definite standard of religious belief equally acceptable to all, it follows that any religion will seem to be a schism in the eyes of those who entertain divergent opinions.

We find by a careful study of the religions of the past, that they grew out of a custom the people of that time had of deifying the spirits of their popular kings, queens, princes, governors and heroes, in which deified state such spirits were regarded as veritable gods and capable of holding an intellectual association with the mortal. Traces of this custom and belief are found in the most remote mythologies of Egypt, Chaldea, Syria, Phœnicia, India, Greece and Rome; and there is but little doubt that the custom prevailed for thousands of years throughout the inhabited portion of the Eastern Continent. These communications were voiced it was claimed through special oracles which were established in many localities among the various nations. Many traditions no less than the history of comparative mythology seem to indicate that the first oracles were women, of whom it was claimed that they were especially chosen by the gods to be their mouth-piece, and there was in later years associated with them a large assisting priesthood. There seems to be no definite record of when or where these oracles were first established; but from data gleaned from tradition, mythology and history, Egypt seems to have been its birthplace no less than that of nearly every ancient religion.

It was claimed that through these oracles the spirits of the nations deified men (*their gods*) gave counsel in times of the undertaking of all great expeditions, conquests, wars etc., also direction for the building of cities and temples, and in brief upon all occasions when the public welfare was involved. The prevalence of these oracles and a belief in the ability of the gods to counsel and direct through them, gave rise to a stupendous propaganda of *Spirit-Schism*, which spread throughout the Orient and infected nearly every country of the continent. As each nation had its own deified great men and heroes, and these were their principal gods, it developed a vast and divergent theism, or theogony.



(*gods*) each nation believing in the supremacy of its own. Political popularity and national prowess, made some kings, princes, governors and heroes popular and great, and at the time of their deification it was claimed that they were invested with superhuman powers, and this idea of the omnipotence of their national gods, each nation accepted as applying to their own respective deities, but each nation disbelieved in the prowess of the gods of their neighbors. To test the prowess of other nations and their gods, too frequently became a national ambition; hence oracles were sought and consulted, who under the spirit influence of warlike kings and blood-thirsty heroes counseled some of the most terrible wars known to the page of time.*

As many of these oracular communications were given in an unknown tongue, some priest was selected to interpret them into the language of the day, and this was frequently done by transposing the communication into verse or rhyme. To speak in an unknown tongue and have the gift of prophecy, was considered to be one of the greatest proofs and manifestations of oracular power within the realms of the gods. Kings and princes consulted these oracles, and made them costly presents. This in time aroused the jealousy of the attending priests, who in turn planned the downfall of the oracle, which certain popular obligations and requirements imposed upon those through whom the oracle was delivered, made it an easy task, as we shall show later on. Most of the oracles up to the time of Apollo of Delphi, were women, who, human-like,

*Wars inaugurated in defense of the gods and in the aid and support of those who believe in them have always aroused the most atrocious acts against a common humanity, and has stimulated the most fiendish outrages of which a half-civilized human is capable. Witness the late war in China in which we see a protestant world fighting for the supremacy of Jehovah—a *tutelary god of the Hebrew race*; and committing acts as diabolical, revengeful and remorseless as any ascribed to Joshua in the Old Testament.

became proud and puffed up with the distinction and attention lavished upon them by the patronage of kings and men of great renown. This pride made them overbearing, erratic and exacting, requiring at times the diplomacy and cajolery of men of rank to win from them an oracular communication from the gods. Even the gods themselves seemed to partake of this spirit of unrest, and demanded sacrifices* of burnt and meat offerings which in many localities terminated in human sacrifices being offered to them before they would communicate through the oracle their counsel and prophecy to the people. If the people did not follow the counsels of these gods as the oracle had voiced and commanded, any accident that happened to an individual of renown, or any calamity that befell any portion of the public, was looked upon as a special punishment sent by the gods for their personal or national sin and perverseness of heart. † Thus there was developed a popular concept of personal and national sin, and the necessity for human sacrifice to atone for it, which schism spread throughout the Orient and all of Asia Minor. It was this pagan idea of national sin and its propitiation by human sacrifice, that gave rise to the proverb that, "Without the shedding of blood there can be no remission of sin." It is an unpleasant commentary on the mental unfoldment of modern civilization, that the popular intellect of this age does not see in the story of the vicarious atonement of Jesus Christ, a reproduction of the barbarous orgies and sorcery that was in practice throughout Europe, Asia and Egypt, at the very time the events of the crucifixion of Jesus were said to have taken place.

*The sentiment and requirements of warlike and blood-thirsty spirits. See Jehovah's command to Moses. Exodus, xii. 3-13.

† From tutelary gods was developed the idea that God punishes national and individual sin. See Banier's *Hist. Mythology*, also Jehovah's warlike threatenings.

Every national god of warlike and revengeful nature required an animal or human sacrifice for the sins of the people; and the practice of offering such sacrifice was common wherever these gods were worshipped. Sacrifice has always been held as a Religious act "whereby man acknowledges the Divinity of him to whom it is made." The early forms of nature worship were extremely simple and sacrifices were only of green herbs. But in later periods when the nations had acquired the practice of deifying their great men, and oracles had been established to converse and counsel with these deities, blood sacrifice was required to propitiate the sins of the people. Among the more warlike nations this custom developed the offering of human sacrifice. The early fathers of the Roman church instructed that God accepted blood sacrifices and Moses enjoined them upon the Israelites.* It is claimed by many historians and poets that the god Saturn is identical with Abraham of the old Testament, and it is also affirmed that Saturn as a god was a prototype of Abraham.† But a similar parallel is found between Moloch and Abraham. The parallel between Saturn and Moloch, however, is wanting. Saturn is represented as leading a peaceful life, humane and kind in disposition and a wise governor. Moloch was the reverse and to him are ascribed the barbarisms of human sacrifice. Whatever may be the parallel or relationship between these ancient gods and Abraham one thing is

*"And in process of time it came to pass that Cain brought of the fruit of the ground an offering unto the Lord.

"And Abel, he also brought of the firstlings of his flocks, and of the fat thereof. And the Lord had respect unto Abel and his offering.

"But unto Cain and to his offering he had no respect. And Cain was very wroth, and his countenance fell."—Gen. iv. 3, 4, 5.

Nearly all of the gods liked meat and fat, and Jehovah whom men worship, was of this sort, and was angry at Cain for offering him the fruits of the field.

† See Abbé Banier. *Hist. Mythol.* Vol. I. Chapt. X.

thoroughly established; and that is, that blood sacrifice is as old as the Hebrew religion and seemingly as acceptable to Jehovah as to any other pagan god.*

The sacrifices were made on established festival or feast days, and these were held in accord with certain astrological signs at those seasons of the year introducing the spring or vernal equinox, the autumnal solstice, and the death of the old year in December when the sun has reached its lowest plane, and the days are the shortest. As these feast days varied a little in different localities, political, economic and social intercourse gradually merged them into one general day; and this tendency made Easter a day of common feast. Easter is one of the oldest feast days known to the calendar of time, and by an act of the Nicene Council in 325 A. D. this pagan day of phallic worship and incest, was fastened upon future generations by a born pagan who lived and died a pagan, and who during his earth life was titled, "CONSTANTINE THE GREAT, PONTIFIX MAXIMUS, EMPEROR AND SUPREME DIGNITARY OF THE PAGAN HIERARCHY." So it will be seen that Easter commemorates not only the festival of the supposed resurrection of Jesus but the spring equinox as celebrated by the pagan world, including Baal (fire) worship, and the festival and worship of OSTARA, one of the principal deities of the Saxons and Angles. These festivals in many localities were made to coincide with Easter and their celebration included both animal and human sacrifice.† The commemoration of the birth of Jesus is of pagan origin, and history records that the early Christians had no fixed day for the observance of this festival. It was held in May, April and January by Christians of var-

*See Gen. xxii. 2-13.

†See Chambers Encl. Art. Easter.

See also Banier's Hist. Mythol.

ious localities, until about the beginning of the fifth century, when it was transferred to December 25th.* Among the principal causes inducing this change was that the pagan nations regarded the beginning of the spring equinox at January 6th when the days begin to lengthen, hence feasts held to celebrate the coming year, when the sun rises from the grave of winter, were common among all pagan nations, and the feasts were held December 25th and continuing in some localities for eight days.† It was a common usage in those times to begin the festival with a blood, meat, or animal offering, and in many places with human sacrifices.

PORPHYRY in his history of ancient usages gives the following list where human beings were offered on such occasions *as a propitiation to the gods for pagan sins: Cyprus, Arabia, Athens, the Phenicians, Egyptians, the inhabitants of Carthage, Tyre, Lacedemon, the Ionians, Grecians, Romans, the Scythians, Albanians, Allemans, the Angles, also the Spaniards and the Gauls.* STRABO mentions human sacrifice for the remission of sin as practiced by the ancient Germans. ATHANASIUS gives the same account of the *Phenicians and Cretans*; and TERTULIAN of the *Scythians and Africans*. In some of these countries around Judea and Palestine at the time some Christians were commemorating the death and crucifixion of Jesus as a ransom and remission of the sins of the world, other pagan nations were celebrating the death of the old year and the burial of "The Sun of the gods" in the sepulcher of winter in all of the surrounding nations, and commemorating their festivals by making human sacrifice as an atonement for

*Nearly all modern critics agree that the birth of Jesus could not have been on December 25th, or during the winter solstice, for the reason that is the rainy season in Judea, *and shepherds could hardly be watching their flocks by night in the plains.* See Lib. U. K., Art. Christmas.

†See Lib. U. K. Art. Ostara.

Also Ency. Britannica.

the sins of pagan nations. If concurrency in human beliefs and religious rites could be taken as a criterion of truth, in barbarous practices, certainly ecclesiasticism ought to enjoy the combined sympathy of all the pagan nations, for introducing Christianity by the crucifixion of Jesus.

In justice to the history of paganism, it is true that some of them among the more civilized revolted at these inhuman and bloodthirsty orgies; and modified them by the offering of animal and burnt sacrifices. Still, *we live to see a Christian world worship at the shrine of a belief in an orgie (religious rite) that Jehovah, a tutelary god of the Jews, gave his only begotten Son, as a living human sacrifice for the sins of the world. Did pagan zeal and evil spirits ever invent a more revolting ceremonial of religious sorcery?*

When the liberated human intellect can calmly review and consider the testimonies of Bibles, and other so-called sacred writings, and of history and mythology upon these pagan practices, when the philosophic thinker can fully and thoroughly consider the extent of these inhuman barbarisms, and compare them with the testimony of the Evangels of the New Testament regarding the crucifixion of Jesus, he will sense only a slight modification of a common "SPIRIT-SCHISM," universally accepted and practiced in those ages when Oracles, Priests and Prophets worshipped at the shrine of the spirits of deified men, whose bloodthirsty lust for conquest and national supremacy, was only equalled by their duplicity and revengeful natures. That the Jehovah of the Jews as a spirit of a deified man possessed all of the revenge, warlike ferocity and savagery ever ascribed to Zeus, Jupiter or Mars, and that he is one of the numerous pagan deities whose spirit as a deified man spoke through oracles, priests and prophets, read the following:

"For I will pass through the land of Egypt this night and will smite all of the first born in the land of Egypt,

both man and beast, and against all of the gods of Egypt I will execute judgment. I am the Lord." *Exodus, xii. 12.*

If the entire Pentateuch was not full of the vindictive character of this tutelary god of the Jews, this verse quoted would be sufficient to prove our assertion that the era introducing the Hebrew race was an era of SPIRIT-SCHISM, hence we affirm that ecclesiasticism and Christianity to-day are a continuance of this pagan Schism and worship, conceived at a period when the most atrocious acts known to the calendar of time, were considered in the light of religious rites and ceremonies. Let us ask is not the propagandism of the worship of Jehovah as conducive to a spirit of war, to the raising of armies and navies, to the development of avarice and greed, to the manufacture of cannon and death-dealing weapons as were conquests and bloody sacrifices to him, when he selected a figment of the Semetic race from the millions of humanity "*for his only chosen people.*"

The woman Oracle in some sections of Judea and Palestine had given place to the prophet and priest; and this was the change taking place at the time that Moses became the *oracle* of Jehovah. On a former page we spoke of the the rising jealousies of the priesthood who attended and assisted at all oracular communications of the gods, on account of the costly presents and attention given the oracle. We also stated that a larger number of these oracles were women, who in some localities were called priestess, and who becoming vain of the superior attention paid to them, were exacting and erratic. In many localities when blood offerings were made or human sacrifices given to the gods, there developed among the priesthood and the people a feeling that the oracle should fast for a number of days, that they should perform certain ablutions and inflict upon themselves certain punishments before they were escorted to the tripod where the oracle was given. The priests in the meantime claimed that inasmuch as they heard the

voice of the gods as it spoke to the oracle, and had to translate frequently an unknown tongue in which the oracle was given, that he should take the place of the oracle, and succeeded in inducing a change, which in connection with the austerities required of the woman oracle, in time made the change effectual. These priest oracles were given at Dodona from hollow trees, caverns, or holes in the ground, and in a voice calculated to inspire awe and fear. Listen to-day to the measured tones of the priest or the sanctimonious vocalization of the average clergyman, and you can easily trace its origin.

Thus was born the priest and the prophet, and the saying "The Oracles of the Gods," was changed to that of "The Man of God," a term common to our time. What the oracles were in their relation to the gods in the time of ancient Babylonia and Syria, the prophets were to Jehovah in the time ascribed to Moses and the Pentateuch. The Hebrew race with its national and race aversion to the supremacy of woman, did away with the woman oracle and installed the prophets in her place, and this race aversion is still so keen and dogmatic, that as a race they will not listen to, or accept as possible any communications that comes from spirit life, save those voiced as coming from Jehovah to their own race prophets in the past. Need we say that this dogmatic assumption has had a hypnotic influence upon all creeds who worship and instruct the SPIRIT-SCHISMS of the Pentateuch and its tutelary deities. It may be difficult to trace concisely the various systems of theogony (*gods believed in*) surrounding Judea from the time of Moses until the time ascribed in the New Testament to Jesus; but enough is known to prove that notwithstanding the continuous threats of Jehovah, the Hebrew race and several of its patriarchs worshipped other gods under the symbol of "The Serpent," "The Golden Calf," Astarte, Ashtaroth, Baal, Moloch, the Teraphim (phallic deities) and

many others. Note carefully that in the Septuagint and in the Jewish liturgy, Adonai (*from the Sun god Adonis of Syria*) is still addressed as the spirit of a deified man. The Hebrew system of theogony did away with the Magi of India, but it introduced its own patriarchs. It did not recognize the oracles of other gods, but it followed the voice of its prophets and sooth-sayers, and in the changes of time, its priests became "the voice of god." Its form of religion since the time of Moses has differentiated into a number of impracticable and incoherent Spirit-Schisms. Its history, full of adventure, of sentiment and miracle, was selected by later pagans who had no history and no religion, and appropriated as a beautiful and charming picture nicely framed in the imagery of antiquity, as a suitable ideal for the religious sentiment of the world to recognize.

Its tutelary gods and portions of its sacred cosmogony have been stolen, and although the original text declares that the Hebrew race were the especial and chosen people whom its god would save,—all who did not recognize Jehovah* as "God over all gods," and "Lord over all lords," and be circumcised, "should be cut off root and branch," The Christians would make you believe, that these declarations had been changed by a later plan of Jehovah, who decided in his old age to have another only begotten son, although, Jupiter like, he had several other sons† by the daughters of men, this especial son should be sacrificed as an atonement for the sins of the whole world, and this codicil as a New Testimony of Jehovah attached to the former

*That Jehovah is specifically the God of the Hebrew is clear from the fact, that the heathen deities never receive this name; they are always spoken of as *Elohim*. (See Lib. U. R. Art. Jehovah.)

†There were giants in the earth in those days; and also after that *when the sons of God came in unto the daughters of men*, and they bore children to them; the same became mighty men, which were of old, men of renown. Gen. vi. 4.

Jehovistic code, would secure the salvation of all sinners alike.

Meanwhile the Hebrew, whose god has not made known to him or through the mouth of his prophets this later day platitude of "saving grace," looks on in scorn as revising committee after revising committee try to disentangle the web of "God's revealed will," and make it presentable to the opening eyes and growing intelligence of an age inclined to think for itself. These changes so modify and mutilate the original text, that the priests in the Jewish synagogues, its "*chazzans*" and "*sheliach*," no longer recognize that the "Sacred volume," its song melodies or its gods, ever belonged to them.

The close parallels existing in forms of speech and thought between the Jewish, Zoroastrian and Christian religions, has given opportunity for much controversy between scholars in ancient religions, as to the priority of these faiths. The great mass of Christian believers of whatsoever faith do not fully realize the fact, that Christianity as a Spirit-Schism was established upon a slightly modified form of Judahism by retaining its chronology, pentateuch and its many miracles. So it will be seen that whatever parallels exist, they had their origin between the two older faiths—viz: Judahism and Zoroasterism. We have not place in this chapter to trace the respective claims of priority as between these systems of thought, but will give briefly the opinions of those who lived much nearer the time of Zoroaster, than any modern writer.

*Aristotle places him 6,000 years before Plato, or about 6,425 before the Christian era. Xanthos gives his

*The time of Zoroaster or Zarathustra according to Aristotle, Eudoxus and others, would place him from 1,550 to 2,420 years before the time the Hebrew Jehovah is said to have created the heavens and the earth.

time at 600 years before the Trojan war—1785 B. C.† Eudoxus gives the time of his life the same as Aristotle. Others at 5,000 before Socrates. Hystapses places him at only 500 B. C. This date would make him a little before the time of Socrates. A close inspection of the *Zend Avesta* and the *Gathas* particularly the *Gathas* where we find the true theology of Zoroaster given, will satisfy any unbiased reader that Zoroaster was not a cotemporary with Moses as some claim, but that he ante-dates him from one to two thousand years. This being true it will be seen that fragments of the Jewish faith were derived from this source. While Zoroaster's theology was monotheistic, his principal deity was called *Ahuro Masado*—the *Ormazed* of the more modern Parsees, the symbol of worship of which, is fire. The terms he applied to himself was *Manthran*, a reciter of *Manthras*, one who listens to the voice of oracles given by the spirit, or, sacred words from *Ahura-Mazda* through the flames. His principal oracle, however, was "the voice of nature." "The sacred flame," was only a metaphor of the light of the sun, or the ethereal flames of sunlight, and its symbol, *fire*. Here the reader will trace a close similarity to the Brahmic system of thought during the early periods of the Vedic Aryan race. Hence, the voice of nature, *Ahura-Mazda*, is a spiritual term and concept, implying the sensations made upon the soul by impressions coming from objective nature through the medium of light and the eye. This monotheism of nature, including good and evil, light and darkness, represents the real system of theology entertained by Zoroaster as will be seen in a perusal of the *Gathas*. The system is one, as day and night are one and inseparable. The dualistic idea developed when good was personified as an individuality under

†This date would make Zoroaster cotemporary with the time of Isaac and Esau of the Old Testament.

the term "*Vohu Mano*," or the good mind; and evil, as another personality called the "*Akem Mano*," the "naught mind." Solar light was the gift of the *Vohu Mano*, while darkness was the especial product of *Akem Mano*. We see in these mental concepts a striking similarity to the Brahmic Theogony of Vishnu—the sun—the creator of all good, and Siva, the destroyer; two principles of nature eternally operative in growth and decay, in integration and disintegration. But Zoroaster's theology included a spiritual sphere, where lived the supreme spirit of *Ahura Mazda*, the maker and creator of all things-in-nature. When this monotheism was broken up and superseded by dualism, the opposers of this doctrine had recourse to a false and irrational interpretation and explanation of the term *ZERVANA AKARANA*, which means eternity or time without bounds. This eternity of duration was made to represent a Supreme Being who was called "good," and associated with it another Supreme Being* called "Evil." Thus, there gradually developed the belief of two opposing forces of good and evil, and two opposing individualities of God and the Devil. The early form of Zoroaster's monotheism included the concept of a realm of ærial Damons (*angels of light*) out of which developed a Spirit-Schism known as the "*Deva religion*" or the worship of angels as spiritual beings. Traces of this schism are found to extend over a period of several hundred years, having its origin before Zoroaster's time and existing for a long period after his death. Max Muller in his memorable Oxford essays on comparative mythology, speaks of the ancient Irans (a name given to

*It is claimed by Ecclesiastics that there can be in the order of things only one Supreme Being. The concept of two equally Supreme Beings is found in the early Hindu religion, when Vishnu—the Sun—was regarded as the creator of all things, and Shiva—the destroyer, as that process of disintegration which sequences all visible forms of life.

the early Parsees) and the Aryans as comprising originally one family, speaking the same general language and entertaining similar religious views. The Irans or Parsees lived in the western part of India and the Aryans in the north-west. A long time before the advent of Zoroaster there arose between these factions a strong political and social feud, which developed such intensity of hatred that the Parsees withdrew from the Aryan religion which consisted in the worship of the Devas or Damons as ministering angels, and established a new schism of angel worship under the name of the Ahura religion, or the worship of good angels, called by the Parsees Mazdayasna. The Ahura religion or schism, was largely the religion of the magians and fire priests at the time of the inception of the feud between the Aryan and Parsee races. The Aryans took every opportunity to brand the Parsee seceders with opprobrious epithets and were not restrained from committing many acts of social and personal violence. The Parsees, on the other hand, branded the old worship of the Damons and Devas as veritable devil worship, and the Damons and Devas as real demons and devils. This feud for a long period of time existed between the Parsee and Jew also, and the latter was subject to many persecutions. "To accept the instruction of a magian," is pronounced by a Jewish sage "to be an offense worthy of death," and the magi were termed in their writings as "demons of hell." It is worthy of note that it is in the history of the growth of this quarrel between the religious factions of the same mother family, that we find the first traces of a personal devil and a literal hell. Here, we find for the first time in history that the gods and angels of light by a dissenting political faction, became the demons and devils of that faction;* and here we witness

*See Hyde *Vet. Rel. Pers. Hist.* 1760. Also Dadabhai Naoroji *The Parsee Religion*, Liverpool, 1861.

how social and political hate becomes at times so intensified that not only individual man, but nations of men will deny even their own God, and label him "devil." This feature of human insincerity and duplicity frequently noted in the Old and New Testaments, and on the page of time are strange manifestations of human beliefs in God, when selfish interests intervene. The history of this feud also affords a date when the spirit world and ministering angels were first regarded in a religious sense as veritable demons and devils, and it is here the Jewish, Roman, and Protestant churches refer to the antiquity of this belief. The saying found in the Bible, "Thou shalt not suffer a witch to live," had its inception in this historical hate of the Deva religion. We should have noted that this feud had its inception before the time of Zoroaster, when the good spirits were called by the Parsees "Ahuras," in distinction to the Indian Devas. Although the monotheism of Zoroaster had been of the kind that personifies the ideal of good and evil under one term, meaning nature, with superior tact and diplomacy at the time this feud was at its height, he succeeded in unifying the worship of the Ahuras as good spirits into the worship of one supreme Ahura or spirit as the creator of all things. Thus, there grew into the thought of the ancient Parsee the concept of one Supreme God or spirit over all, and with it the idea of one supreme devil as the author of the Deva religion. It is to this political and social quarrel between the Aryans and Parsees that the world can trace the origin of the concept of one Supreme God over all gods, and one Supreme Devil over all demons. And it was here that the monotheism of Zoroaster gave way to a dualism, which has infested civilization with horror and fear, and woven into every succeeding age a holocaust of religious superstitions. But Zoroaster's dualism not only gave new impetus to the Parsee religion, but it changed the early form of Brahmanism, the worship of

Vishnu (the Sun) and Shiva (the destroyer) into a theistic dualism introducing the epic era with its priests and casts, from which schisms and servitude it has never been able to free itself.

In the worship of the Sun by the ancient Brahmin, that luminary was regarded as the promoter of all forms and types of life and the preserver and over-ruling power in nature. The Brahmic Shiva was regarded as the destroyer of life, the one who tears down, the cause of disintegration and death. It was thought that while the Sun and heavenly bodies were taking counsel to protect life, that Shiva and darkness were plotting to destroy it. And so it was that the change from this concept to that of theistic dualism was an easy one in which the Sun simply represented the spirit of one Supreme Ahura, who now as a personality was taking counsel with other good spirits in the heavenly host to benefit mankind, while the Supreme Deva or devil was also taking counsel in the realms of shadows and darkness to destroy mankind. The former was regarded as the heavenly council, the latter as "the infernal hierarchy in the house of hell."

That this change in an old Brahmic schism has had a lasting influence upon subsequent civilizations let the history of intervening centuries testify.

It is a curious reflection on Christianity and its origin, that in the history and traditions of the religious worship paid to Zoroaster we find an account of his having an immaculate son, born to him in the same mysterious way that in a later period was ascribed to Jesus. It is here in a period ante-dating that of Jesus from fifteen hundred to two thousand years we find an account of SOCIOSH, *the Messiah of the Parsees*, miraculously conceived of a virgin who in the final resurrection of the dead is "to awaken the dead bodies, to restore all life lost by death, and hold the last judgment. It is here also we find the terms "*The Revealed*

Word of Zarathustra the Holy," the celebration of the last supper, and the origin of the legend of "The Revelations" of the New Testament. That the Jew and Christian both copied much from the Sacred text of *The Zend Avesta and the Bundehesh* is sensed in the detailed account of "the resurrection and last judgment," as found in the last mentioned book. That Zoroaster was deified and made a tutelary god so common in the time in which he is supposed to have lived, is manifest in the writings ascribed to him by his once numerous followers. Did the Hebrew copy the original monotheistic ideals of Zoroaster to reclothe their revengeful and capricious Jehovah with, and did the Christian borrow the legend of Zoroaster's immaculate son to reclothe a wandering, adventurous and pretentious Jew into the personality of Jesus Christ? These are questions which many scholars in Oriental languages have considered and are still considering; and a question which every student in philology must, for the present at least, consider and determine for himself. The fact that the Christian religion and Jewish Talmud contain so many parallels with Zoroasterism in metaphor, concepts, ideality, forms of thought and expression could not have been greater if originally the Christian and the Jew had selected from the religious schism of Zoroaster what best could be appropriated to the time in which subsequently it was used by each. Here the Jew found in the monotheism of Zoroaster's early teachings the ideals of the oneness of good and evil as expressed in nature, so thoroughly outlined in the Pentateuch.* Here was found also the order of High

*In the first mention of Satan in the Old Testament he figures as a minister of God, and appears in the function assigned him by God as an accuser and seducer.

In Chron. xxiv. 1, Satan stirs up David to number the people; while in the older Hebrew version the same act is ascribed to an angry God. See 2 Sam. xxiv. 1.

Priests in the ceremonies of fire worship, which for centuries after under a slight change of dress and name took part in national festivals, feasts, and religious propaganda of the Jewish theogony. Here the Christian with less modesty borrowed without acknowledgment the allegory of Sosiosh as a Hindu Messiah born of immaculate conception of a virgin, changed the date of his supposed birth two thousand years, and the name of his birth place, attached to his personality a few beatitudes, a stoic nature and many grave inconsistencies; called him Jesus Christ, "the promised Messiah—The Savior of the world." Thus, we trace from the earliest forms of nature worship the evolution of "Spirit-Schisms" where man worshipped at the shrine of the deified spirit of a nation's great men, inaugurating a system of tutelary worship of the gods, which multiplied schism after schism induced wars, strifes and greed, which have continued to follow in the wake of religions based on the jealousies of warlike gods, and their ability to communicate with the sons and daughters of mankind.

THE AGE OF SPIRITISM.

Webster defines Spiritism, as "the doctrine or practice of Spiritists—Spiritualism." This definition is not sufficiently exact and concise to answer the purpose and intent of a scientific philosophy; besides, we shall be able to show in a succeeding chapter that Spiritualism is as widely divergent from Spiritism, as modern scientific analysis is divergent from the prevailing concepts of the sibyline age. There is also as wide divergency between Spiritism and Spirit-Schism, in an intellectual sense, as between the mesozoic and paleozoic periods in a geological sense. The evolution of the mesozoic system of geological formations from the paleozoic period, required untold centuries of time; and in an analogous manner the evolution of Spiritism with its attending formulas of thought, from the pronounced barbarisms incident to a belief in Spirit-Schism, required in similar manner centuries of time. The age of Spirit-Schism introduced all of the gods known to mythology and modern thought; the larger number of which, were the spirits of deified men, who once lived, or were said to have lived in human form. All of these gods without exception were capricious, revengeful, lustful, adulterous, cruel and treacherous. Read carefully the cruel and warlike treachery of the Jewish Jehovah as voiced in the Pentateuch, and you will find portrayed the inherent weakness of most of the gods of time. The other deities belonging to the age of Spirit-Schism, were principles of nature deified into sentient existences. These were clothed by the ancient mind with the power of transformation and reincarnation; and comprise the origin in part of Ovid's *Metamorphoses*. The era of Spirit-Schism introduced the oracle and the priest. The priest supplanted the oracle, and turned prophet, and his descendants still assume in modern pulpits to interpret God to man. The era of Spiritism began with the political career of Tarquin

the Proud ; who was elected by the Senate under Aneus Marcius to succeed that monarch to the throne of Rome about 509 years B. C. Jealousies on the part of the priest who interpreted the oracle, to which we before alluded, and international strifes induced by the gods of the oracle, were strong factors in promoting the decline of oracular counsels. Plutarch informs us that the wretched poetry and verse in which the priest interpreted the oracle, was the cause of open jest and raillery on the part of the Epicureans and Cynics. They said, "It was surprising that Apollo, the God of Poetry, should be a much worse poet than Homer, whom he had inspired," and whom they claimed inspired them, and the priests were frequently accused of stealing from Homer, to cover up their own poetical incompetency. But the gradual decline of the oracle, made opportunity for the introduction of the Sibyl, and with the Sibyl came SPIRITISM as a distinct form and enlarged ideal of the relation the mortal holds to immortal spheres, from that entertained during the era of the Oracle. We have shown in a former chapter that the oracle introduced an era of Spirit-Schism and the varying and divergent systems of theogony introducing the gods.

Sibyllism or Spiritism was a modification of this concept, which from the time of Tarquin the Proud until the introduction of Christianity and indeed for several centuries after, underwent a slow but more liberal and general interpretation. The oracles as Spirit-Schisms, established dogmatic theocracies in the spirit world and on the earth plane ; ever at variance with each other, and at war. Sibyllism as Spiritism, was a partisan but patriotic spiritual hierarchy ; which for nearly five hundred years counseled the Roman Senate in the government and management of the social, religious and political affairs of Rome. The age of Spirit-Schisms, was a quarrel among the gods for supremacy. Spiritism was a counsel of supposedly great and wise spirits

in the affairs of an empire; and while it is true that some of these spirits had been deified in the minds of the Roman, and some were warlike and desired conquest, the close student of history can trace the varying fortunes of the Roman empire according as its rulers were swayed by warlike or peaceful spiritual influences. It may be well to state here that there are some writers and historians who deny that Spiritism or Sibyllism had any place in the affairs of Rome or the Roman Senate, since so much of its history is shrouded in poesy and romance; hence they reject not only Sibylline influence but deny there ever existed Sibyls who had mental intercourse with spirit life. In opposition to this thought and statement the author of this has taken pains to secure the names of distinguished historians and poets of the past, some of whom lived before Rome became an empire, and some contemporaneous with the periods to which we refer, who attest their belief in spirit communication, and some of later date who in their writings refer to the influence of Sibyllism upon the age in which they lived. See list of these names below.* This list will afford an object lesson for modern writers and speakers who deny that any person of renown ever believed in or accredited the mental association of a spirit world with the mortal.

Sibylline Spiritism like its predecessor Spirit-Schism inculcated an ideal of the miraculous, the wonderful and mysterious. Hence the ancient Sibyl was thought to have

*The following list of historical names is only a comparative few known to our language and civilization, who either affirmed a belief in Spiritism or lent a tacit acknowledgment of the fact. Among the poets we find Homer, Hesiod, Virgil, Ovid, Dante, Shakespere, and Milton. Among the philosophers Pythagorus, Socrates, Plato, Aristotle, Gallacus, and Hermias. Among the historians and writers we find Strabo, Varro, Plutarch, Pliny, Herodotus, Deliro, Van Dale, M. Petit, Saetantius, Peucerus, Neander, Suidas, Pausanius, Elian, Cicero, Stephanus, Aristophanes, Solinus, Agathus, Jambilicus, Ammeanus, Marcelinus and Justin. Among the early fathers of the church we find St. Jerome, St. Justin Martyr and St. Augustine.

the gift of prophecy, of foretelling future events, and their predictions were regarded by many, as inexorable fate. In Spirit-Schism the oracular prophecy was regarded as the "Will of the Gods." In Sibylline Spiritism, the Sibyls were regarded as being "*divinely inspired*," hence what they said under this inspiration had great weight with those in sympathy with their counsels. They were usually young women, although a few are referred to who must have been of middle age. It seems a little strange that in the etymology of the term Sibyl, different scholars have traced it to Hebrew, Greek, Latin and African origin. In all of these languages it means an *inspired woman*, or an *enthusiast*. Saetantius claimed it was Greek, and meant "*The Counsel of God*." When it is understood that the ancient Greek and other people claimed that only great minds who had been raised to the rank of gods by deification could converse with the mortal, this interpretation of the term will seem consistent. We have stated that Spiritism or Sibylism had its inception with the introduction of Tarquin the Proud to the rank of Emperor of Rome. By this we do not wish to be understood as saying that the Sibyls were not known in ancient history until that period, for we find frequent reference to them at a time contemporaneous with the most ancient oracles. But what we desired to say was, that with the connection of Tarquin the Proud with the political affairs of Rome, that Sibylline Spiritism became a feature in the council and public policy of that Empire.

It is evident that the ancients had reasoned deeply upon the possibility of the association which man is capable of having with the deified spirits of its great men, who were their principal gods. They affirmed that this correspondence might be so intimate when man had attained a certain degree of proficiency and perfection, that the events of the future could be foretold, and it was claimed that several absolutely attained this development by virtue of a certain

kind of magic which they called *Theurgia*,* and this attainment was one of the fundamental principles of Pagan theology.

Regarding the introduction of the Sibyl and the Sibylline prophecies into the public policy of Rome, *Livy* the historian records the following: "A Sibyl called Herophile appeared before King Tarquin the Proud, and offered him nine books for sale. The price demanded appeared to the monarch exorbitant, and he refused to purchase them. She then went away and, destroyed three, and returning asked as much for the remaining six as for the nine. This was again refused, whereupon she destroyed other three, and once more offered to sell him the rest, but without any abatement of the original price. Tarquin was struck by her pertinacity, and bought the books, which were found to contain advices regarding the religion and policy of the Roman Empire. The books were preserved in a subterranean chamber of the Temple of Jupiter on the *Capitoline*, and were originally intrusted to two officials, appointed by the Senate, who alone had the right to inspect them. The number of keepers was afterwards increased to ten (*decemviri*), and finally to fifteen (*quindecimviri*). In the year 84 B. C., the Temple of Jupiter having been consumed by fire, the original Sibylline books, or leaves, were destroyed, whereupon a special embassy was dispatched by the Senate to all the cities of Greece, Italy and Asia Minor, to collect such as were current in those regions. This being done, the new collection was deposited in the Temple of Jupiter after it had been rebuilt. Spurious Sibylline prophe-

*According to Murdock "Theurgia was to the Egyptian Platonists, an imaginary science supposed to have been revealed to men by the gods themselves in very ancient times, and to have been handed down traditionally by the priests; also, the ability, by means of certain acts, habits, words, and symbols, to move the gods to impart to us secrets which surpass the powers of reason, to lay open the future, and to render themselves visible."

cies—or what were regarded as such—accumulated greatly in private hands toward the close of the republic; and *Augustus*, fearing, perhaps, that they might be turned to political uses, ordered them all to be given up to the city-prætor, who burned them. More than two thousand were destroyed on this occasion. The remainder were kept in the temple of *Apollo*, on the *Palatine*, under lock and key; but the whole perished during the burning of Rome in the time of *Nero*, about 64 A. D.*

Claudian informs us that the original three books that *Tarquin* bought, were not written upon paper but on linen cloth, that they might last the longer. *Abbe Banier* in his history of the Sibyls and the Sibylline records or prophecies says: "There was a college of fifteen persons founded, to be the guardians of this collection of Sibylline books, whom they called the *Quindecemviri* of the Sibyls; to them this deposit was committed: By them it was to be consulted; and so great was the faith that was put in the predictions it contained, that whenever they—the Romans—were to enter upon a war, when plague or famine, or any epidemical calamity infested either city or country, hither they were sure to have recourse. It was a kind of standing oracle, as often consulted by the Romans, as that of *Delphos* was by the Greeks and other nations."

Dionysius of Halicarnassus says: "The Senate ordered them to be consulted upon the rise of any sedition, upon the defeat of the army, or when some prodigies are observed which presage a great calamity, as there have been many such." This statement is also confirmed by *Varro*. That Christianity believed in and endorsed Sibylline Spiritism is attested by many ancient writers. *Gallacus* in his work entitled "*Oracular Sibyllina*," published at Amsterdam in 1689, says: It is, however, beyond doubt that as early at

*See Lib. U. K. Art. Sibyll. Also Banier's Hist. Sibyll Vol. I page 375.

least as the second century A. D., when enthusiastic men sprang up in the Christian church, prophesying in a poetic-oracular style (whence they were sometimes called *Sibyllists*) the Sibylline books were much interpolated and falsified to assist the progress of the new faith. The utterances of these Christian Sibyllists *form a special department of early ecclesiastical literature*, and are a mixture of Jewish, pagan and Christian ingredients. The collection of them also bears the name of "Sibylline books." Fragments of Christian Sibyllism have also been published by Angelo Mai, at Milan, 1817, and by several others of still later date. *Abbe Banier*, in his history of Mythology* in speaking of Christian Sibyllism, says:

"We know not what was the fate of this collection of Sibylline verses; for as to that which we have at present (1739), consisting of eight books, upon which Gallacus has made a learned commentary, tho' it may possibly contain some of the ancient predictions, yet all the critics look upon it as a very dubious composition, and likely to have been the product of the pious fraud of some more zealous than judicious Christians, who thought by compiling it, to strengthen the authority of the Christian religion, and enable its defenders to combat paganism with more advantage." Continuing he says: "What puts the matter quite out of doubt is, that we find in this undigested collection, predictions relating to the mysteries of Christianity, clearer than they are in Isaiah and the other prophets. There the very name of Jesus Christ and that of the Virgin Mary occur in every page. It speaks of the mystery of the redemption, of our Saviour's miracles, His passion, His death and resurrection, the creation of the world, the terrestrial paradise, the longevity of the patriarchs, the deluge. One of the Sibyls even vaunts that 'she had been in the ark with

*See Hist. Mythol. page 376.

Noah.'" The same writer says: "It is amazing to find authors so blindly prepossessed as to hold that whatever this collection contains, was composed by the Sibyls."

That Christianity had its inception in Sibylline Spiritism and other pagan beliefs can be shown by pages of irrefutable history of similar character, written and attested by those claiming to be Christians, and by many of the early fathers of the church, no less than by the heathenish doctrines and unknowable assumptions and dogmas of the Bible itself. Nothing can be more clear than that Moses and all of the prophets of the Old Testament were oracles with whom Jehovah as a tutelary spirit communicated. The term "Angel of the Lord" always means a spirit intelligence who was capable of communicating with the prophets and seers. The term "Man of God" always refers to a seer, prophet, or medium. The New Testament abounds in spiritual communications and associations. Acts ix. x. xi. xii. are recitals of this character. The term "Word of God" means a spiritual communication of the spirit of a deified man that had been raised to the rank of the gods with the mortal. All such communications from tutelary deities were called "Word of God"; for the reason that these tutelary gods, were the only sentient gods known. The entire Pentateuch with the exception of the first chapter of Genesis is the representation of the relation that Jehovah as a tutelary god of the Hebrew nation held with the prophets and patriarchs of the nation. The Old Testament is a record of prevailing SPIRIT-SCHISMS woven into historical and allegorical form. The New Testament is a mixture of SPIRIT-SCHISM with Spiritism. The so-called miracles ascribed to Jesus and his apostles, are manifestations of Spiritism. The Christian church in its inception included not only the practices of the Sibyl referred to above, but it also included "shrine worship" practiced in pagan theology. Indeed the history of the early Christian church

from the first century to the time of the "Reformation," was notable for its practices in Spiritism. Its gatherings, prayers, invocations and worship, were largely in the perpetuation of the religious propagandism of so-called pagan nations. The change from pagan formula and ideals was slow and almost imperceptible. Even up to the fifteenth century a writer in *The Library of Universal Knowledge* says: "The friars (of the Roman church) had sunk from being zealous and active preachers into bigots and mendicants cumbering the ground. The secular clergy were hardly less corrupted; in many cases the higher dignitaries of the church had no interest in the spiritual duties of their office, and gave themselves up entirely to the pleasures of a worldly life, or at best, to the duties of political and military activity. The revival of the old classical literature in Italy—the spirit of what is called the *renaissance*—accelerated this movement of spiritual decay. *The papacy itself was half pagan.* The church was little cared for; even as an organ of government; *it was used as an engine of self-aggrandizement and the most extravagant luxury.*" The general public opinion to-day among protestants is, that Christianity is a distinct system of religious and moral ethics from that of any preceding system of thought. This opinion is based on ignorance of former religions. The early church of Rome was only a modification of the then prevailing theological beliefs, based upon Roman theogony; and Roman theogony contained many of the platitudes, concepts and formulas, qualifying the Sibylline period, based upon a stupendous and inconsistent Spirit-Schism of Hebrew, Aryan and Parsee theogony, some phases of which we referred to in the Spirit-Schism of Zoroaster and the Parsees. But Roman theology and theogony centralized and focalized into a gigantic effort to control the social, religious and political interests of the world. It was a mighty political hierarchy in the sixteenth century, holding great power

throughout Italy, Greece, the German Empire, France, Spain, England, Ireland, Scotland, Denmark, Holland and other European nations. Great institutions like great conquerors become fanatic and short-sighted by consecutive conquests. This was the condition of the Roman church and its papal authorities at the beginning of the sixteenth century. Blinded by aggrandizement, dizzy with luxury, but yet greedy, it sought to extend its domain and make popular its influence and government by selling "*Indulgences*," or the permission to violate moral restraint in the domain of human passions and appetite. This political platitude of the Roman church had its inception early in the commencement of the sixteenth century and attained a scandalous height in 1517 under the agency and activity of a Dominican friar by the name of Tetzel.* A man of low and unscrupulous character, but gifted with great volubility, he carried on this traffic in a shameless manner. There is in human nature, however, in its moments of moral reflection, something that repudiates moral perjury, or the consistency of immoralities as a part of a moral life. This feeling or moral sentiment against indulgences and other gross abuses prevailing at the time in the Roman church, aroused a spirit of resentment and opposition throughout Germany, Bohemia, England, Holland and in most nations where the Roman theology prevailed; and it only required a spark to kindle into a fierce flame the slumbering agitation. "The bold traffic of Tetzel in the sale of "*Indulgences*," aroused the ire of Martin Luther, who saw the evil influences of "*indulgences*" in his own church, and he made a firm stand

*The Roman Church was by no means the first religion to inculcate indulgences. The Jewish Rabbis commanded every Jew to eat garlic on Friday night as a stimulant to get drunk on Friday night or Saturday. The Sabbath (Saturday) was not only to be spent in prayer, but was a day for *attainable pleasures*. The Talmud also expressly commands the Jews to get drunk on Purim Day.—*Judas Iscariot Min. Pub. Co.*

against the nefarious and shameless practice that will add honor to his name in the centuries yet to come. In this movement he was ably assisted by Melanchton, Zwingle of Zurich, and other fearless opponents of indulgent tolerance. During the fifteenth century abuses in the church government and a general moral relaxation called out reformers before the *Reformation*, and they organized a society called "*Brethren of Common Lot*," and they took up a more evangelical form from that of the "*Brethren of the Free Spirit*," whose teaching was a species of *Spiritualistic pantheism*. This movement, headed by Reuchlin of Germany, Gerhard Groot, Thomas à Kempis and John Wessel of Gröningen, became valuable factors in extending the Reformation commenced so earnestly by Luther. Frederick of Saxony established a civic and legal basis for the reformation by commissioning Luther and Melanchton to prepare a new form of church government and church service for his dominions. "His example was soon followed by other princes and other states in Germany that had renounced the papal supremacy. An effort was made at the Diet of Spires in 1526 to suppress the new religious movement, and to insist upon the vigorous execution of the papal sentence against Luther and his followers. This effort was successfully opposed, and it was resolved on the contrary that the princes should have full power to order ecclesiastical affairs in their own dominions as they thought proper." "A new diet was convoked at the same place in 1529, and under the powerful influence of the papal party, the measures of the former diet were recalled, and all changes in religion declared to be unlawful except such as might be advised by the council." "It was then that the Elector of Saxony, the Landgrave of Hesse, and other princes of the empire who had already embraced the reformation and established it in their dominions, made a '*Solemn protest*' against the action of this diet, which circumstance gave rise to the name of

Protestant." The issues involved between these contending factions resulted in the war of the Reformation, and it was not until 1555 that a diet was assembled which gave to the protestant party the religious liberties of the Augsburg confession of faith."

We have given this brief review of Roman church history for the double purpose of calling attention to the fact that *Spiritism* had a notable place in its religious code up to the time of the reformation, and that many of its adjunct organizations like the "Brethren of the Common Lot," and "Free Spirit" were special organizations of Spiritism as late as the beginning of the sixteenth century. We also desire to call attention to a fact very much overlooked by many writers, pulpiteers, and rostrum lecturers: that Protestantism is only a babe in its swaddling clothes of infancy, as compared to the age of the religion of Zoroaster and Buddah, being only 347 years old since the diet of Augsburg in 1555. But Protestantism and its ecclesiastical mother—the Roman church—are marching towards the setting sun of their impending destiny. The scythe of time is at their roots; and the first nervous tremor of approaching crisis sends a shudder of coming dissolution through ever fiber of their respective organizations. Conflicting schisms growing out of inconsistent dogmas and incoherent sophisms, in connection with an effete and narrow intellectual development of the clergy and priesthood, breed unrest and contempt among the more scholarly laity, who command a more careful investigation of the mythologies, traditions and histories, upon which the religions of the past were established. Revisions of creed and a broader interpretation of the scriptures in keeping with cogent common sense, is the frantic appeal of those who would keep the antiquated barque of ecclesiasticism afloat. The numerous gods of conflicting spirit-schisms are dead and dying; and their revenge and glory are submerged beneath the tidal wave of human blood

and mortal anguish which they caused to flow from human veins and human hearts. Zeus and Jupiter have ceased their amours; and their mortal and immortal wives are remembered only as they represent some principle of nature. The shadows of Olympus cover with a sigh of relief their mortal career, leaving chiseled to view on the tablets of time their poetical eloquence in allegorical art.

Adonis, the prototype of Osiris, whose sentient soul was worshipped in the Sun, and whose rays of light were thought in those ages of antiquity to penetrate and illumine all types of matter with "his Infinite Intelligence,"* still continues to wheel his chariot of fire through the vault of heaven, followed with conjugal fidelity and inseparable affinity and devotion by his loving Venus; the Moon, whose reflected rays light up the sacred groves where lovers meet to plight their troth again and again, while gentle zephyrs breathe in musical cadences the union of human hearts to the whispering leaves, and the nymphs of the forest gather in silent approval and tender sympathy to witness the scene of nature's holiest promise and gift to man—a woman's love. Adonis and Venus the mortals, slumber in the embrace of nature's maternal caress in the sacred groves of Phenicia; while their immortal remains set in the matchless framing of Ovid's and Virgil's poetical art, will live on the page of time a sublime allegory of human love and passion portrayed in the constancy of the suns and stars of our solar system.

Apollo and Diana—these deities of a remote and allegorical age—appear in poetical redevelopment on the horizon of memory. Apollo and Diana whose darts were swift

*The ancient Syrians thought that when Adonis died that his spirit went to reside in the sun, and ever after that the sun was a sentient being, and his rays (the sun's) falling upon the earth endowed all forms of matter with his "Infinite Intelligence." The Egyptians have a similar tradition with regard to Osiris. So it will be seen that this modern claim, was also a pagan platitude.—See *Hist. Mythology*.

to slay the children of the vaunting *Niobe*, who spoke ill of their mother *Latona*; Apollo the god of music, of art, of eloquence, *Diana* the goddess of virtue, the protector of maternity and the sacredness of woman's integrity, live only in the history of the world's traditions. Apollo whose winged shaft of unerring aim slew the *serpent python* which the jealous *Juno* created to harass and menace his mother, and after having rid the earth of this monster, he established an Oracle at *Delphi* to commune with the gods. *Diana*, whose temple at *Ephesus* attracted the wonder and admiration of the pagan world, whose priestess she was in spirit life, ages after it was built, sleeps in the silent chamber of the sentiment and refinement of a prehistoric age. But the virtues of *Diana* inculcated into woman's life, shine with a brighter luster with the advancement of a higher and a more charitable civilization. *Diana*, as the priestess of ancient *Ephesus*, no longer whispers her beneficence in the vaulted alcoves of her temple—she is silent on the mountain top of sacred *Olympus*; but the *Diana* of woman's soul worth, still communes with the gods, and transmits her benedictions, her fidelity, and virtue, to the daughters of mankind.

Apollo, the sympathy of whose lute hushed into a gentle moan the warring conflict of nature's elements, and drew to his feet in silent, dreamy reverie the wild beasts of the forests, whose sweetness of voice and eloquent sweep of harp strings lulled into rest the winds of the wood, and silenced its feathery songsters; he too slumbers with his father *Jupiter*, in the poets' burial ground of the gods. But 'tis said that at night when the human brain is freed from the tumult of life, that his spirit touches the mortal intellect with the wand of musical enchantment, until every fiber of the sleeper trembles with the music and rhapsodies of heaven's blue dome, where angel voices incite in spiritual song the human soul to a higher and nobler existence. And

Orpheus, Apollo's mortal son, whose lyre was possessed of an extra string, whose pathos of voice and soul of lute melted to tears all who came within its sphere, no longer seeks in unbeaten paths of the forest his lost Eurydice. In the despair of his soul he seeks her no more in the gloomy depths of Hades, where his tender and pathetic appeal for his wife, and his heavenly music stilled the wheel of Ixion, and quenched the perpetual thirst of Tantalus, and caused the Furies to shed tears and withhold their persecutions of the souls of mortals. Even Pluto and Persephone, seated on their throne, stony-hearted, were moved to pity by the pathos of his music, and the vision of a faithful mortal love, which it portrayed. The era that gave us these eloquent ideals of spiritism, these sublime poesies of mortal and immortal life, these portrayals of a human love that bridges the grave, and of a fidelity as matchless as the stars in nature's blue vault, is only seen in part on the dial of a traditional past, so remote, that our gaze but faintly discerns the scintillations of its transcendent elegance of allegory and metaphor, by which the poet portrayed life here and hereafter.

SPIRITUALISM.

What is spiritualism? An earnest inquiry will develop many answers, as diverse in their character as the divergent mental unfoldment of those who attempt reply. In the main, however, those who are biased by popular illusions of prevailing religious or social schisms, will tell you that Spiritualism is the name of a very unpopular theory or belief that the "dead can communicate with the mortal." That "it is a superstition that when a man is dead, that *he is not dead.*" That "it is a kind of religious belief of a very low and vulgar class of people who claim to see spirits and talk with them." That "it is a very dangerous belief leading thousands to dementia and insanity." That "it is a secret

of knowing how to crack your big toe joint and prophesy by the adroit shuffling of cards."* That "it is only manifestations of the Devil."

On the part of its advocates, however, we are told that "it is our beautiful religion that we can communicate with the spirits of our friends who have passed over the river of death." That "it is not belief in continued life, but knowledge of that fact through mediumship." That "it is a state of superior spiritual discernment—an intellectual realm where the mind discovers spiritual truths and spiritual things." That "it is a scientific religion based on spiritual science, and not on material or physical science."

These answers by opponent and advocatè could be multiplied *ad infinitum*, but we have given enough to indicate that while answers of opponents are extremely narrow and some of them bigoted, the advocates of Spiritualism are far from being united in their ideals as to what it really is. In the midst of so many conflicting opinions, it may be desirable that we enter into a careful analysis of the word, and ascertain what is to be understood by it.

In its general sense the term "Spiritualism" is a compound of "spiritual" and "ism." The word "*spiritual*" is a qualifying word, and means, not material, † incorporeal, consisting of spirit, or spiritual substance. The term "*ism*," as a suffix means, in its modern application, the theory, doctrine, or philosophy of whatever word or term to which it is suffixed. Thus Calvinism, the theory or doctrine of Calvin. Methodism, the doctrine of the Methodists. But the term Spiritualism means more than the

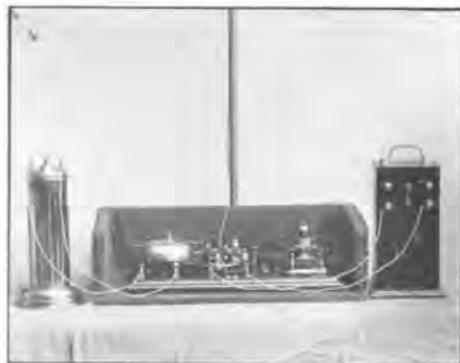
*See report Seybert Commission of the State University of Pennsylvania.

†Before science had discovered the invisibility of the life principle of elements and compound forms of matter, it was customary to speak of the invisible as "the immaterial," and this thought was dominant in Berkley's time as well as in all ecclesiastical dogma.

theory or doctrine of Spiritualists, since the term "spiritual" implies the philosophy of matter as the product of immaterial or, (using a more concise term) invisible substances. It also implies the life principles of all existences; and hence has a wider meaning and application than any other word or term in the English language. With all of these facts in evidence we shall affirm that the term Spiritualism, means the philosophy of cosmic process, the analysis of existence, and includes a demonstration of those invisible modes of motion which relate elements to matter, and correlates all that can be known of cosmic process to a universal system of spiritual evolution. With these inductions in view, the modern critics of Spiritualism may consistently retire from this discussion, until they learn how the visible in cosmic process is the result of *invisible combinations*, and that the philosophy of *invisible co-relations is the mathematics of infinitude*. That all of the elements of nature are *invisibly* related, that not a blade of grass grows and accretes but by *invisible* impact, that the relation of the planetary universe in combination with the planets of our own solar system exert an *invisible* influence on vegetation and all forms of life, that nature evolves formative or shaping principles *as the real soul of things*, that the visible form is only the phenomenon of the *invisible formative process* taking place within the structure we see, that nature gives by psychic process the elements suited to each growth, from out her vast laboratory of cosmic art, in the evolution and development of her souls of things, and that all nature is in a perpetual partnership called, "co-relation," in these processes. These cosmic facts are some of the data in the natural philosophy of modern Spiritualism. In proof of these facts, the philosophic intellect points out that in stellar photography the color motion emanating from the sphere of the dog star Sirius, which is said to be twenty-three billions of miles away, has its affinity for, and impresses the photo-

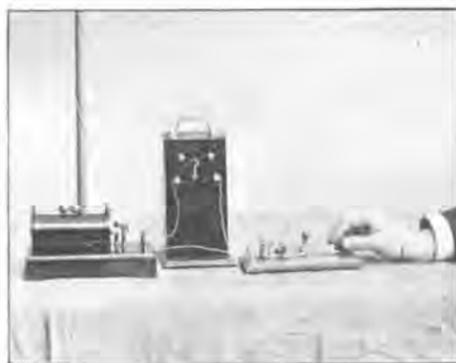
graphic plate in the Camera Obscura attachment of the modern astronomical telescope. This affinity could not take place were there not *chemical and molecular co-relation* existing between the light of the star and the sensitive film of the plate. Spectrum analysis discovers that the color motion found in plants, flowers, and all forms of vegetable growths, is identical in molecular radiation and vibration with that existing in the photosphere of the sun; hence the deduction that the color motion existing in plants is transmitted through the medium of solar light from this distant sphere. These phenomena could not occur, were there not polar co-relation in cosmic process. All variations of the weather, its heat or cold, its sunshine and its storms, are due to molecular changes and combinations in the atmosphere, induced by planetary associations and conjunctions promoting these electro-magnetic states. None of these phenomena would ever be expressed, were there not a universal system of molecular co-relation existing between planets and atmospheric factors. These co-relations like all co-operations in nature are psychic in their molecular action, but visible in some of the manifestations of their phenomena.

The growth (materialization of shaping forces and formative principles) of all forms of vegetable life, depends upon the molecular (invisible) impact on the plant or shrub, of these elements, forces, and energies, held in etheric form, which are suitable and selective to its development. This impact is due to the action of solar light; and the elements selected by the plant or shrub, depend upon a principle of *receptive polarity*. The seance chamber of night with its principles of negative reaction transforms the character and form of these elements by a process of development, which the physicist calls "*a change of chemical spectrum.*" These transformations take place within the chemical laboratory of the plant by a process evidently of *deoxidation*, in which the



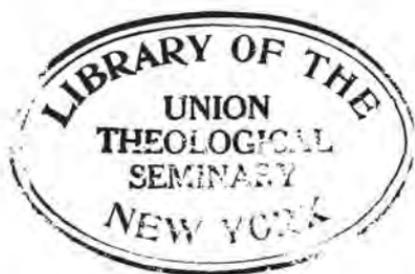
RECEIVER.
NEW YORK.

WIRELESS
TELEGRAPHY.



TRANSMITTER.
PHILADELPHIA.

"Now we affirm that all nature is infinitely polar and her elements, energies, forces and modes of motion are infinitely reciprocal. Hence all of her affinities are polar affinities. This fact is sensed in her processes of chemical combination. It is her basic truth in commercial telegraphy and manifest on a more subtle plane in Wireless Telegraphy and Telephony. Objective nature impresses your *consciousness* through the various avenues of sensation by her own formula of *wireless telegraphy*. She transmits to your conscious vision a beautiful landscape; to your ear the song of the birds amid waving branches; to your sense of smell the aroma of fragrant flowers, and to your soul the affectionate and fraternal glance of friendship. But more than all this, through reciprocal mediumship, she sends to you the loving messages of friends in spirit life."—*Extract from Prof. Lockwood's Great Lecture on Mediumship at Lilly Dale, August, 1902.*



plant throws off oxygen and retains its carbon, since from carbonic gas and water many of the vegetable compounds are derived which have a special place and function in the promotion of visibility* and form. Now these materializations of invisible elemental or compound energies selected by the plant from air and soil, this development and growth of plant and shrub, could not take place, the elements and energies would not combine in the plant, without *the reciprocal polar co-relations* of these forces in cosmic evolution.

In common commercial telegraphy, in our telephonic system, in the transmission of electrical energy, in phonographic and photographic impressions, and in all chemical combinations we witness the phenomena of nature's co-relations. The phenomenon of *The X Ray*, suggests the depth and range of this truth; whereby, with a cathodic illumination in a vacuum tube, we are enabled to see into and through opaque matter. Wireless telegraphy affords us a better conception of the subtlety and extent of this eternal principle. An electrical magnetic field is established at Halifax, Nova Scotia, *in a wireless Transmitter*, and a *Receiver precisely tensioned to the same polar resistance* is located at Liverpool, England. Upon touching a button which closes the electro circuit of the Transmitter, a bell is rung on the Receiver at Liverpool. This calls the attention of the operator at Liverpool. A token of "attention," is rung back to Halifax, when the operator there with a modified form of telegraphic key sends the symbols of telegraphic language which are accurately registered at Liverpool by the Receiver. If there were a thousand Receivers tensioned to the same electro resistance, they would have responded to the operator at Halifax, and registered the same symbols. These discoveries in electrical physics, will

*See Liebig's Agricultural Chemistry. Also Gregory's Organic Chemistry.

afford our reader an opportunity to trace principles of nature's subtle co-relations in every department of *visible* cosmic process.

But they do not end with visibility. No scientific truth has been more thoroughly established than that of "*thought transference*." Thought sent by volition (*a servient attribute of consciousness*), has been as accurately received and registered by people thousands of miles away from the sender of the thought, as any ever sent by any line of telegraph. There are thousands of testimonies of this general truth. Indeed, the experiences of everyday life attest this rational fact. The human brain in its average normal development contains a more subtle transmitter and receiver of human thought, than any yet constructed by Marconi or Fessenden. Conscious volition of the motary system, and conscious mental sensibility of the sensory system, are transmitter and receiver in this electro field of consciousness. Where two intellects are reciprocally polar to each other either on the physical or intellectual plane, the transference of thought and *sensations* are common phenomena. The various manifestations of mesmeric psychology depend upon these principles of reciprocal mental polarity and correlation. It must be borne in mind that all relations in nature are psychic and invisible in whatsoever realm or on whatsoever plane the actions and reactions take place. Hence modern Spiritualism affirms that these principles being true and operative between the invisible and visible in the various processes of cosmic evolution, that they are also operative between visible life on the mortal plane and life beyond the change called death; and furthermore it demonstrates that the psychic phenomena of Spiritualism is an inductive demonstration of this truth; based as they are, upon nature's immutable and eternal principles.

If the co-relations of nature's forces are operative in every realm of cosmic process, and the mental association

of the human depends upon this principle of co-relation, why is not its expression between the mortal and spirit life, *proof of the continuation of these principles of mental modes of motion*. All human communication is carried on by symbols or signs. Written thought is evidence of symbol language, ancient or modern. Vocal speech is a combination of vocal sounds, so arranged as to express consecutive thought. Thought itself is *a mental mode of motion*, which a reciprocal mentality can be impressed with, and understand. Thought transference by any form of telegraphy is expressed in symbols, signs, or cipher.

Thought expressed by vocal speech is a process of *mental induction by sounds*. Expressed in writing, is mental induction by signs. When expressed by telegraphic symbols, *it is mental electro induction by signs*. When expressed in acoustic symbols, *it is mental electro induction by sound*. Thought transference is based upon principles of *mental electro induction*.*

The mere articulation of the telegraphic key—its raps—without the symbols or signs belonging to telegraphic communication is the result of an over-sensitive wire or circuit, hence is an expression of *electro induction*; but when these raps of the key are given in the symbols or signs of telegraphy, it is then known as *mental electro induction*, because there is a mental process included in the transmission of the message. Spirit raps when given on a table, the back of a chair, or by the use of a key and sounder, in accord with the formula of telegraphic communications, and are manifestations of *mental electro induction*, because it includes a mental process. Spirit raps, answering to the calling of the letters of the alphabet, spelling out words

*In scientific exactness, all thought transference is that of mental electro induction, since we depend upon the electro structure and condition of brain fiber and brain cells for normal mental expression, for without these necessary electro states of the brain structure, mental processes become abnormal.

and sentences of concise and cogent thought, *are also manifestations of mental electro induction*, furthermore, these manifestations are in strict accord with the principles of symbol language.

All phenomena of human communication with human, or of spiritual intelligence with the human, are in strict harmony with the universal principles of the co-relation of nature's forces, and the conservation of her energies, which truth we will more thoroughly amplify in a succeeding chapter.

With all the testimony of nature and cosmic process in evidence, it will be seen that *modern Spiritualism* is entirely unlike the *Spirit-Schisms* of a mythological age, or the *Spiritism* of a later and more modern time. Spirit-Schism instructed that only the gods could communicate with the mortal. Spiritism claimed that certain spirits who had attained a degree of miraculous wisdom, by some supernatural agency, could converse with the mortal, but only through those who by some magic called "*Theurgia*," had reached a plane of mystical unfoldment.

Modern Spiritualism *demonstrates* that the human race is reciprocal to spirit influence and ever has been, although perhaps unmindful of the fact. More than this, modern Spiritualism *demonstrates* that the human is more or less receptive to all modes of cosmic motion, by impression, and that it is through this receptivity, and in accord with it, that the human acquires knowledge.

Spirit-Schism claimed the omnipotence of their own national gods, but denied the omnipotence of the gods of other nations.

Spiritism included in this omnipotence those spirits gifted with the power of prophecy and supposed transformations.

Modern Spiritualism demonstrates that in an infinitude of co-related elements and energies, that any factor of

nature, *is as omnipotent in its sphere of action, as any god known to the calendar of time.*

Spirit-Schism taught through the oracle, the dogmatism of the gods.

Spiritism sought through the sibyls and psychics, counsel from spirits how to govern and control man and nations in the interests of self-aggrandizement and gain. Neither of these systems instructed individual continuity of life and progression.

Modern Spiritualism as the philosophy of nature and the soul's progression instructs that nature is democratic and reciprocal, and that as all nature is a vast and infinite expression of associated energies, so mankind should be an association of national brotherhood; co-operative in character, fraternal in sentiment, and progressive. Modern Spiritualism as the philosophy of cosmic evolution demonstrates that continuity of life is nature's free gift to humanity—and that these immutable principles of the soul's evolution, existed before Bibles were written, before priests and priest-craft came to blight the world and human happiness with his insane and impossible system of *Spirit-Schisms and necromancy.*

CO-RELATION AND CORRELATION.

In the previous chapter we have submitted the fact, that the proof and basis of Modern Spiritualism from the plane of natural science, inheres in the *co-relation* of elemental factors and forces in cosmic process, and in the *conservation* of energy. As there are two terms, "co-relation," and "correlation," in common use with physicists and chemists, and as they do not mean or apply to one and the same relation, it will be in order to point out briefly their different meanings before proceeding with their application. The term "correlation" is the term generally employed by

physicists in the discussions of the relations of force or energy in cosmic process; and the word means as given by most lexicographers, "That which stands in a reciprocal relation to *something else*, as father to son, husband to wife," etc. This definition of the word is altogether too obscure to be relevant in physical or psychical science, since we do not trace "blood relations" between the various elements of nature or ties of hereditary, or paternal character between oxygen and its combining factors. The term "co-relation" is a compound word consisting of co- and relation,—the two words thus united mean, "relation with," or more accurately, "*corresponding relation.*" For this reason principally, the author of this book always employs the term co-relation, since he finds that so far as experiment can demonstrate that all forms and types of matter and every expression of energy and force, have *polar relations, hence, corresponding relations.* Every chemical combination is a manifestation of the phenomena of polar reciprocities in the combining processes. In tracing briefly these corresponding relations, we find them expressed in the slow growth of rocks and metal, in the processes of vegetable accretion and growth, and in all forms of life, also in the inter-relations of stellar space. To state it more definitely, we find co-relation between oxygen and hydrogen in water formation, based upon the reciprocal polarities of these two gases. We find carbon, oxygen, hydrogen, nitrogen, ammonial compounds, hydrogen compounds in plants and vegetable life, based upon the plants' reciprocal polarity to sunlight, atmospheric substances and soil, containing these elements. In all of these manifestations of cosmic process, *we trace corresponding relations, hence co-relation.*

In the organization of brain in human anatomy, we find expressed in normal states the functions of the motary and sensory system, with their varying degrees of development in the individual, and the similarity of its expression to the

varying needs of human existence. These corresponding relations of the motor brain to the voluntary movements of the physical organism, are extremely subtle and complex, while the relation between the sensory system and objective nature, by which man's consciousness is largely impressed, affords us a study in psychology and its associations which as yet are only partially comprehended by the average intellect. All co-relations in nature depend upon a principle of reciprocal polarity, which as an inner ruling principle unites in harmonious combination the heterogeneous characteristics of nature's elemental forces. It is a universal axiom in physics, that "any entity or manifestation of energy that has affinity for, or can be acted upon by unlike factors, has the strongest affinity for those factors of its own composition." The affinity that an individual vegetable plant has for those factors of atmosphere and soil which are *selective* to its *special development*, is a demonstration of this axiom. The expression of electrical energy along lines of the most highly tensioned wire, or through earth currents and atmosphere of *the least resistance*, is a further demonstration of this universal truth. But in no realm of energy or force is this truth more manifest than in mental co-relations. The affinity (polar relation) of one mind or intellect to another, or for all minds of similar grade, affords ample demonstration of this axiom. Indeed, in cosmic process, there are no limitations to this axiom of the universal relation of things, and it exists in all forms of elements and matter, and in all types of life, *as an invisible mode of motion.*

THE CONSERVATION OF ENERGY.

If the principle of "The Conservation of Energy," be true, it must apply to mental energies, as well as to other forms of force. Applied to matter, it means "to preserve and protect from loss or decay all energies and factors of nature." The discovery of its underlying data, gave rise

to the axiom that, "*In nature nothing is created, nothing lost.*" Nature "preserves and protects" in some form the infinitude of her forces and their relations. This being true of natural forces it must include, *conscious individual mental force*. If it be true of all forces, it must include the highest and most subtle, no less than its factors. It must include the "formative or shaping forces" no less than the corollaries of these forces. If it includes "the formative or shaping forces" of nature, than it includes the soul of individual man; *as each human possesses this individual shaping soul force*. If nothing be lost in the laboratory of cosmic evolution, than "*the soul of things,*" which is *the real entity that nature evolves in cosmic art, is immortal*. To deny this deduction, is to deny the inductions of science, and the premise upon which all human knowledge is formulated.

To deny the mental co-relation existing between spirit-life and the mortal plane, is to deny the corresponding relations belonging to every plane of existence, since all existence is to the mortal, an invisible existence. The highest order and form of energy known to reason and research, *is intellectual energy*. So we affirm that in a world where all manifestations have their origin in invisible nature, where all relations and associations are psychic in their action, no thoughtful student and thinker will be in haste to establish the limitations and boundaries of nature's related associations. This tendency and weakness has been a besetting vice of short-sighted zealots and dogmatists in all of the ages of past time, who have labored in vain to make infinitude the product of some god, whom they have clothed with their own mental individuality, and in dogmatic opposition to the demonstrations and facts of nature as cited by colleges and universities, they label their mental speculations, "*Infinite Intelligence.*"

THE HYPOTHESIS OF THE CO-RELATION OF FORCE, DEMONSTRATED.

We affirm that the positive and scientific proof of *Modern Spiritualism* and of the "continuity of life," inheres in the principles of "The Co-relation of Force," and "The Conservation of Energy," as these principles are applied to the mathematics of cosmic process. It is a popular illusion that the proof of immortality and modern Spiritualism can be found only in the Bible, and in what is call "*a spirit test.*" In all candor we desire to say that there is not a particle of proof of continuity of existence to be found either in the Protestant or Douay Bible, or in any volume of sacred writings known; neither is there any proof of Modern Spiritualism in any ancient beliefs or texts known, for the reason that the data and facts upon which this modern induction is based, were not known to the time or periods which gave birth to ancient Spirit-Schisms. Not only the Bible, but all so-called "*sacred cosmogonies,*" contain testimony and evidence of "Spirit-Schisms," and "Spiritism," since testimony and evidence are only indications of human opinions and beliefs, but human opinions and beliefs, and the concurrency of them, unsupported by synthetic analysis, falls short of the methods by which truth is known, *and proof, an established synthesis.* No book of the "Old Testament" contains evidence that the Hebrew nation had any concurrency of belief in immortal life. Its writers were pessimistic, materialistic, speculative and uncertain regarding a state of future existence. The various tribes of Israel were more interested in establishing the prowess and prestige of their national gods than in establishing the principles of the continuity of life. They thought themselves to be *a chosen people,* and their gods were partisan deities, too selfish, fiendish and merciless to save or protect other nations who

worshipped other gods. The "New Testament" is a much later record of events than those recorded in The Old Testament. The term "New Testament" means "*new testimony*," and new testimony is not "old testimony." It implies *different testimony* from that of the old. But testimony old or new is not proof. Jesus did not teach immortality for the race of mankind. His life and acts furnish no evidence that he believed in such a state of progression for man. *He did not bring immortality to light.* He did far less to establish this thought than did the Oracles of Apollo and Dodona 2,000 years before his time. St. Paul gives more consecutive testimony of a state of spirit existence than did Jesus and his disciples. The people with whom the disciples and apostles associated both before and after the crucifixion, furnish more evidence of spirit control and spirit association, than did either Jesus or his disciples. But none of this testimony or evidence is proof of continuity of life. *Human opinions, however uniform, cannot be taken as the criterion of truth. Let it be written on every human intellect, that the phenomenon of any reaction in cosmic process, or the mental relations of the spirit world, cannot be proven by mere beliefs and opinions; for the reason that proof of any cosmic phenomenon IS TO BE FOUND ONLY IN THE ANALYSIS OF THE PRINCIPLES OF NATURE, UPON WHICH THE PHENOMENON IS BASED; AND THROUGH WHICH INTER-RELATIONS IT IS EXPRESSED.*

We do not prove water formation by the beliefs and opinions of those who drink it, or who sometimes use it for promoting cleanliness. We do not prove that Lime is the oxide of the metal Calcium, by human opinions, *or why* it has great resistance to heat, by the guesses of the public mind. We are obliged to resort to chemical analysis to obtain these facts. So in the demonstration of Modern Spiritualism as the philosophy of continued life and the

mental association of the spirit realm, we shall ultimately see that the proof of these concepts can only be accurately demonstrated, by an analysis of the principles of co-relation which unite in cosmic process all the factors, forces, chemical modes of motion, and mental energies of nature. With this object in view, we ask our reader to accompany us into the laboratory of analytical investigation, *where only can we find* the true data of nature's associated energies, and where her immutable truths stand forth as guiding stars to human research and progress.

Here we must ask you to leave at the threshold of this inquiry the commonly accepted priestly platitude that "matter is dead, and crude and inert," or that its investigation is materialistic and tends to atheism and infidelity. These foolish sophisms are the careless speech of those whose zeal for popularity stops at nothing, and would even malign the God whom they claim is the author of the universe. In tracing these co-relations we shall be able to prove that man, like all forms of life below him, is restricted by similar environments as those qualifying other forms of life, to the extent at least, that he depends upon nature's assistance for all that he is or can aspire to.

The philosophy of action and reaction, of co-relation and affinity, are not so difficult to comprehend, if we begin an investigation rightly. Here are a dozen marbles oooooooooo held in a groove, and so placed that they impinge, one upon another. If we press or push the first marble against the marble it touches, it will induce movement in all of them to the extent the first one is moved. This action, or movement of the entire line of marbles, is best understood as an action or movement of physical induction, or transmission, since the energy which we transmit to the push of our finger, against the first marble, is transferred and induced in succession through the entire row of marbles. With this simple experiment to introduce you

to a form of what is called physical action, we will now call your attention to a deeper and more suggestive experiment with *The Vibrating Steel Bar*. (See Plate 1.) Here we have a common steel bar thirty inches long and so suspended as to be free from contact from any thing. If we strike our bar on the end with a common steel hammer, the blow puts it in vibration, and we hear a very pretty tone. But there comes with the vibration of the bar a sound of the hammer that struck it. What induces that sound of the hammer? A principle of reaction. If we examine carefully all of the facts of this phenomenon, we find that the bar struck the hammer, just as hard, as the hammer struck the bar. That is to say in scientific way, that the action of the hammer upon the bar, was equalled by the reaction of the bar upon the hammer. Thus you see how it is, that in certain departments of physics, we say that, "action and reaction are equal." Let us now make another experiment which will demonstrate a universal principle of action and reaction which applies with full force to every department of nature's co-related energies. We will now strike our steel bar with a wooden hammer. (See Plate 1.) In this action our hammer emits a different tone or sound from that of the steel hammer, while the pitch of the tone of the bar remains the same. What is the cause of the change of sound in the hammer? Because of the different structure and organization of the hammer itself. The former hammer was made of steel. The reaction of the bar upon it, put its entire molecular structure into vibration. The wooden hammer is composed of a different form of matter, but that fact did not prevent the reaction of the bar upon it, for it vibrated its own molecular fiber and characteristics. If we strike our bar in succession with a variety of hammers, we will find that while the pitch of tone of the bar remains the same, that the reaction of the bar upon the hammers used, makes each of them in

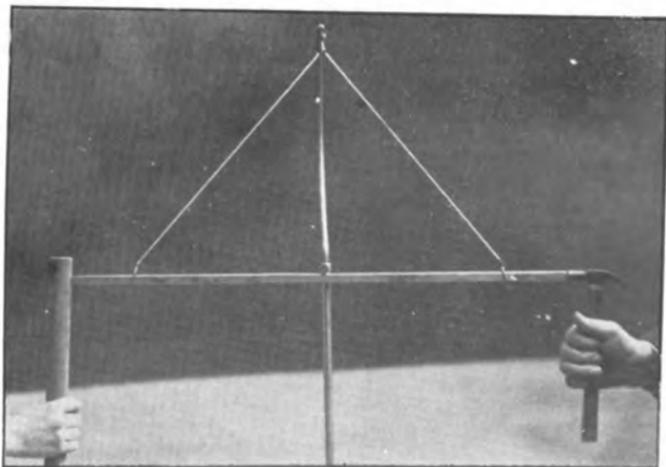
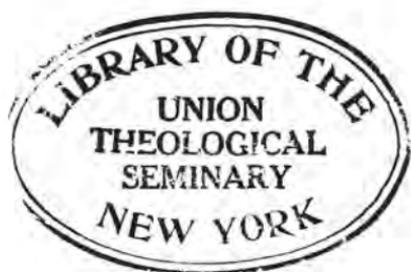


PLATE 1.



turn, *vibrate their own molecular organization*. If our steel bar was a mile or more in length, and properly insulated, we could soon train our ear to sense and tell each hammer that struck it. We will demonstrate this principle and fact a little later on, in another department of physics. All and each of these experiments, like our first one with the marbles, are the expression of what is called (erroneously) physical or mechanical* induction, which fact will be amplified as we proceed. But we desire to call your attention to another fact and phenomenon which otherwise might escape your attention. It is this: That while each hammer induced a certain pitch of tone or vibration in the bar, *the quality of the tone*, was modified or changed with each hammer we used. If we continue these experiments, using in turn six differently structured hammers, we will find that one of them induces in the steel bar its finest quality of tone. This phenomenon is due to *a principle of molecular selection* or suitability of the hammer to the vibratory structure of the bar, in the promotion of fine quality and elegance of tone. This truth of selection is found expressed in varying degrees in all cosmic forms of life. So it will be seen that selection as well as co-relation are associated factors lying at the very base of organic matter. It took our musical mechanics a long time to find out something of this principle of selection in the construction of organ pipes, and reeds; and in the structure of a

*In precise scientific reasoning, there is no such thing as physical or mechanical induction for the reason that all energy is an invisible mode of motion and has its source or origin in the psychic reactions of nature's laboratory. The energy that moved the marbles, or struck the steel bar, was an evolution of conscious volition, operating upon and through certain ganglionic centers of the brain and arm. Steam and electricity are neither physical or mechanical energies per se; but may be applied to physical or mechanical action. So can volition operating through certain cortical centers of the motary system. All relations and co-relations in cosmic process are psychic, being the reactions of the life principle of things.

suitable wire material for our pianos, and properly covered hammers to strike the wire; and there is still room for improvement. It has taken our agriculturists, and floraculturists a long time to find the most suitable soils and climate for the respective growths and highest development of seeds and flowers, but no one has yet been brave enough to suggest that the highest application of this truth of intellectual selection, should qualify conjugal and matrimonial alliances and wedded life. But of this we may speak further on. Let us apply this principle of action and reaction, and of co-relation briefly, in another department of physics. Here is a glass of common water. We will put into it a small lump of salt, and watch the action upon it. The *action* of the water upon the salt very soon dissolves it. As a visible lump of salt, it is lost to view—it has changed its form of visibility. As salt, it can no longer be seen by the eye. The water has *acted* upon it and changed its form. But the salt in turn has *re-acted* upon the water, and changed *its character*. It is no longer pure water. Its *action on the salt* has been met and opposed by *the re-action* of the salt, which now *pervades every molecule of water in the glass*. Every molecule of visible salt was *acted upon* by the water, and, every molecule of water *by the re-action of the salt*, became salt-water. Our analytical chemist will find a trace of the smallest particle of salt we can put into the water. Thus we see that action and reaction are equal, since the time required to reduce the salt, be the quantity large or small, depends upon the proportion of the volume of the water to the quantity of salt.

This eternal principle of action and re-action applies not only to elements of nature in process of combination, but to all compound forms of matter, and to all types and conditions of vegetable or plasmatic life, and all types and kinds of animal life from nomad to man. It is the fundamental order of the equations of stellar-space.

Disease acts upon the human system as a mode of invisible motion; and the system opposes the action of the disease to the degree of its own polar resistance, or in proportion as the vital action of the system qualifies it to oppose the action of the disease. Disease of whatever kind exerts an influence on the system, and leaves a trace of its effects. So crime committed, leaves its effects on the entire nervous and mental organization of man. The memory of a crime, articulates every avenue of the human mentality, until every fibre and tissue of the human vibrates the crime as a molecular mode of mental motion; *as certain and definite* in its action, as the vibrations of our steel bar and its various hammers. The human that goes into company with abnormal appetite, with disease, or crime, is as sure to be diseased as readily with one condition as the other, as certain of detection when these great truths of reactions and co-relations are thoroughly comprehended, as the chemist is, to find salt in salt water, or the vibrations of the steel bar and hammers are, to reveal their own molecular organizations. Physicists hitherto, have only applied these principles of action, reaction and co-relation to the ordinary forms of matter in its organic relations. We find these principles to apply and to be operative in every realm and department of nature—*they are eternal*. The popular mind will be startled with the significance of this truth as with the trump of judgment day, when it fully realizes the extent, subtlety, and application of these immutable reactions, connecting as they do, man to his environment. There can be no action in any realm of existence without reaction; and man's mental reactions and thought will eventually reveal to the public his duplicity, his crimes and misdemeanors, with the certainty and accuracy of wireless telegraphy, since both of these systems of wireless telegraphy and thought transference involve the same data of selective prolarity and principles of mental electro induction.

Nature seems to be a vast laboratory of spiritual energies and elements, infinitely related by molecular ties of electro polar character. Every form we see has an invisible relation to some things we do not see. We call this invisible relation, "*psychic*;"—hence all relations in nature are psychic and are unseen. This is true of every form of matter and type of life. Man has not understood or comprehended his relation to nature or to his fellow-man because he has depended upon his vision, not knowing that vision was only an avenue of sensing, and that sensation itself is the result of a psychic impact of some mode of sense motion upon his consciousness. Our steel bar is composed of an innumerable number of steel molecules so small in size as to be invisible to the eye. In organization each molecule is like the rest. These are united together by a process of combination of the elements of which the bar is composed. This combining process is called affinity, which we will explain a little further on. These molecules of steel are all of the same electro tension, and when we strike the end of the bar, the entire bar rings for the reason that each molecule blends into union with its neighbor molecule, and any impulse that disturbs one of these and arouses it into vibration, that impulse induces similar action in the entire mass of molecules comprising the bar. The same principle applies to the hammers, and to all forms of matter that possess acoustic properties. Not only this, but nearly every form of matter and the elements of which they are composed, are reciprocal to an infinite variety of impulses far more subtle than those we ascribe to mechanical or physical induction, as we shall be able to demonstrate in another chapter. Matter, infinitely reciprocal to all modes of motion known to cosmic process, and cosmic evolution! What a sublime truth. Matter, ethereal, elemental or in compound form, the vehicle of thought and mental energy, connecting all spheres and realms of time and space,

because of its infinite co-relations. What a realism is this to usher in the great inductions of the Twentieth Century. Matter, fresh from the mold of spiritual forces, in a spiritual universe, and almost sentient by the omnipotent touch of nature's combined forces; matter, through which angels breathe the glad tidings of a continuous and progressive life for man, and the disembodied intellect of earth's most noble savans whisper to mortal ears, and impress the conscious brain of the thinking soul, with the thought of a spiritual world of transcendent splendor, where the philosophers and philanthropists of all nations, seek to honor and bless mankind. O, Reader! *Stop and think!*

CO-RELATION WITHOUT VISIBLE CONTACT.

In the foregoing we have briefly demonstrated principles of action and reaction and of co-relation where the factors were in contact. We have shown how a blow or concussion of any hammer on the steel bar induced a vibration caused by the impact, through every molecule of the bar; and that the reaction of the bar induced a similar vibration into the molecules of the hammer that struck the bar. We have suggested that the vibration of the bar carried with it the sound of the hammer that struck it, and that the reaction of the bar upon the hammer transmitted to the hammer, the pitch of tone and molecular tension of the bar. We also found by experiment that these same principles of action and reaction applied to chemical combination with the same degree of verification. From these data we deduced the universal application of these principles of the molecular co-relation of things, and that it applied to all cosmic processes and their factors. We deduced that as disease in the human system aroused a vibration of molec-

ular character indicating the presence of disease as a mode of motion, so the action of crime committed of whatsoever character arouses in the nervous mental organization of the individual who committed it, *a vibration of the crime*, that intellectual man can read as accurately as the scientific pathologist reads and locates disease. Having shown these immutable principles to be operative where there is visible contact of the factors, we will now demonstrate that they apply with equal force, where there is no contact, and the factors are remote from each other, but when there exists polar affinity between them.

We will make our first experiments in the art of scenic photography, because the exposition of its principles will better qualify you to understand other more subtle correlations found in nature. We will select a little neck of water extending from the lake up into the highlands, where the bank slopes gracefully towards the water, and beyond the bank rises a large grove of trees majestic and stately, whose gently moving branches and tops seem to be stretching their arms and leaves high into the sunlight of a beautiful June morning, as if in anxious, but hopeful expectation of continuous support from the sun and ethers of space. On the bank, the owner of the property has trimmed into comely form some native flowering shrubs, and little patches of violets, and here and there a small bush of wild roses, which help to mould into eloquent scenery the landscape before us. The little neck of water too, so placid and calm in the sunlight, reflects the beautiful bank with its shrubs and flowers and the large trees in the background, are all mirrored in so strong outlines, that we can easily imagine that we sense in this reflection of the scene in the water, a spirit realm, where perennial banks and flowers and trees exist in reflected reality—the reflection on our consciousness of such an existence, being so analogous in many ways to the reflection in the water. What a mornibg is this, and

how this landscape seems to be in harmony with the radiance of sunlight and the fragrance of the atmosphere. How the eloquent counterpoints here blending of nature's infinite art, brings to mind the swelling and immortalizing strains of Handel's Largo, as it melts the soul into a recognition of the boundless equations in nature's infinitude; and the psychic and spiritual impress of this infinite art upon our consciousness, is in a manner quite analogous to the psychic impress of this scene upon the object glass of our camera. Having selected a suitable position we will focus our lens in such a way, as to reproduce in detail the minutiae of the scene before us. Placing our photographic plate in the exact line of this focus we expose it to the scene before us, one second of time. Let us now take it to the developing room and see what are the results of our efforts. Taking the plate out of the holder, we note no change in the film. Not a trace of any reaction can be seen. No microscope can reveal it; and yet, when as we place it in the developing solution, we see dimly at first, how the entire surface of the plate has been receptive to the invisible modes of color motion, which have had a strange molecular action on the film. Every shade and color seen in the sloping bank and in the verdure of grass and flower and shrub and trees, together with those reflected in the water, have been impressed as color motion on the sensitive plate. Like so many different hammers each color has struck the plate, bringing with it not only the character of the color, but the shape and general contour of the bank; also the shape of flowers and shrubs and trees, and their reflection in the water, have all been affined to the film of the plate, each in proportion to its selective and elective affinity. Each color motion according to its vibratory rate, has impressed the sensitive film, and the film has reacted upon each color motion, thus changing their color individuality. In these reactions and those caused by development the color *per se*

is lost to view,—only its molecular action is seen on the film.* Here we see demonstrated again the principles of action and reaction, and of co-relation where the factors were not in visible contact. Here we sense that there was some quality in each and all of these colors that had chemical affinity for the film or coating of our plate, and we also sense that the chemical structure of the plate was reciprocal to these modes of color motion, hence the co-relations between them. Had this scene been further away, and the atmosphere free from anything to obstruct the action of light and color motion, we would have obtained the same results. Distance, or space of itself, in no way changes the reciprocal relation of polar factors.† Frequently, however, the atmosphere does contain invisible elements and substances, which do interfere and modify natural polar relations, and these opposing elements and factors are known in physics as, "*opposing modes of motion.*"

Having seen that cosmic co-relations and principles of action and reaction are operative through illimitable space,

*In 1874 the author of this demonstrated in a lecture to a convention of photographers held at Buffalo, N. Y., in the month of August, how the picture gets onto the plate in photographic process by the affinity of color motion for the film or coating of the plate. He also affirmed at that time that "if the principles of molecular radiation were true, the time was not distant when we would be able to picture the internal anatomy of the human organism."—See Munn's Science Record, 1874, Art. Photometry of Colors.

†The photographing of the dog-star *Sirus* at the Lick Observatory, and the discovery of stars in its nebula in the photograph which the eye could not see through the telescope, is a demonstration of this principle. *Sirus* is said to be twenty-three billions of miles from the earth. Also the discovery this current year—1902—of a star of the first magnitude in the southern hemisphere which is larger than *Sirus*, and whose approximate distance is estimated at 123 billions of miles from the earth, is conclusive evidence that the principles of psychic affinity and co-relation are without limit.

we will now turn our attention to an experiment that demonstrates that time is virtually annihilated in the expression of these co-relations; or at most is so brief as to be beyond ordinary sensation. To this end we will photograph what is called "a streak of lightning." To secure the best demonstration of this fact in nature's relation of forces, we will select a dark night, when all nature seems hushed as though anticipating a cataclysmic shock. An occasional peal of thunder preceded by a bright flash of lightning is all that disturbs the static quiet and inky darkness enveloping us. The peals of thunder grow louder, the flashes of lightning more frequent, while here and there a fork of zigzag lightning descends towards the earth accompanied with deafening peals of thunder. The storm cloud comes nearer; we can now see its outlines when a flash of lightning lights up its silver-crested domain. Let us get ready now for the experiment before the rain begins to fall, for these electrical reactions upon the oxygen and hydrogen gases in the atmosphere are nature's method of evolving water. We will first focus our lens upon the approaching cloud, and place a sensitive photographic film several feet in length, closely wound upon a cylinder and so adjusted in the camera, that it can be drawn out directly in line of the focus. Connecting one end of the film to the mechanism that moves it, we will now see that the electrical device for opening and closing the shutter of the lens is properly connected. A strong battery attached to a small motor dynamo so tensioned as to open and close our shutter in one-thousandth part of a second is connected behind the lens. Starting the mechanism in motion that moves the film across the field of focus, we press the button operating the shutter, which flies with electrical rapidity across the face of the lens. A few flashes of heat lightning—so-called—are reflected upon the film as it is drawn over the field of focus. Now there comes a terrific discharge of forked lightning, accompanied by a deaf-

ening crash. During all of this time our device for securing this picture in the briefest time possible, has been steadily at work, the film being impressed with every flash of light, and the shutter opening and closing the lens with electrical fidelity. It is in such mechanisms as these, that we see demonstrated how the genius of man's progressive intellect, which theology in all ages has labeled "finite mind," is so progressive as to devise methods to catch and hold a picture of the very lightnings of storm-clouds, and the storm-clouds themselves, that their form and visible appearance may be investigated. The development of our film demonstrates that every flash of heat lightning illuminated the approaching cloud and the changes taking place in its shape and character. Not only this, but the zigzag bolt in its attractions to the earth has been accurately taken and outlined on the film of our negative. The inconceivable time in which this was taken, indicates that the psychic and invisible impress of this energy of electrical character, makes chemical changes in atmosphere and every thing for which it has polar affinity, as well as upon the photographic film in a lapse of time so brief that the intellect cannot grasp it. The one-thousandth part of a second. Who among our readers can think it. Yet in that fraction of a second, the molecular changes in atmosphere and soil, and upon vegetation and all forms of life within its polar radiation, were far more wonderful and far-reaching, than all of the miracles ascribed to the gods of time. No star of space, no realm of infinitude so remote, as to be exempt from the eternal rhythm of nature's reactions. No change of formula, no plane or sphere in cosmic process, that is not subject to it. *There is no domain of metaphysics*—no place where there is a change of this invisible relation of the elements and factors of time. What the world of philosophy has called "physics," is only a term expressive of the visible phenomena of invisible chemical changes. There is no

arcanum where there is a variation of this order of unity in cosmic evolution.

The metaphysician will die with the gods. He has been a willing and abject slave to some form of theology, since the inception of the priesthood. No mental chimera, no flight of an abnormal imagination, no platitude, in brief no ignorance so stolid, that he without thought, or with mental perjury would not help to perpetuate. Miracle, mystery and myths, are *the trinity in unity*, upon which he imagines cosmic process to depend. "Material laws for a material world," "and spiritual laws for a spiritual world," "a realm of matter and a realm of spirit," "a realm of physics and a realm of metaphysics," and "the duality of matter and spirit," are some of the ridiculous and unprovable sophisms inscribed upon his banners and in his writings. These inconsistent theological vagaries have had their day. Before the rising genius of a liberated intellect and the inductions of modern science, the myths and mysteries of a mythological age will fade from view; and will be succeeded by a knowledge of the sublime truths of cosmic co-relations. All of nature's forces will be seen to be in a co-operative partnership of fraternal and harmonious combination; uniting in polar unity to sustain and develop *formative forces*, which manifest themselves on the earth plane in the phenomena of visible form. From this visibility of appearance, the superficial thinker has imagined cosmos and cosmic processes to be material; but the philosophic intellect discovers behind this phenomenon of visibility, the omnipotence and spirituality of nature's formative processes. This truer, deeper and grander thought of nature's associated energies, *will gradually dawn upon the progressive intellect of an age that thinks.*

ALL FORMS OF CO-RELATION ARE INVISIBLE MODES OF MOTION.

Having shown briefly the fact of co-relation existing between things in contact that produce or evoke special phenomena, as well as between factors that are polar to each other but far apart, it may be desirable that we demonstrate as clearly as possible, that this relation of one thing or factor to another in nature's domain, *is always an invisible relation*. The impulse in our steel bar that was aroused by the stroke of the various hammers used, was transferred from molecule to molecule as an "invisible mode of motion," which means an *invisible method of acting, or of action*, on the part of the molecules of the bar. The same truth applies to each hammer used. The reaction of the bar, aroused or induced an invisible action of the molecules of the various hammers.

In a manner somewhat analogous, the impact of the different colors in the scenery we photographed, upon the sensitive film of our plate, caused an invisible chemical action on the film, and the reaction of the chemical energies upon the various color motions was so intense, although invisible, as to eliminate the color *per se* from the impress obtained, and leave on the plate only the result of the electro action of the color itself. It was also demonstrated that each hammer made a different sound as it struck the bar, and each color left a different impress on the film, hence it follows that every change of sound in the hammers and bar, and every variation of the impress of color motion on the photographic film, was in reality caused by different methods of acting, of the different modes of motion, co-operative in the production of the phenomena induced by these experiments. Let us see now if we can probe a little deeper into this invisible action, and ascertain if possible something of its character, and what it

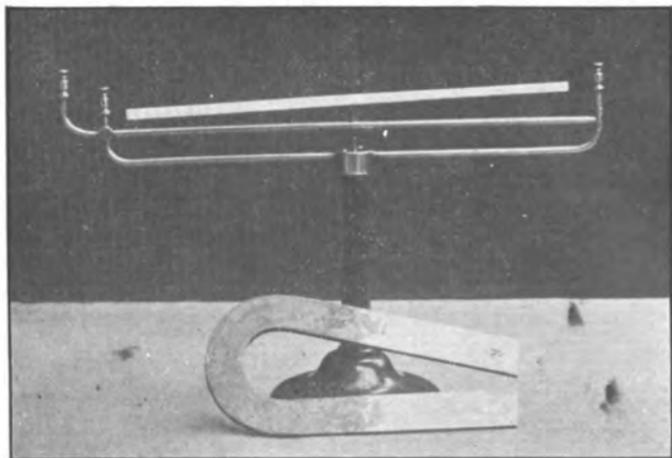
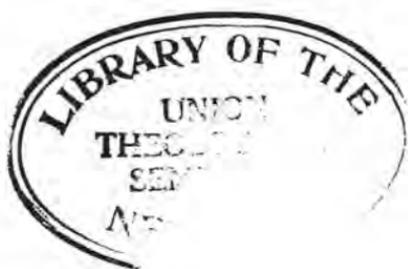


PLATE 2.



is that causes this great divergency in the methods of action of what scientific minds have called, "modes of motion."

Here we have (Plate 2) an electropoise. Although not made *especially* as an electropoise, it will answer our purpose. If we take our twelve-inch horseshoe magnet, and hold its negative pole within six or eight inches of the positive pole of the steel bar poised in the center of the apparatus, you will note an indication of a strong attraction of the needle or bar, towards the magnet. If we hold the N-pole near enough, the needle or bar will be so closely attached, as to require some force to separate them. If we hold the positive end of the magnet near the positive end of the needle, the needle or bar will be repelled. Now you can't see this energy that seems to pull the needle towards the magnet, or that drives it away. It is called an *invisible mode of electro-magnetic motion*. Yet this invisible motion pulls or pushes in proportion to the electro-magnetism induced by the combining molecular organization of both magnet and bar. This invisible energy does not belong to the magnet alone, but is an evolution of the combined energies of both bar and magnet. To prove this let us suspend our magnet by a string tied in its center and attached to the ceiling, and we will find that if we hold the bar or needle rigidly in our hand near the magnet, that it will in turn be attracted or repelled as we relate the positive or negative poles of the bar. These phenomena always appearing in these experiments, we find that the principles of attraction and repulsion in nature are sensed to be (first) invisible modes of motion, and (second) the result of the combining elements and energies of the factors involved. This principle of invisible relation, and combination applies to every molecule of all forms of matter, and is manifest in the various modes of attraction and repulsion in the expression of all types and combinations of matter. But it will be claimed by the superficial thinker, that there is no com-

bination where there is visible repulsion as is witnessed in the action of the needle, when opposing poles are brought in contact. This is a very common, but erroneous conclusion. In the phenomenon of the repulsion of the needle or bar, it is quite evident that the mode of motion emanating between these poles do act and re-act upon each other for the reason that if our magnet be suspended, and its positive pole approached by the bar held firmly (*positively*) in our hand, the positive pole of the magnet will be repelled, so we reach the conclusion that principles of visible repulsion, when all factors are equally disturbed, inhere in the psychic reaction of the molecules of both factors.* To this extent then, there does exist between the opposing poles of magnet and bar, a species of combination which for want of a better term we will call, "*nego combination.*"†

To further elucidate this truth, that visible repulsion is due to a repelling magnetic force the product of the positive or negative poles of the magnet and bar when brought into contact, we will call your attention to experiments with the *Differential Magnetometer*.‡ (See Plate 3.)

If we place a copper bar or needle on the upper pivot of this apparatus, we find by experiment that the bar is

*It would be well for those people who gossip about their dislikes of persons with whom they come in contact, to remember that this feeling is the result of the reaction of their own personal magnetism, no less than of those they criticise.

†The term "Nego," is from the Latin and means "to repel," hence a repelling magnetic combination of forces, in the sense in which it is used.

‡*The Differential Magnetometer*, is an amplified form of Oersted's electropoise, and is so arranged that needles of different metallic structures and amalgamations may be tested, and their polar attractions and repulsions measured and compared for the purpose of noting principles of differentiated magnetism as qualifying the different forms of metals. The amplified form of this apparatus is the invention of the author of this book.

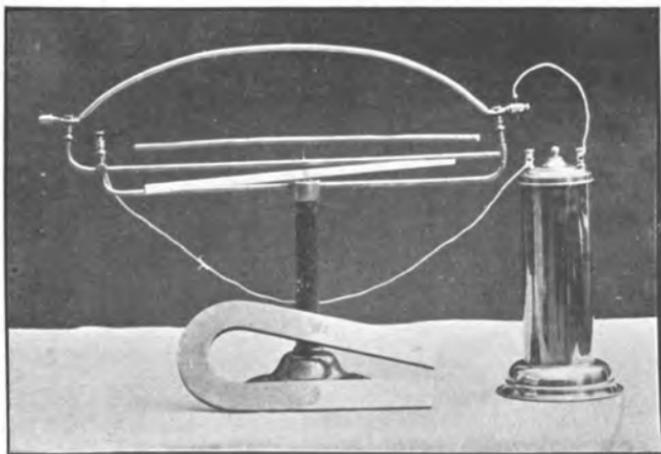
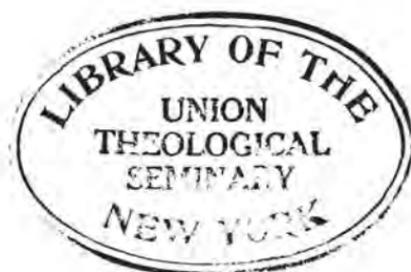


PLATE 3.



neither attracted or repelled by the approach and touch of our magnet. This static state of the bar is due to the fact that its molecular organization is not reciprocal to the magnetic energy or motion of the magnet. In other words, *it is not polar to it*—the molecules of copper contain no property or function to act or be acted upon by this kind of magnetism. If we substitute a bar or needle made of an amalgam of half iron and half copper, there will be seen to be slight action and re-action, and this phenomenon of attraction and repulsion increases in vigor of expression, in proportion as we increase the amount of iron to the amount of copper in the construction of our needle. These experiments carried on with a variety of amalgamated needles of various metals, lead us directly to the consideration of the fact that magnetic combination depends upon a principle of selection, and selection depends upon polarity, and affinity depends upon *both selection and polarity*. Applying this principle to the chemical reactions of the color motions which made the impress on our photographic plate, we see that those colors above the purple possessed the strongest affinity for the plate, and were also the first to appear in the development. And those colors below the purple had seemingly less affinity for the plate,—some of them making very feeble impressions—and were the slowest to appear in development.

With the vast amount of data of these principles of correlation in evidence, it is not difficult to understand that the formation of metals, of rocks and stones, of the different shape, size and character, of trees, shrubs, flowers and leaves with all of their varying contour and characteristics, depend upon polar selection in combining processes, and that the art which has been attributed to an *Omnipotent Designer, in reality inheres in the differentiated attractions and selective polar affinities of nature's elemental forces*. The method of combination is wonderfully variable, in cos-

mic process, and that shape, form, and visible characteristics and invisible properties are due to these varieties of selection in method of combination, seems to be thoroughly evident to the careful investigator and unbiased thinker. If the polar repulsion of invisible elements be due to some property or polar function in a flower, leaf or blade of grass in process of development, then what the flower, leaf or blade of grass attracts is likewise due to selective attraction. Hence each form of vegetable life depends upon that function of attraction which selects through this principle of reciprocal and co-related polarities just those elements necessary for its own development—all others are repelled or possess no function of attraction. Let us extend our investigation of co-relation into another department of affinity.

THE PHENOMENA OF CO-RELATIONS, WITHOUT VISIBLE CHEMICAL CHANGE.

We have in the foregoing briefly traced some of the principles of action and reaction, and portrayed the process of polar co-relations when visible phenomena were noted in certain phases of chemical combination. But by far the largest proportion of co-relations obtain in cosmic process, where there is no visible or immediate change taking place that can be seen in the factors involved. And these invisible changes, let us suggest, are more subtle, far-reaching and important, in the promotion of the equational character of all forms of life, and even of cosmos itself, than those which we see in the immediate product of chemical combination.

In order to demonstrate some of the facts incident to this class of phenomena, we will call your attention to an apparatus involving two distinct principles, and which in

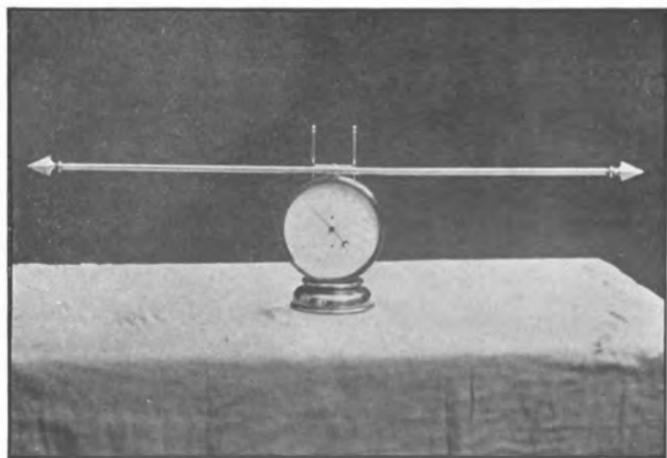
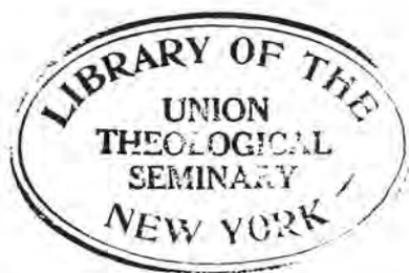


PLATE 4.



reality are separate mechanisms, but which we have combined for convenience of illustration.

It consists of a common metal equipoise or balance, for indicating principles of what we call to-day, "*gravitation*," to the framework of which, we have attached a modern *metallic thermometer*. (See Plate 4.) Our equipoise is so constructed that a ring—not shown in the cut—can be moved upon one of the arms of the instrument to indicate changes induced by the action of gravitation.

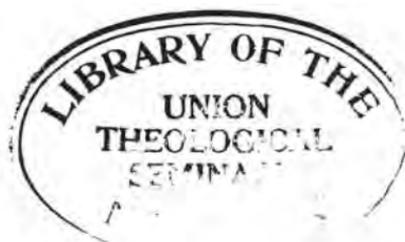
It will be seen that when the arms are perfectly balanced or poised, they will be of precisely the same distance each, from the surface of the table on which the apparatus rests. What we call gravitation is an invisible mode of motion, or, more exactly speaking, *an invisible method of molecular attraction*, and this attraction holds the arms of our instrument in exact balance; because there are as many molecules of matter to be attracted in the arms, on one side of the fulcrum or pivot, as on the other; hence we have the perfect equipoise or balance of the arms. If we place on the arm a ring or weight of whatever character, and of ever so small a size, the arm thus weighted will descend for the reason that there are more molecules now on one side of the fulcrum than on the other—hence the greater attraction. This force that pulls the arm down is invisible, and its action upon the molecular structure of the arms of the apparatus, or upon any form of matter attracted, is also invisible. This truth applies to all specific gravities of which water is the unit of measurement or comparison, and it also applies to etheric gravities of which atmosphere is the unit of comparison. In all of the co-relations of gravity in either form, we have to deal with an action and reaction in which no perceptible chemical change takes place in either factor. We only witness the phenomenon of the result of the attractive forces. The question often arises, "What is gravitation?"

There has been much speculation and discussion among physicists and experimentalists in an effort to answer this interrogation, and opinions vary according to the different lines of investigation each claimant has pursued. With due respect to the opinions of others, we believe that eventually gravitation will be seen to be *a form of electro-magnetic attraction*, and in harmonious mathematical accord to the proportion of the body of the earth, relative to the body attracted. In this computation we will see that the magnetic action of the earth exerted an influence exactly equal to the relative molecular weight of the attracted matter. Molecular co-relations are the basis of all forms of co-relation in nature; and it must be borne in mind that this co-relation between the earth and any attracted matter is an invisible relation.

With a comprehension of these facts, we are now prepared to investigate other forms of co-relation in which we sense analogous formula. In our modern metallic Thermometer (See Plate 4) is an ingeniously arranged combination of metallic springs. It is a well-established fact in "*Metallurgy*," that some metals expand and some contract when subject to the action of heat. And this expansion and contraction holds a definite proportion to the degrees of heat involved. The mechanical physicist has applied these facts to the structure of a thermometer which mechanism is worked by the expansion and contraction of metals; and he has succeeded in furnishing us a thermometer as exact as the mercurial thermometer, though not quite so sensitive to the action of heat. Here we see how the index hand on the dial is moved by the expansion of the metal to which the dial hand is attached, and conversely how falling temperature is shown by the contraction of the metal. The action of heat upon this mechanism is of molecular character, and is an invisible mode of motion, co-related to the metallic structure upon which it acts. Heat induces chem-



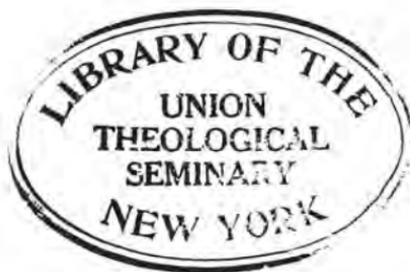
PLATE 5.



ical action, but the chemical action is of a kind we cannot see, and that chemical action expands the molecules and molecular organization of the spring which connects to the dial-hand. Heat as a mode of cosmic motion is one of the most potent factors known,—but like all other factors of time, its operations are carried on in an invisible spectrum. But heat, and cold, and moisture of the atmosphere, produce *other electro-magnetic changes*, different entirely as a mode of motion from that of heat alone, and the genius of man has invented an instrument to indicate the varying changes of these elements and factors, as they unite in different combinations. The instrument used to note these varied associations existing between cold, heat and atmospheric moisture, is called a *Barometer* (See Plate 5). This is a very finely calculated and a very sensitive mechanism; so arranged that when a cold wave begins to near a locality, the combining electro-magnetic changes in the atmosphere, induce a change upon the molecules of the mechanism of the apparatus, sufficient to cause the index hand on the dial to point to the coming weather. When the electro-magnetic action of moisture is in the atmosphere, although the center of this action may be many miles away, yet the molecular change enveloping our *Barometer* and its internal structure, true to these co-relations and reactions, indicate on the dial the coming storm. We call these changes of the *Barometer*, the result of atmospheric pressure, but such terms are conventional—they do not express the fact. The changes, as before stated, are the result of *electro-magnetic action between cold, heat and moisture*. If the coming storm center were a sentient personality, and telegraphed ahead that “it was coming,” “prepare for me,” the results could not be more precise and certain and true, than now, when it sends its symbols ahead sometimes thousands of miles with telegraphic exactness.

If we take our Barometer down into the earth on a clear day a hundred feet, its dial hand soon indicates the change of location. If we take it to the top of a high building, again its index hand notes the change of altitude. The electro-magnetic changes called "*atmospheric pressure,*" soon co-relate themselves to our instrument, and tell us in symbol language of nature's own making, the atmospheric conditions of our environment. When man learns to read these symbols of co-related nature, in a wider and deeper application than is now comprehended by the popular mind, he will be able to trace facts and their relation to other facts, far beyond what is voiced to-day. And the highest and most exalted truth which his expanding vision will discover, is that of continued life and its relations to the mortal plane, by symbols and signs as certain and true as those that relate light and heat to chemical action, or the stars of the etherial vault to our earth and solar system. On a future page *we will demonstrate this truth.*





RADIANT MATTER AND THE X RAY.

Few, if any, discoveries of modern time have been of more universal interest and importance to the welfare and happiness of civilization, than the discovery of the X Ray. There are some inventions and discoveries valuable only to the student in science and natural philosophy; while others are of unlimited value to science and the physical welfare of the human race. The X Ray discovery, is of the latter class, and like other expositions of natural principle seems to appear upon the scroll of human progress as an inductive synthesis towards which an element of scientific thought had been tending many years. MICHAEL FARADAY in some of his grand essays, in a moment of inspiration, voiced his belief in a principle of the universal radiancy of matter, based upon the electro-magnetic character of all known forms of matter. This thought was opposed and even derided by many jealous physicists, chemists, and experimentalists of his time, and seemed almost lost to view when Professor Crookes discovered the "high vacuum tube." Although the first tubes used by Crookes were of comparatively simple structure, yet a slight modification of them in the hands of Professor Roentgen in some experiments made with a Rumcorff induction coil, led to the discovery of the X Ray. Subsequent experiments with the X Ray opened to view new principles manifest in the formation and character of matter in general; leading experimentalists to the conclusion that Faraday's theory of the "Radiancy of matter,"* if it was not an inspiration, was a

*Michael Faraday made many experiments with a vacuum tube of low tension, and was followed by Gessler, who made improvements upon it. These tubes are known as "low vacuum tubes." But it remained for Professor Crookes to construct a "high vacuum tube," and the discovery of the X Ray is due to the manifestation of a very penetrative quality of light not manifest in a low vacuum.

very close deduction from facts known in his time, and which a close analysis and further experiments in this field of research were found to contain an *inductive truth*.

Following in close succession the discovery of Crookes' tube and the X Ray, came the discovery by Edison of the Fluoroscope; which is not only a most valuable acquisition to an X Ray apparatus, but an evidence within itself of the principles of radiancy upon which Faraday postulated his hypothesis. It is not our intent to trace out the co-relations upon which X Ray phenomena depend, but rather to call attention to the fact that the principles and data involved in this discovery, no less than the character of the phenomena of X Ray experiments, are important and valuable factors in the discussion before us. With the application of the principles of "The Co-relation of Force," "The Conservation of Energy," and "Radiancy of Matter," as outlined by Faraday, it will be seen that Modern Spiritualism and its phenomena as a cosmic truth, rests upon a basis that challenges the attention of the ripest scholarship and the most mature thought of the philosophic intellect of this age.

Lexicographers define the word "radiant," as meaning "darting"—emitting rays of heat or light—"beaming with brightness." As both heat and light emanating from matter depend upon a state of molecular vibration, it will be seen that when any form of matter can be raised to the vibrations producing heat and light, that such forms of matter are naturally radiant; that is, they contain properties which under certain combinations *evoke radiancy*. The reactions of a solution of cold sal-ammonia upon a cold carbon evokes both light and heat. The reactions of a diluted solution of sulphuric acid upon a carbon and zinc, evolves both light and heat. The reactions of the Sun's atmosphere upon the atmosphere of the earth, evolves not only light and heat, but many chemical changes. None of these phenomena would obtain were not the various forms of matter highly electro

and possessing functional combination. Glass, water, and the atmosphere and ethers of space, are to the sense of vision, as opaque and dense as a stone wall, in the absence of light. Light differs in its forms and penetrative qualities. Even sun light differs from day to day in its functional reactions and photometric qualities. There is a vast difference between the Cathodic and X Ray in penetrative power. Lenard had discovered Cathodic Rays before Roentgen discovered the X Ray; but the Cathodic Ray is less penetrative than the X Ray. The discovery of the Cathodic Ray by Lenard had been regarded only as a scientific fact, but the discovery of the X Ray with its wonderful penetrative power enabling us to see the bones within the living body, aroused the wonder and amazement of the thinking world. Now Faraday was the first to suggest the radiancy of matter, which he called "the fourth state," which means that matter contains within itself those electro qualities producing or developing radiancy. Professor Zollner was the next to follow in this line of experimentation, and he termed this radiancy "Transcendental Physics," and because of its being a manifestation of an internal attribute of matter, he called it the phenomenon of "*The Fourth Dimension of Space.*" Zollner was scoffed at by the popular scientists because he affirmed that this invisible and functional property of matter had to do with the phenomena of Spiritualism. But Professor Crookes followed in 1878-9 with a series of papers upon a "Fourth or Radiant State of Matter." Professor Tyndall admitted these inductions of Faraday and Crookes in his essays upon light and heat, considered as modes of motion of matter.

We cannot pass these data without pointing out briefly the attitude of the scientific world towards Spiritualism during the time some of these earlier experiments were being made regarding the character of matter. Faraday, Tyndall and many other well-known physicists opposed Spiritualism

because they saw no relevancy or relation between spirit as an immaterial entity, and matter. Spiritual forces were regarded only in a metaphysical sense, and a scientific thinker is rarely, *if ever*, a metaphysician. In Roman Catholic, Protestant, Mahomedan, Brahmie and Buddhistic nations, Spirit and Spiritual forces or things were considered as separate and distinct forces from those qualifying the visible world. *The infinite spirituality of all cosmic forces had not dawned upon the human intellect.* In Catholic and Protestant countries the only spiritual forces were those that emanated from the Hebrew God, Jehovah or Yahve. In Mahomedan countries the only spiritual energies were those that flowed from ALLAH. In Brahmie nations only the spirit of Brama or Brahm was omnipotent. In Buddhistic countries the only spiritual force or power was that which flowed *from Buddah in Nirvana.* With some of these varying concepts of spirit and spirituality in the environment of the scientific student, coupled with the shortcomings and incongruities of the atomic theory, it is but little wonder that a scientific intellect could not comprehend the relation or the co-relation of spirit or spiritual modes of motion to matter. Man is swayed more or less by his environment, and always has been, and will be, because of the natural co-relation of mental forces. Neither Faraday, Tyndall nor Huxley could see how that spirit as an *entity or mode of motion*, could manifest through matter which it was assumed had no affinity for spirit, since they understood thoroughly that all phenomena in nature were the result of affinities. Besides, these savans accepted the atomic theory, although all of them appreciated its inconsistencies. Zollner also accepted the atomic theory and rejected Spiritualism until his famous experiments with Dr. Henry Slade, the phenomenal Spiritualist, of New York. These experiments and tests aroused a new line of thought in him, and his "Transcendental Physics," is the first

scholarly effort on record to place Spiritualism and its phenomena where it belongs—in nature's order of things. He was unfortunate both in the selection of a title to his work, and in presenting his facts from the plane of a metaphysician. The term "Transcendental," means *super-eminent—surpassing others*. This term cannot logically be applied to the attributes, functions or qualities of matter, or to the elements of which it is composed; nor can there be in cosmic process a state or condition of matter that is "super-eminent," or surpassing other states, for the reason that every advanced state in the organization of matter depends upon a preceding state or condition.

Yet Zollner succeeded in part, in calling the attention of thinkers to the fact that matter has something more than length, breadth and thickness. Its internal function qualifies a *dimension of space* that cannot be measured by length, breadth and thickness. In his mental vision of these manifestations of functional attributes he could not apply the atomic theory, but he recognized the presence of an unknown power which Faraday, Gessler and others had called "The Fourth State of Matter." Faraday accounted for the radiancy of matter upon the hypothesis that in a state of radiant vibration the molecules were far apart comparatively. Crookes claimed to have demonstrated Faraday's hypothesis as a fact, by experiments in his *high-vacuum* tubes. None of these eminent thinkers had considered that the life principle of the elements of which matter is composed, was possibly held in etheric solution, or more accurately, in etheric form. Hence, as ethers and the life principle of elements contained in them cannot be measured by atoms any more than we can measure sunshine by ounces and pounds, it follows that etheric substances cannot be hypothecated upon such a physical and materialistic basis. Besides, principles of radiation are just as true in etheric form, as in the form of matter, as is demonstrated

in the phenomena of solar light and *radiation* in the vast ethers of space. These facts and phenomena being in evidence, we deduce that matter being the product of the elements, all of which can be reduced to etheric form, that it contains or possesses the function of radiancy, since all forms of ethers known are radiant. That all forms of matter possess this attribute seems true, but that some forms of matter are more radiant than other forms, will be seen to be true also, owing to principles of organization and combination. The application of the X Ray, demonstrates this fact, since the tissues of flesh, and many other forms of matter, offer but slight resistance to the penetrative power of X Ray, while other forms such as some metals possess, require a powerful voltage of electric energy to infuse the molecular structure of the metal to a form of vibration analogous to that of radiant heat before visible radiancy appears. Considerable progress has been made in the application of the X Ray in anatomical investigation, since its discovery, and it is not an idle dream to foresee that with some changes that are sure to follow in the arrangement and application of this invention, that we shall yet so modify and perfect it, that the action of the heart, the circulation of the blood, the effect of some diseases upon the liver, heart, intestines and perhaps the nerve ganglia, may be examined as minutely as we now examine a dislocated joint or the fracture of a bone.

But what makes the X Ray exposition of the greatest importance to the modern Spiritualist and thinker, is not only the fact that it proves the natural radiancy of matter, but that its analysis establishes a premise of scientific character for the better comprehension of *Clairvoyance*, inasmuch as in the analysis of the X Ray we sense how polar radiation enables us to see with the physical eye into organic bodies, and through matter; and mental polar radiation is the central fact in clairvoyance, enabling the Seer, to be



PLATE 6.
WIRE, AND WIRELESS TELEPHONE.

impressed with modes of molecular motion emanating in "*a dimension of space,*" lying beyond the line of ocular vision. The analysis of the X Ray is an analysis of co-related modes of invisible motion, producing radiancy. The analysis of the human brain, *is an analysis of how modes of invisible motion, evoke conscious sensation of things that we cannot see, but do sense.* This is a good place for the reader to stop, and think.

MENTAL, ELECTRO CO-RELATIONS BETWEEN THOUGHT AND MATTER.

Having made a careful study of the principles of nature involved in the data of preceding chapters, we are the better prepared to examine closely and in an analytical manner the phenomena of the electro relation of mental energy and thought to matter as is witnessed in the Modern Telephone. If we have succeeded in impressing your consciousness with the fact that all of the energies and elements entering into the organization of matter are inter-related in consequence of a principle of electro character, and that electrical energy is the vehicle of all exchanges and transferences in cosmic process, if by the term "co-relation of energy" you can comprehend that thought energy and vocal modes of thought motion are included in this term, we shall be able to impress your mentality with one of the most sublime discoveries and inductions of the nineteenth century. (See Plate 6.) Wire and *wireless* telephoning. What a discovery, uniting—*co-relating*—consciousness to consciousness over great distances of space. Telephonic from "*Tele,*" far away, *phonic,* sounds; meaning literally far-away sounds. How do these far away sounds reach us, we ask? By telephone, you reply. Yes, by telephone; but how does sound operate upon the tele-

phonic wire? That is the question. The wire carries or transmits the sound you say. No, the wire does not transmit sound *per se*. Sound, in its relation to consciousness *is a mode of molecular motion*; and different sounds are different modes of auditory motion. Let us look carefully into this matter. In the experiment with our steel bar and its hammers, we found that the bar when struck carried in its vibrations, *the character and quality of the hammer that struck it*. Vocal speech consists of a combination of vowel with consonant sounds. Let us consider these sounds as little hammers. The transmitter of our telephone consists of a mouthpiece, behind which we place a small thin disk made of celluloid or tin, which lies gently against the poles of a wound magnet—a kind of induction coil. One pole of this magnet or coil connects to the earth with a wire to which is attached what is called an electrode which is placed several feet in the earth. To the other pole of the magnet, is attached another wire which is stretched along poles set in the ground, and connecting to a distant town or station. The earth current and our wire comprise a suitable electro circuit. Let us now speak the letter A into the mouthpiece of our transmitter. The sound of our voice puts the little celluloid disk into rapid vibration against the poles of the magnet and this impact of the disk induces through the entire length of the wire a molecular vibration of the molecules of copper of which it is composed. At the the receiving end of the line one end of our wire is attached to one of the poles of a magnet in the receiving apparatus. When the vibration of the molecules of the wire reach the receiver they are transposed into the same form as when impacted upon the transmitting magnet, and in this form they are impacted upon the tympanum of the ear of the receiving operator. The tympanum of the human ear is a thin membranous disk, its external surface being smooth but set in association with

nerves of sensory character connecting with the *sensori-motor nerves* of human sensation. The internal surface of the tympanum is lined with mucous membrane and is connected by nerves of sensation in the external chamber of the ear, by a branch of the *ariculo-temporal* of the *tri-facial* nerves. Against the upper half of the inner surface of the tympanum, lies the handle of the *malleus* (the mallet). The malleus vibrates against the *incus* (anvil bone) in a manner analogous to the vibration of the celluloid disk against the magnet of our transmitter in the telephone. The vibrations of the anvil bone are connected to the *cochlea and its vestibule*, by tissues of special structure and the *auditory nerve*, which terminates in it. The *cochlea*, is a special electrode of magnetic and acoustic character to which CONSCIOUSNESS, THE KNOWING ATTRIBUTE OF THE SOUL PRINCIPLE OF MAN, IS CO-RELATED. So, the mode of molecular motion which was evoked in the transmitting magnet by the vocal impact of the letter A, continues its travel as a mode of motion through the various mechanisms of the ear until it reaches the seat of consciousness, where its impact evokes a sensation of a sound symbolizing the letter A. If we speak the letter B into our transmitter a different kind of hammer has now been impacted upon the transferring magnet, evoking different molecular modes of motion through the wire and the receiver, and through the mechanical structure of the ear until it reaches the seat of conscious sensation, when there is evolved another symbol of human speech. And so whatever word or combination of words, whatever sound or combination of sounds are transmitted through these mechanisms of the telephone and the auditory centers, consciousness is the receiver of the symbols of human thought, for let it be known that conscious thought formulated in the intellect of the trans-

mitter of the message, accompanies each and all of these symbols of vocal speech.

So it will be readily seen that CONSCIOUSNESS, operating through the centers of the motor system of the brain, sent the message; and CONSCIOUSNESS being psychically impressed by the molecular changes taking place through the telephone system, and the auditory system, is the receiver of the message. Hence the relation and co-relation in sending the message was between *consciousness and consciousness*. To recapitulate. The form of impressing by telephone is MOLECULAR. The Character of the impressions received, is PSYCHIC. The Method,—that of INVISIBLE MODES OF MOTION. The System,—that of mental electro induction by SOUND. The Symbols employed,—THOSE OF VOCAL SPEECH. The mental action of the sender of the message upon those centers of his brain that control his vocal organs, was of psychic and invisible character. The action of his voice upon the mechanism of the telephone and upon the wire, were psychic and invisible. The transference of the molecular modes of motion comprising the message, through the ear and its auditory connections were psychic and invisible. The impact of these molecules of sound motion upon the consciousness of the receiver, were psychic and invisible. If the message sent called for a reply, the action of the conscious volition of the party replying upon the motary centers of his own brain, evoked the physical aspect, of sound or vocal speech. But in sending our message we must not overlook the fact, that the ground current comprised half of this circuit. Matter, that which theology in all ages has claimed to be "dead, crude and inert," and which from pulpit and rostrum throughout all ecclesiastical realms is still voiced as "dead matter," comprised one-half of this electro circuit, requiring no battery save that of its own electro magnetic currents, to enter into a partnership with other co-related forces of nature,

assisting us to transmit our message. The co-relation of thought as a mode of mental motion to processes of matter in the transference of vocal speech—what a phenomenon is this? Who among the fakirs in the pulpits, who assume to know so much about God and his plans, can comprehend the infinite subtlety of this relation. Yet, it is true, faithful, unerring and certain. If our lines or circuit had been made of the auditory nerve of the ear of any God preached about, if as capricious, treacherous, and remorseless as he is pictured by his representatives, you would never be certain to get a message through, unless you joined the ecclesiastical trust, and then, it *might depend upon the matter.*

It was the discovery of the extreme subtlety and high electro tension of the matter comprising the earth and the energies of the atmosphere, that led to the discovery of wireless telegraphy and telephony. But in wireless telephony it is found that the molecular modes of motion comprising vocal speech come in contact with many opposing modes of motion in the atmosphere, the nature of which is not at present fully known. For this reason, and perhaps others, wireless telephoning has been more successful over large bodies of water where atmospheric resistance was more homogeneous, and more easily overcome. But the electro relation of thought and mental action to all processes of transference will be seen to be a fact in the molecular co-relations of nature, and more than this, we are just beginning to comprehend that all co-relations in nature are psychic, and all impressions upon man's conscious soul principle are invisible impressions, and these facts will go far towards demonstrating that this is the way *the spirit world impresses the mortal.*

THE AFFINITY OF THOUGHT FOR MATTER; DEMONSTRATED.

An analysis of the mechanical structure of the telephone and its principles demonstrates that vocal speech and its accompanying thought can be transmitted from place to place through the electro character of the wire and the earth currents as is witnessed in the common telephone service, and through the electro condition of the atmosphere and the earth in wireless telephony. These experiments demonstrate that matter in all of its ordinary and elemental forms may become the vehicle of thought, since we note that not only the homogeneous structure of the wire, but the heterogeneous organization of the matter comprising the the crust of the earth and the elemental forms of etheric substances, result simultaneously in the manifestation of telephonic phenomena. If the Hebrew God has his chosen people, and the same God made the heavens and the earth and all of nature's combining principles, we would naturally conclude that only the Hebrew language would consistently be co-related to telephonic transmission; but we find by experiment that nature is so democratic in her gifts, that every language under the sun, and all combinations of sounds, can be transferred across the continent without a sacrifice being offered to *Yahve*, from which we infer, that Jehovah was not consulted, when the principles of thought transference by telephone were established. With the wholesome feeling that all nature is co-operative and fraternal in her cosmic attributes, that she transmits the messages of saints and sinners with equal fidelity, let us examine briefly another department of her affinities, and see demonstrated how human thought accompanying vocal speech are each affined to matter. The discovery of the Phonograph by Edison was a most important one, in the demonstration that not only sound as a

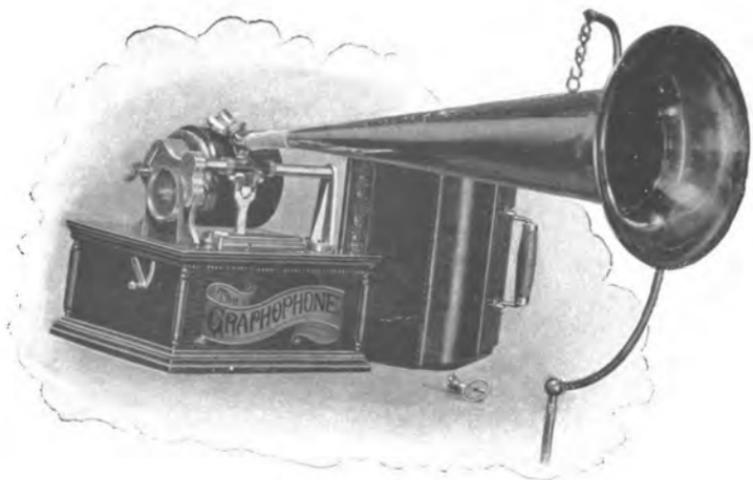


PLATE 7.

mode of motion had affinity for matter, but that thought, or the mental act of volition, was also affined to matter by this process. It must be remembered that words and letters, *are only symbols of thought*, so when we speak into the Phonograph or Graphophone, our vocal speech representing our thought, is transcribed upon the surface of the blank Phonograph record, as an invisible mode of thought motion by sound. This sound of words in whatsoever language spoken, disturbs or induces a molecular change on the surface of the cylinder or blank record by the action or vibration of the "recording stylus." When the "reproducing stylus" is drawn over these impregnated lines of the recording stylus, we sense the phenomena of vocal speech and its accompanying thought. The phenomena of reproduction of vocal speech and its accompanying thought in this experiment, in many ways is analogous to that of the telephone in the transmission of vocal speech. Although theology has for many centuries affirmed that there were no relations or affinities between the composition of the soul and matter, yet here we see demonstrated that every vocal expression of the soul of man does hold the same relation to matter as an invisible mode of motion, that all forms of matter hold to each other; and we furthermore sense that thought itself, has a place in nature's co-related affinities as an invisible mode of mental motion, not however as a designer, not as the product of an omnipotent power, *but as a record of speech and thought motion*, capable of scientific verification, or demonstration. Since records of vocal speech and thought have been more or less successfully made upon tin-foil, zinc, lead, gold leaf, silver leaf, and several amalgams of these metals, also upon gutta-percha, paraffine, and its several combinations with gum-shellac, also upon carbonized iron and steel, it appears that all forms of solid matter that possess fine molecular organization are capable of recording thought and speech

motion. Thus falls the claim and assumption of ecclesiasticism and every other form of religious schism that "the soul of man bears no relation to matter"—"that it is something entirely different from matter." The greater truth is, that *matter being the product of spiritual elements and forces*, IS INFINITELY CO-RELATED TO ALL FORMS OF LIFE AND THEIR EXISTING SOUL PRINCIPLES.

Regarding the formula by which the phonographic record is made, there exists a variety of opinions. The popular concept is, that the recording stylus or pen makes a peculiar impression on the parafine cylinder with the vibration of each word, and that these impressions vary in length and depth with each syllable of a word. This idea seems plausible since the cylinder has to be in rotation to produce this sound of words; hence there has been given the name of "Kinitic motion" as the process by which such impressions are made and recorded. However plausible this may seem at first view, it utterly fails to account for a multitude of sounds made and recorded in the same space on the cylinder, in the same moment of time. For instance: A sound or note from a cornet five seconds or less in duration, will be inscribed on the cylinder in a line or mark of corresponding length, to the length of the note of the cornet. During that same interval of time, and occupying the same space in the line on the cylinder or record, a band of sixty instruments can be accurately recorded. As sounds are modes of motion which vary in length of vibration with the pitch of the tone, it will be seen that the tone of bass horns would require a different Kinitic motion from that of a piccolo. To affirm that all of these varying modes of sound motion can be recorded by a single stylus in the same line and space, is contrary to the mathematics of the vibratory theory. In the midst of this conflict between the science of sound vibrations and Kinitic motion, may we not suggest that sound as a mode of

motion induces *molecular change* in many ways analogous to that of color motion, as is noted in photographic impressions. This hypothesis being the true one, it will be seen that molecular contact and impress will account for these phonographic phenomena. It will be found upon close investigation, that all forms of impression and impregnation in nature depend upon molecular impact.

Nature requires time and motion to express the duration of sensory vibrations, but *all sensory motions, are correlated molecular motions*. How harmonious and grand, how rhythmic and sublime are nature's evolutions. What a realm of thought is awakened and aroused in human consciousness, as the liberated intellect of man turns his gaze towards the oncoming morn of intellectual truth. How this horizon of a new light dissipates the clouds of past errors, frees the mind from the hypocracies and nightmares of creedal superstitions, and reveals a radiant morn of progressive immortality.

APPLICATION OF THE PRINCIPLES OF CO-RELATION TO THE PHENOMENA OF SPIRITUALISM.

We have traced, thus far, the fact that all nature demonstrates that the co-relation of her forces lie behind, or are involved in, all cosmic phenomena. We have suggested that not a blade of grass can grow, a flower develop, a cereal grain mature, or any form of matter combine, without the assistance and support of *nature's co-related energies*. We desire now to point out the most important truth known to human consciousness on the records of time, that the phenomena of Spiritualism in all of its varied manifestations, like all other phenomena of cosmic forces, inheres in nature's sublime co-relations of spiritual and elemental forces. That the phenomena of Spiritualism, unlike the phenomena ascribed to religious mystery and miracle, do not depend upon the power, caprice or omnipotence of some entity called God, but spring from the harmonious associations of nature's infinite and omnipotent energies. For this reason, if for no other, Spiritualism is entirely unlike all religions known, and for this reason if for no other, *Spiritualism is demonstrated to be a cosmic truth.*

SPIRIT PHOTOGRAPHY.

The principles of *Spirit photography* are noted in the fact that in photographing the stars in our astronomical observatories, that stars of small magnitude and satellites are frequently photographed in the nebula surrounding a star, which the eye could not see through the telescope. These phenomena are based upon the fact that the color motion of so high a vibration as to be beyond vision, is capable of promoting or inducing chemical action on the plate. This action of the invisible color motion of the star and the

reactions of the chemical structure of the plate develop the visibility of nebulous stars. Now this principle of the invisible action and reaction of color motion is especially applicable in all departments of photographic process. In common photographic portraiture, freckles and marks in the cuticle of the skin of the face photographed, which the operator cannot detect, are shown in strong relief in the negative and print. In the Radiograph—X Ray photography—witness the phenomenon of photographing the invisible. The molecular co-relation of nature's forces being true in both opaque and etheric forms of matter, the possibility of photography in midnight darkness is easily demonstrated. As all spirit forms are of electro magnetic composition, that such forms bear the same analogous vibratory relation to the sensitive film of a photographic plate that other forms of magnetic action do, will be seen to be a mathematical truth. The other fact that charlatans reproduce similar phenomena of spirit photography by various artificial devices and by intrigue, can in no way impair the validity of the principles we have alluded to, and spirit photography will be seen to be a fact based on the co-relations of chemical and magnetic re-actions, and holding the same relation to cosmic process that all other phenomena hold.

In connection with spirit photography is the oft questioned phenomenon of materialization. Even among pronounced Spiritualists, the truth of spirit-materialization is questioned, and sometimes it is bitterly denounced. Yet no fact in nature contains so large an area of inductive evidence. Proof of this phenomenon has been sought too much in the field of mystery and the supposed power of the materializing spirit, and too little in the realm of nature's truths and her co-related forces. The human seems to be predisposed to accord to some miracle, the operations of nature, and to ascribe to some outside power every phe-

nomenon of cosmic process. The general public do not yet comprehend that all visible forms of matter are the result of the combination of invisible elemental energies. When we speak of the evolution of water, the average thinker will admit that it is composed of two invisible elemental forces, but very few stop to consider that it is *the life or soul principle of oxygen and hydrogen* that enters into this combination. We are told with manifest zeal that oxygen and hydrogen are gases. It is true that chemists and physicists have given to these elements the name and properties of gases, because largely of their etheric gravities; but who knows that the life principle of these elements is gas? since all real gases are a compound, and oxygen and hydrogen are not a compound, the only characteristic they have of being a gas is their manifestation of etheric gravity. The growth of every tree, shrub, plant, flower or leaf, depends upon the impact of invisible elements and combinations of unseen forces. These processes of development, *are processes of materialization*, the method nature employs to promote visibility. In photographic art the development of the negative is a process of making visible the action and reaction of color-motion; in reality, *it is the formula of materializing invisible modes of color motion*. The reactions of the chemical energies in the photographic film or coating upon color-motion, induce visibility *as a result* of these reactions. Let us suggest that the magnetic co-relations of a spirit form (as an intelligence) to the medium, and the magnetic aura accompanying an assemblage of people, induce a materialization of the Spirit, not only sufficiently luminous to be photographed, but sufficiently tangible to be plainly seen. In the manifestation of this phenomenon, the Spirit attracts out of the bioplasmic aura and the medium, those elements selective to its visibility.

In electro-plating we witness the phenomenon of the

attraction out of the fluid containing some form of silver or gold, the silver or gold element, which to our vision is an invisible element, and we also witness the materialization of these nebulous elements upon the structure electroplated. All materializations in nature are the direct result of a change of chemical spectrum; and this fact applies not only to Spirit-materializations, but to every process of growth and development in the universe. In photographic development, as in the materialization of those modes of invisible motion reflected and impacted upon the plate which make the picture, the operator requires a dark room for those chemical reactions which change the chemical spectrum from invisible motion to visible form. So, in an analogous manner, nature requires the dark chamber of night, where free from the positive action of light, she changes the chemical spectrum of vegetation, from the invisible impact of invisible elements, into visible form. In precisely analogous manner, the Spirit form is made save in this respect—the vegetable requires the action of light to impact the elements selective to its growth, whereas the Spirit attracts the aura selective to the promotion of its form, by *magnetic attraction*.

Nature presents a wonderful uniformity of action in all of her processes of materializations, and the thinker will find that Spirit-materialization is in accord with these universal principles; and these facts becoming known will make it impossible for the charlatan and perjurer in your materialization seances, to practice his nefarious art in public. We have not time or space in a work for which this is intended, to give a scientific exposition of every phase of Spiritual phenomena, but the reader who studies closely the foregoing pages will readily comprehend that all true phenomena are within the pale of natural philosophy, and that to understand the order and character of any appearance in nature's order, we must understand under-

lying principles. But we cannot leave this important subject without inquiring into the data of the spirit rap.

THE SPIRIT RAP.

Spirit raps are produced by the "make and break" of an invisible electro-magnetic current, projected upon any desirable surface. We must constantly bear in mind that all modes of motion in nature, are electro magnetic, by which we are to understand that electrical energy is the vehicle by which an impulse is transmitted, and magnetic individuality the promotor of the impulse. A close investigation of electro and magnetic physics will satisfy any investigator of the truthfulness of this statement. The electro-magnetic impulse of the atmosphere operates as an invisible mode of motion upon the barometer, indicating the character of the electro magnetic states of atmosphere. The action of heat is thus registered on our thermometers. Color motions of flowers and plants are thus registered in the respective chlorophyl of their organizations. The transmission of the *rap of a telegraphic key* is thus registered, and reproduced by the sounder of the key board at a remote station. The "make and break" of a telegraphic current by this formula of electro magnetic induction, registers in dots and dashes the symbols of the telegraphic alphabet. In an analogous manner and by the same formula of electro energy, *a Spirit can and does produce raps*. These spirit raps were known to the most ancient civilizations of Egypt, India and Persia, and were a factor of spirit communication in the earliest ages of antiquity. They did not assume however, their most signal importance until 1848, when at Hydesville, N. Y., in the Fox family, their occurrence and manifestations attracted the attention of the general public mind. It was during these investigations the discovery was made that the Spirit could both see and hear; and that it possessed a

knowledge of the individual lives of the Fox family that could only be known by an intimate acquaintance with the family. Consecutive questionings brought out the fact that when the Spirit rapped once, it was a symbol meaning "No" to the question asked. If two raps were given it meant "that the Spirit did not know." If three raps were made, it meant "Yes." Thus there was introduced "a primitive symbol method of raps," suggested by the Spirit communicating, which answered in a cogent and consistent manner the various questions which were asked by the many investigators who came to witness these phenomena. Not only were the many questions of the Fox family intelligently answered, but those of neighbors and visitors coming from a distance, were answered in such cogency of manner, as to attract the wonder and interest of all who came to investigate. As the Spirit communicating could only reply by these symbols, to questions that could be answered by "yes or no," it was suggested that the letters of the alphabet be called over, and when the proper letter spelling a name or word was called, the Spirit should rap three times. Proceeding with this formula the name of Jacob Smith was spelled out, who was the grandfather of Mrs. Fox, and who, it was ascertained, was the communicating Spirit. By applying these symbols of "three raps," when the proper letter in the spelling out of a word was named, communications of considerable length were secured by many, relating to matters of importance, which were as consistently stated as though answered by an intelligent human being. An investigation of the phenomena of the raps with an intelligent Spirit, will satisfy any unprejudiced thinker that the symbols of "spirit raps" contain the same class of data of human communication by symbols, as that qualifying common telegraphy. In plainer language, Spiritual telegraphy by raps, is identical in method with that of electro telegraphy by the raps of the transmitting key. The

only difference being in the application and form of the symbol. Let us demonstrate this great truth.

SPIRITUAL TELEGRAPHY BY RAPS IDENTICAL IN PRINCIPLE WITH THE RAPS OF THE TELEGRAPHIC KEY.

The historical fact that commercial telegraphy was discovered and put into practice only six or eight years before spirit telegraphy was established at Hydesville, N. Y., will eventually be seen and understood as meaning something more than a mere incidence in the evolution of the art of telegraphy, particularly when we recall that all communication between mind and mind, or consciousness and consciousness, is always carried on *by symbols of sign or symbols of sound*.

The first telegraphic line in operation known, was established between Paddington and Drayton, England, in 1835. The first line in operation in this country was between Washington, D. C., and Baltimore, Maryland. The Morse system of telegraphy was found to be the most efficient and desirable of any system then known, owing largely to the comparative simplicity of its printing mechanism, and the ingenuity manifest in the alphabet of symbols used. This system, however, did not come into general use until 1845. It was a combination of four dots and four dashes so arranged as to represent in a symbolic manner the letters of the English alphabet. Thus the letter A in the Morse system was represented by a dot and a dash, B by a dash and three dots, C by a dash and a dot and another dash and a dot, etc. But telegraphic operators becoming familiar with the sound of the recording stylus in receiving a message, soon learned to dispense with the recording apparatus, and to depend entirely upon the ear.

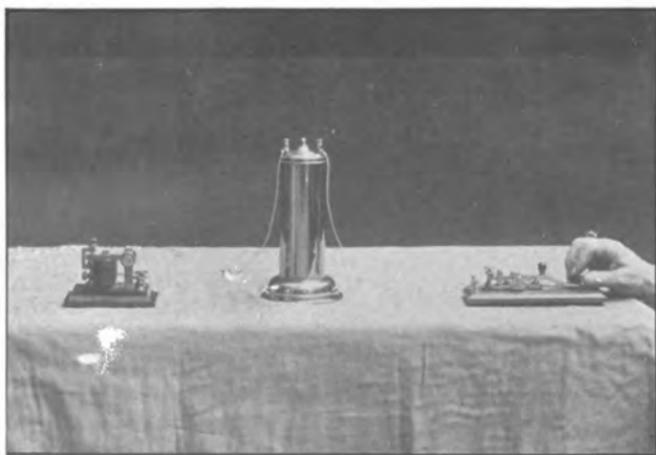
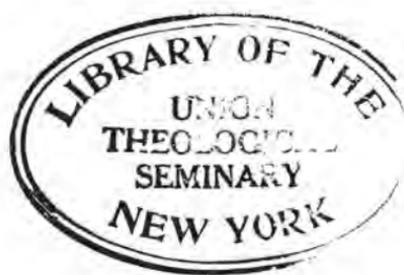


PLATE 8.
COMMERCIAL TELEGRAPHY.



This custom introduced *the acoustic system* of telegraphy by sound. In this system the ear depends upon the order of articulation of the Sounder in its symbolic representation of the various letters of the alphabet, which in reality consists of a succession of *raps* as the circuit is made or interrupted by the action of the key in the fingers of the operator. If we concede co-operation in the Spiritual world with the mortal plane, it will seem to many that *the introduction of Spirit telegraphy by raps*, so soon after the introduction by Morse of commercial telegraphy by sign, and soon after by sound, was a matter of arrangement in the Spirit world. Thus it would seem that Modern Spiritualism is the result of a combined effort of spirit intelligences, to demonstrate their existence as a reality in spirit realms by that order of symbol communication that obtains between mortals on the earth plane. As we have before stated, all forms of communication between consciousness and consciousness whether by the symbols of sound or vocal speech, or by symbols of sign or written language,—the formula in either case is that of *mental electro induction*. The raps of the telegraphic key or sounder when transmitted or received in the mental order of the telegraphic alphabet, are in accord with this order of intellectual association, because of the concise agreement of the thought received, with the telegraphic symbols. So, in precise agreement with this intellectual method, the Spirit-rap symbolizing or indicating the letters of the English or other alphabet used in the spelling of a word, is also a formula of *mental electro induction by sound, and therefore is positive proof of an intelligent operator at the spirit end of the line of conscious association*.

A spirit sent us by these symbols, in 1881, the following communication:

“Your friend Happ passed into spirit life early this

morning, and you will get a letter asking you to officiate at his funeral."

This communication was spelled out by raps on a table as I called the letters of the alphabet. My father, *Henry F. Lockwood*, was the Spirit operator, who rapped three times as the right letter was named in spelling out this communication.

The following day at two o'clock in the afternoon, a telegram came saying: "Prof. Happ died yesterday morning between two and three o'clock." *Signed. A. Lobez.*

The same evening a letter was received from his wife, asking me to officiate at his funeral, which I did. Prof. Happ was a resident of Racine, Wis., and the writer of this lived at Ripon, Wis. The two cities are about 120 miles apart. It is the manifestation of such phenomenon as this that verifies the utter failure of T. J. Hudson's theory of *sub-consciousness* to account for the facts of the spirit telegram by spirit raps, which were confirmed the following day by a commercial telegram. If the spirit telegram using the formula of symbol language and in *strict accord with principles of mental electro-induction*, can be postulated upon the theory of sub-consciousness, why cannot the commercial telegram which came a day later be proven by the same hypothesis as both systems of thought transference *are identical in method and in scientific agreement with symbol language by sound?* It is the common occurrence of phenomena of this character that not only attest the shallowness of sub-conscious theories, but demonstrate beyond the possibility of logical refutation, the fact that all mental realms are infinitely co-related, and that conscious individual life survives the dissolution of the physical body. If the really earnest investigator of Spiritualism and its phenomena, would spend one-half the time in tracing scientific facts involved in the manifestations of its phenomena, that is spent by its opponents in an effort to

bolster up the wild vagaries of inconsistent zeal, the truths of nature's sublime order of co-related energies would not only free the mind from the fogs of theological superstitions, but it would qualify and fit the intellect for a deeper comprehension of the truth, that continuity of life is a cosmic truth, a fact in nature's order of human evolution, the data of which is an established principle of greater importance to humanity at large, than all the Bibles and speculative cosmogonies written by mortal pen.

TRUMPET PHENOMENA.

In the month of August in 1898 Mrs. Etta Wriedt, then of Buffalo, was holding Trumpet Seances at Lilly Dale, N. Y., during the session of the Cassadaga Lake Free Association. At a seance held on a Wednesday evening, Mr. E. Bennett of Buffalo who was present at this seance, received a communication from a spirit who on the earth plane was known as Jack Eagleton, who stated through the trumpet that he (the spirit of Jack Eagleton) had committed suicide by poison on the previous Saturday evening, and that he was at the time of this act in the Soldiers' Military Home at Dayton, Ohio. As Mr. Bennett had received a letter from Jack Eagleton written at New York only a few days before the time of the suicide, he believed the spirit communication to be fraudulent, and considerable controversy obtained at the time as to its veracity. Mr. Bennett to satisfy himself as to the integrity of this trumpet message, wrote a letter to Gov. Thomas of the Soldiers' Military Home and received from the Governor a telegram saying that Jack Eagleton had committed suicide by poison on the Saturday indicated in the trumpet seance. This telegram was handed the writer of this a few hours after it was received by Mr. Bennett, to be used as demonstrative testimony in any way the writer deemed proper. In Mrs. Wriedt's

seances, frequently the trumpet is heard in an opposite corner of the room from which Mrs. Wriedt is seated. In this phase of phenomena the method of communication is that of *mental induction by vocal speech*. The careful investigator will have occasion to discern that all spirit phenomena rest upon the cosmic principles of nature's co-related forces, and when seen or understood from this plane, they are in accord with all phenomena of nature.

SPIRITUALISM AND THE SOUL.

Thus far we have traced briefly the co-relations of nature as applied to those processes called cosmical. In closing this treatise we feel that we can do no better service to our reader than to point out the fact that the development and evolution of the human soul is in concise agreement with those principles of nature which promote form and generate life in all of its multiform phases of existence. In tracing the development of the embryo in cereal embryology, we found that cereal life springs from the blending of the germinal centers, of ovule and vesicle, actuated into expression by the combined influences of soil with its compounds, and the atmosphere with its associated energies. Close investigation will discover that a very analogous process is involved in the development of animal life which springs from the egg or ovum. In the development of the chick we note the blending of the germinal dot with the processes of segmentation of the yolk of the egg, also, the development of the *formative stripe* into a spinal system with its attending and associated ganglia. In similar manner in the evolution of mammal life we note the blending of the male filament or spermatozoon into the female egg or ovum, in the formation of foetal or placental life. In this development of the mammal embryo, the relation of the

male spermatozoon to the female ovum as germinal centers will be seen to be closely allied to the relation existing between the vesicle and ovule in cereal development, and to the germinal dot and yolk of the egg in the evolution of fish or chick. So in man the development of placental life from the interblending of the male filament with the female ovum is so nearly identical with that of mammalian types, as to indicate a universal principle in the formula of procreation. Indeed we may say that so closely allied and alike are these processes that it is difficult to trace special lines of demarkation between placental man, and several types of the lower forms of animal existences. Not only are the processes of development nearly allied, but the shape and form of foetal life of many animals up to a point of embryotic individuality, are so nearly alike that of man, as to require close investigation to determine which is mammal and which man.

Not alone are these facts in evidence that man *is not a special creation*, but the entire evolution of the visible organism of the human and his vascular system is in accord with the general principles of the evolution of mammal life. To affirm that some god gave to man a soul principle in accord to his own similitude, and to all other forms of life a soul principle in accord with some special cosmic process, is an assumption so careless and dogmatic as to be unworthy popular credence. This assumption places a god in the position of a dispenser of souls. A soul suited to each organism whether weak, strong, rational, or idiotic, is measured out to fit the idiosyncrasies of human appetite and lust as nature reproduces in human form her weaknesses of physical character, and monstrosities of mental structure, as an Omnipotent design, if this ecclesiastical dogma be true. What a business for a God of Infinite Intelligence to be in,—in real partnership with the ignorance and lust and abnormal appetites expressed and

manifest in human generation. He seemingly is as willing to furnish a soul suited to the mental structure of an idiot, as to the intellectual fiber of genius. This criticism seems all the more terse when it is recalled that *there must be polar affinity between the soul, and the organism it develops or occupies*, for without polar affinity there can be no combination in cosmic processes. The philosophy of Spiritualism demonstrates the fallacies of such opinions by calling attention to the fact that nature develops formative or shaping principles which are the souls, or the real life energy of her forms. Where do these souls come from, you ask? From the combination of the magnetic spheres of parental life. From the blending of the formative life principles of spermatozoon and ovum, transmitted from parents to offspring during the countless ages of the past. Has my soul always existed, you ask? Yes, but as a life principle only, as a formative or shaping energy, belonging to and qualifying every normal man and woman. This formative principle is stored up in the fecundating centers of human generation, and has always existed as a shaping soul principle in a manner analogous to the shaping soul principle stored in the ovule and vesicles of cereal life, or the germinal dot and yolk or ovum of animal existences.

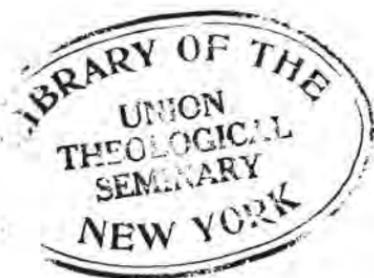
Spiritual evolution and cosmic evolution demonstrate that this principle of soul life is not only eternal in its past, but that it is capable of progression while in the earth form, and is also capable of transmitting this progressed quality to its offspring. Upon this basis of transmitted improvement of heredity, civilization depends for its progressive tendencies and accomplishments as the ages come and go. With weak and diseased heredity, civilizations and nations fade and pass away. With strong physical organisms, and high mental and intellectual endowments, society and civilization unfold a higher degree of art, a more intellectual life, and a finer perception of the

the possibilities of human improvement. Thus it is seen that the individual soul has its beginning as a formative shaping energy with the formation of foetal life, but the combined life energies which blend and unite their component factors in foetal development, have always existed as factors of life and individuality in the parental life of ancestry. This shaping soul force forms the body in keeping with principles of heredity, and associated environments. The environing conditions of gestative processes are factors to be considered and understood in human evolution. Diseased conditions of either parent, or weak, enfeebled states make apparent the axiom that, "like transmits and promotes like." The soul is like the associated environments in which it is developed. The body is the visible aspect of the soul's struggle to develop its habitation in its individual surroundings. From foetal life to infancy, from infancy to youth, and from youth to mature age, the soul grows the body. To this body the soul is affined during the years of its earthly development. The body is only a bioplasmatic scaffolding the tissues of which are inter-related and inter-traversed by ganglionic tracts of high electro tension, forming in the brain a sensory and motary system to which consciousness is co-related. The mental characteristics of brain ganglia do not terminate in the convolutions of the cerebrum, the cerebellum and the medulla-oblongata, but extend their ramifications through the entire vascular system, connecting every gland and every process to the central thoroughfare of the spine, to the extent that it is impossible to touch the external epidermis or skin, or the internal organism without arousing electro reactions inducing conscious sensation. Between the ages of 45 to 55 years, the glands of the average human undergo a change. At this time of life the human does not breathe so deeply as in earlier years. The carbon which is in the food we eat, is not thrown off by the

action of oxygen of the atmosphere we breathe, hence carbonic gas is carried to the blood, which coming in contact with the glands of assimilation produces in its reaction, *atrophy* of the gland, which slowly and subtly change and modify its assimilative functions. This phenomenon is particular noticeable in the follicular glands of the hair, which being thus acted upon, do not assimilate the proper nourishment for the hair, hence it begins to turn gray. This truth applies with equal certainty to every gland of the human system—it is nature's way of preparing the soul to separate itself from the organism. The soul being the real entity that is evolved in man's earth life, and the body itself merely a bioplasmatic scaffolding through which the soul's growth and progress is made possible in its embryotic state of earth gestation, the gradual shrinking of the physical glands of the body, is nature's own way to liberate the soul when she has prepared it for its birth in a new form of life of spiritual character beyond the dissolution of the physical body. Mid all of these changes from the blending of the spermatozoon with the ovum, during placental gestation and its birth into the earth sphere, and during all of its changes and environments until mature years, we note only a cosmic process, in close keeping with all forms of bioplasmatic and vegetable life. To say that the gradual development of the human soul is unlike the evolution of other forms of soul and life principles, is an unwarranted assumption for which there is no proof. The philosophy of the variation of species in accord with environments and climatic changes will account for the evolution from the homogeneous to the heterogeneous, but through every stage of this development we note only cosmic processes. Man's soul is an evolution from nature's infinitude, and during all successive stages of the soul's progression there is no evidence that it depends upon any factor or power not belonging to cosmic art. **Modern**

Spiritualism instructs this evolution of the conscious principle of man, because each succeeding stage can be verified, and because this evolution and progression is in scientific agreement with the fundamental principles of cosmic process. To affirm that man originated in other cause, or sprang from other source, is an unprovable and pernicious sophism. The spiritual nature of infinitude is manifest in the psychic character of her co-related forces and elements. This truth is sensed in the order and structure of her visible factors which are eternally related by invisible modes of motion to invisible causation. These data of nature are the data of Modern Spiritualism. The progressive thought of this century recognizes the great possibility of these truths of nature as the foundation of a scientific demonstration of *continuity of life as a cosmic fact*, and that an intellectual association between the mortal plane and a realm of life beyond the grave is a logical synthesis to these data. The philosophy of Modern Spiritualism as sensed from this view of nature and her co-related energies and forces, presents an intellectual formula of cosmos, and of the relation the mortal holds to it as a progressive soul entity. These truths of nature preceded the dreams of poesy and speculation of Oriental imagination, hence are older than ancient religions either traditional, oral or written. These principles of co-relation and progress in nature, are older than Bibles or any system of theology and theogony known to time. Before this planet swung in space these principles of the infinite, these facts and data of continuity of life and the associations existing between all spheres were written upon the records of nature, but are yet unperceived by the shrouded intellect of man. His impressable mentality, has made him the victim of designing greed and cunning duplicity. His wonder and native love of the mysterious, have been a barrier to his intellectual progress, and has peopled, his imagination with angry and revengeful gods, and merci-

less demons. His worship of these has consisted of mouth-ing supplication and ceremonial orgies, and although voiced in pillared sanctuary and embellished philactories, it has never changed the immutable order of nature. But the realm of conscious sensation is rapidly freeing itself from the superstitions of ancestral beliefs. The gods of human imagination are dead and dying; for a new light dawns upon the consciousness of man as the twentieth century appears upon the scroll of time. A mighty host of thinkers and philosophers of past ages are touching the expanding intellect of our time with the inductions of scientific truth, and before this truth the religions of the Orient and the sophisms of the Occident will fade from view, and the world's greatest wisdom will write in letters of love, "*Behold the old hath passed away, and all things are seen anew,*" by the advent of science and Modern Spiritualism, which demonstrate that continuity of life and individual progress is a fact in nature's order of evolution,—*it is a cosmic truth.*



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