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ADDENDA

ON OCCULT AND MODERN SCIENCE.

SECTION I.

REASONS FOR THESE ADDENDA.

MANY of the doctrines contained in the foregoing seven Stanzas and Commentaries having been studied and critically examined by some Western Theosophists, certain of the Occult Teachings have been found wanting from the ordinary stand-point of modern scientific knowledge. They seemed to encounter insuperable difficulties in the way of their acceptance, and to require reconsideration in view of scientific criticism. Some friends have already been tempted to regret the necessity of so often calling in question the assertions of Modern Science. It appeared to them—and I here repeat only their arguments—that “to run counter to the teachings of its most eminent exponents, was to court a premature discomfiture in the eyes of the Western World.”

It is, therefore, desirable to define, once and for all, the position which the writer, who does not in this agree with her friends, intends to maintain. So far as Science remains what in the words of Prof. Huxley it is, viz., “organized common sense”; so far as its inferences are drawn from accurate premisses, its generalizations resting on a purely inductive basis, every Theosophist and Occultist welcomes respectfully and with due admiration its contributions to the domain of cosmological law. There can be no possible conflict between the teachings of Occult and so-called exact Science, wherever the conclusions of the latter are grounded on a substratum of unassailable fact. It is only when its more ardent exponents, over-stepping the limits of

observed phenomena in order to penetrate into the arcana of Being, attempt to wrench the formation of Kosmos and its *living* Forces from Spirit, and to attribute all to blind Matter, that the Occultists claim the right of disputing and calling in question their theories. Science cannot, owing to the very nature of things, unveil the mystery of the Universe around us. Science can, it is true, collect, classify, and generalize upon phenomena; but the Occultist, arguing from admitted metaphysical data, declares that the daring explorer, who would probe the inmost secrets of Nature, must transcend the narrow limitations of sense, and transfer his consciousness into the region of Noumena and the sphere of Primal Causes. To effect this, he must develop faculties which, save in a few rare and exceptional cases, are absolutely dormant, in the constitution of the off-shoots of our present Fifth Root-Race in Europe and America. He can in no other conceivable manner collect the facts on which to base his speculations. Is this not apparent on the principles of Inductive Logic and Metaphysics alike?

On the other hand, whatever the writer may do, she will never be able to satisfy both Truth and Science. To offer the reader a systematic and uninterrupted version of the Archaic Stanzas is impossible. A gap of 43 verses or shlokas has to be left between the 7th, already given, and the 51st, which is the subject of Book II, though the latter are made to run as from 1 onwards, for easier reading and reference. The mere appearance of man on Earth occupies an equal number of Stanzas, which minutely describe his primal evolution from the human Dhyân Chohans, the state of the Globe at that time, etc., etc. A great number of names referring to chemical substances and other compounds, which have now ceased to combine together, and are therefore unknown to the later offshoots of our Fifth Race, occupy a considerable space. As they are simply untranslatable, and would remain in every case inexplicable, they are omitted, along with those which cannot be made public. Nevertheless, even the little that is given will irritate every follower and defender of dogmatic materialistic Science who happens to read it.

In view of the criticism offered, it is proposed, before proceeding to the remaining Stanzas, to defend those already given. That they are not in perfect accord or harmony with Modern Science, we all know. But had they been as much in agreement with the views of modern knowledge as is a lecture by Sir William Thomson, they would have been rejected all the same. For they teach belief in conscious Powers

and Spiritual Entities; in terrestrial, semi-intelligent, and highly intellectual Forces on other planes;* and in Beings that dwell around us in spheres imperceptible, whether through telescope or microscope. Hence the necessity of examining the beliefs of materialistic Science, of comparing its views about the "Elements" with the opinions of the Ancients, and of analysing the physical Forces as they exist in modern conceptions, before the Occultists admit themselves to be in the wrong. We shall touch upon the constitution of the Sun and planets, and the Occult characteristics of what are called Devas and Genii, and are now termed by Science, Forces, or "modes of motion," and see whether Esoteric belief is defensible or not. Notwithstanding the efforts made to the contrary, an unprejudiced mind will discover that under Newton's "agent, material or immaterial,"† the agent which *causes gravity*, and in his personal *working* God, there is just as much of the metaphysical Devas and Genii, as there is in Kepler's Angelus Rector conducting each planet, and in the *species immaterialia* by which the celestial bodies were carried along in their courses, according to that Astronomer.

In Volume II, we shall have to openly approach dangerous subjects. We must bravely face Science and declare, in the teeth of materialistic learning, of Idealism, Hylo-Idealism, Positivism and all-denying modern Psychology, that the true Occultist believes in "Lords of Light"; that he believes in a Sun, which—far from being simply a "lamp of day" moving in accordance with physical law, and far from being merely one of those Suns, which, according to Richter, "are sun-flowers of a higher light"—is, like milliards of other Suns, the dwelling or the vehicle of a God, and of a host of Gods.

In this dispute, of course, it is the Occultists who will be worsted. They will be considered, on the *primâ facie* aspect of the question, to be ignoramuses, and will be labelled with more than one of the usual epithets given to those whom the superficially judging public, itself ignorant of the great underlying truths in Nature, accuses of believing in mediæval superstitions. Let it be so. Submitting beforehand to every criticism in order to go on with their task, they only claim the privilege of showing that the Physicists are as much at loggerheads among themselves in their speculations, as these speculations are with the teachings of Occultism.

* Their intellection, of course, being of quite a different nature to any we can conceive of on Earth.

† See his Third Letter to Bentley.

The Sun is Matter, and the Sun is Spirit. Our ancestors, the "Heathen," like their modern successors, the Parsis, were, and are, wise enough in their generation to see in it the symbol of Divinity, and at the same time to sense within, concealed by the physical symbol, the bright God of Spiritual and Terrestrial Light. Such belief can be regarded as a superstition only by rank Materialism, which denies Deity, Spirit, Soul, and admits no intelligence outside the mind of man. But if too much wrong superstition bred by "Churchianity," as Laurence Oliphant calls it, "renders a man a fool," too much scepticism makes him mad. We prefer the charge of folly in believing too much, to that of a madness which denies everything, as do Materialism and Hylo-Idealism. Hence, the Occultists are fully prepared to receive their dues from Materialism, and to meet the adverse criticism which will be poured on the author of this work, not for writing it, but for believing in that which it contains.

Therefore the discoveries, hypotheses, and unavoidable objections which will be brought forward by the scientific critics must be anticipated and disposed of. It has also to be shown how far the Occult Teachings depart from Modern Science, and whether the ancient or the modern theories are the more logically and philosophically correct. The unity and mutual relations of all parts of Kosmos were known to the Ancients, before they became evident to modern Astronomers and Philosophers. And even if the external and visible portions of the Universe, and their mutual relations, cannot be explained in Physical Science, in any other terms than those used by the adherents of the mechanical theory of the Universe, it does not follow that the Materialist, who denies that the Soul of Kosmos (which appertains to Metaphysical Philosophy) exists, has the right to trespass upon that metaphysical domain. That Physical Science is trying to, and actually does, encroach upon it, is only one more proof that "might is right"; it does not justify the intrusion.

Another good reason for these Addenda is this. Since only a certain portion of the Secret Teachings can be given out in the present age, the doctrines would never be understood even by Theosophists, if they were published without any explanations or commentary. Therefore they must be contrasted with the speculations of Modern Science. Archaic Axioms must be placed side by side with Modern Hypotheses, and the comparison of their value must be left to the sagacious reader.

On the question of the "Seven Governors"—as Hermes calls the

“Seven Builders,” the Spirits which guide the operations of Nature, the animated atoms of which are the shadows, in their own world, of their Primaries in the Astral Realms—this work will, of course, have every Materialist against it, as well as the men of Science. But this opposition can, at most, be only temporary. People have laughed at everything unusual, and have scouted every unpopular idea at first, and have then ended by accepting it. Materialism and Scepticism are evils that must remain in the world so long as man has not quitted his present gross form to don the one he had during the First and Second Races of this Round. Unless Scepticism and our present natural ignorance are equilibrated by Intuition and a natural Spirituality, every being afflicted with such feelings will see in himself nothing better than a bundle of flesh, bones, and muscles, with an empty garret inside, which serves the purpose of storing his sensations and feelings. Sir Humphrey Davy was a great Scientist, as deeply versed in Physics as any theorist of our day, yet he loathed Materialism. He says:

I heard with disgust, in the dissecting-rooms, the plan of the Physiologist, of the gradual secretion of matter, and its becoming endued with irritability, ripening into sensibility, and acquiring such organs as were necessary, by its own inherent forces, and at last rising into intellectual existence.

Nevertheless, Physiologists are not those who should be most blamed for speaking of that only which they can see by, and estimate on the evidence of, their physical senses. Astronomers and Physicists are, we consider, far more illogical in their materialistic views than are even Physiologists, and this has to be proved. Milton’s

. Light
Ethereal, first of things, quintessence pure,

has become with the Materialists only

. Prime cheerer, light,
Of all material beings, first and best.

For the Occultists it is both Spirit and Matter. Behind the “mode of motion,” now regarded as the “property of matter” and nothing more, they perceive the radiant Noumenon. It is the “Spirit of Light,” the first-born of the Eternal pure Element, whose energy, or emanation, is stored in the Sun, the great Life-Giver of the Physical World, as the hidden concealed Spiritual Sun is the Light- and Life-Giver of the Spiritual and Psychic Realms. Bacon was one of the first to strike the key-note of Materialism, not only by his inductive method—renovated from ill-digested Aristotle—but by the general

tenor of his writings. He inverts the order of mental Evolution when saying:

The first creation of God was the light of the sense; the last was the light of the reason; and his Sabbath work ever since is the illumination of the Spirit.

It is just the reverse. The light of Spirit is the eternal Sabbath of the Mystic or Occultist, and he pays little attention to that of mere sense. That which is meant by the allegorical sentence, "*Fiat Lux*," is, when esoterically rendered, "Let there be the 'Sons of Light'," or the Noumena of all phenomena. Thus the Roman Catholics rightly interpret the passage as referring to Angels, but wrongly as meaning Powers created by an anthropomorphic God, whom they personify in the ever thundering and punishing Jehovah.

These beings are the "Sons of Light," because they emanate from, and are self-generated in, that infinite Ocean of Light, whose one pole is pure *Spirit* lost in the absoluteness of Non-Being, and the other pole, the *Matter* in which it condenses, "crystallizing" into a more and more gross type as it descends into manifestation. Therefore Matter, though it is, in one sense, but the illusive dregs of that Light whose Rays are the Creative Forces, yet has in it the full presence of the Soul thereof, of that Principle, which none—not even the "Sons of Light," evolved from its ABSOLUTE DARKNESS—will ever know. The idea is as beautifully, as it is truthfully, expressed by Milton, who hails the holy Light, which is the

. Offspring of Heaven, first-born,
Or of th' Eternal coëternal beam;
. Since God is Light,
And never but in unapproach'd Light
Dwelt from Eternity, dwelt then in thee,
Bright effluence of bright essence increate.

SECTION II.

MODERN PHYSICISTS ARE PLAYING AT BLIND MAN'S BUFF.

AND now Occultism puts to Science the question: Is light a body, or is it not? Whatever the answer of the latter, the former is prepared to show that, to this day, the most eminent Physicists have no real knowledge on the subject. To know what light is, and whether it is an actual substance or a mere undulation of the "ethereal medium," Science has first to learn what Matter, Atom, Ether, Force, are in reality. Now, the truth is, that it knows nothing of any of these, and admits its ignorance. It has not even agreed what to believe in, as dozens of hypotheses on the same subject, emanating from various and very eminent Scientists, are antagonistic to each other and often self-contradictory. Thus their learned speculations may, with a stretch of good-will, be accepted as "working hypotheses" in a secondary sense, as Stallo puts it. But being radically inconsistent with each other, they must finally end by mutually destroying themselves. As declared by the author of *Concepts of Modern Physics*:

It must not be forgotten that the several departments of science are simply arbitrary divisions of science at large. In these several departments the same physical object may be considered under different aspects. The physicist may study its molecular relations, while the chemist determines its atomic constitution. But when they both deal with the same element or agent, it cannot have one set of properties in physics, and another set contradictory of them, in chemistry. If the physicist and chemist alike assume the existence of ultimate atoms absolutely invariable in bulk and weight, the atom cannot be a cube or oblate spheroid for physical, and a sphere for chemical purposes. A group of constant atoms cannot be an aggregate of extended and absolutely inert and impenetrable masses in a crucible or retort, and a system of mere centres of force as part of a magnet or of a Clamond battery. The universal æther cannot be soft and mobile to please the

chemist, and rigid-elastic to satisfy the physicist; it cannot be continuous at the command of Sir William Thomson and discontinuous on the suggestion of Cauchy or Fresnel.*

The eminent Physicist, G. A. Hirn, may likewise be quoted as saying the same thing in the 43rd Volume of the *Mémoires de l'Académie Royale de Belgique*, which we translate from the French, as cited:

When one sees the assurance with which to-day are affirmed doctrines which attribute the collectivity, the universality of the phenomena to the motions alone of the atom, one has a right to expect to find likewise unanimity in the qualities assigned to this unique being, the foundation of all that exists. Now, from the first examination of the particular systems proposed, one finds the strangest deception; one perceives that the atom of the chemist, the atom of the physicist, that of the metaphysician, and that of the mathematician . . . have absolutely nothing in common but the name! The inevitable result is the existing subdivision of our sciences, each of which, in its own little pigeon-hole, constructs an atom which satisfies the requirements of the phenomena it studies, without troubling itself in the least about the requirements proper to the phenomena of the neighbouring pigeon-hole. The metaphysician banishes the principles of attraction and repulsion as dreams; the mathematician, who analyses the laws of elasticity and those of the propagation of light, admits them implicitly, without even naming them. . . . The chemist cannot explain the grouping of the atoms, in his often complicated molecules, without attributing to his atoms specific distinguishing qualities; for the physicist and the metaphysician, partisans of the modern doctrines, the atom is, on the contrary, always and everywhere the same. What am I saying? There is no agreement even in one and the same science as to the properties of the atom. Each constructs an atom to suit his own fancy, in order to explain some special phenomenon with which he is particularly concerned.†

The above is the photographically correct image of Modern Science and Physics. The "pre-requisite of that incessant play of the 'scientific imagination'," which is so often found in Professor Tyndall's eloquent discourses, is vivid indeed, as is shown by Stallo, and for contradictory variety it leaves far behind it any "phantasies" of Occultism. However that may be, if physical theories are confessedly "mere formal, explanatory, didactic devices," and if, to use the words of a critic of Stallo, "atomism is only a symbolical graphic system,"‡ then the Occultist can hardly be regarded as assuming too much, when he places alongside of these "devices" and "symbolical systems" of Modern Science, the symbols and devices of Archaic Teachings.

* *Concepts of Modern Physics*, pp. xi, xii, Introd. to 2nd Ed.

† "Recherches expérimentales sur la relation qui existe entre la résistance de l'air et sa température," p. 68, translated from Stallo's quotation.

‡ From the criticism of *Concepts of Modern Physics*, in *Nature*. See Stallo's work, p. xvi of Introduction.

“AN LUMEN SIT CORPUS, NEC NON?”

Most decidedly light is not a body, we are told. Physical Sciences say light is a force, a vibration, the undulation of Ether. It is the property or quality of Matter, or even an affection thereof—never a *body!*

Just so. For this discovery, the knowledge, whatever it may be worth, that light or caloric is not a motion of *material particles*, Science is chiefly, if not solely indebted, to Sir William Grove. It was he who in a lecture at the London Institution, in 1842, was the first to show that “heat, light,* may be considered as affections of matter itself, and not of a distinct ethereal, ‘imponderable,’ fluid [a state of matter *now*] permeating it.”† Yet, perhaps, for some Physicists—as for Ærsted, a very eminent Scientist—Force and Forces were tacitly “Spirit [and hence Spirits] in Nature.” What several rather mystical Scientists taught was that light, heat, magnetism, electricity and gravity, etc., were not the final *Causes* of the visible phenomena, including planetary motion, but were themselves the secondary *effects of other Causes*, for which Science in our day cares very little, but in which Occultism believes; for the Occultists have exhibited proofs of the validity of their claims in every age. And in what age were there no Occultists and no Adepts?

Sir Isaac Newton held to the Pythagorean corpuscular theory, and was also inclined to admit its consequences; which made the Comte de Maistre hope, at one time, that Newton would ultimately lead Science back to the recognition of the fact that Forces and the Celestial Bodies *were propelled and guided by Intelligences.*‡ But de Maistre counted without his host. The innermost thoughts and ideas of Newton were

* Mr. Robert Ward, discussing the questions of Heat and Light in the November *Journal of Science*, 1881, shows us how utterly ignorant is Science about one of the commonest facts of Nature—the heat of the Sun. He says: “The question of the temperature of the sun has been the subject of investigation with many scientists: Newton, one of the first investigators of this problem, tried to determine it, and after him all the scientists who have been occupied with calorimetry have followed his example. All have believed themselves successful, and have formulated their results with great confidence. The following, in the chronological order of the publication of the results, are the temperatures (in centigrade degrees) found by each of them: Newton, 1,699,300°; Pouillet, 1,461°; Tollner, 102,200°; Secchi, 5,344,840°; Ericsson, 2,726,700°; Fizeau, 7,500°; Waterston, 9,000,000°; Spöeren, 27,000°; Deville, 9,500°; Soret, 5,801,846°; Vicaire, 1,500°; Rosetti, 20,000°. The difference is as 1,400° against 9,000,000°, or no less than 8,998,600°!! There probably does not exist in science a more astonishing contradiction than that revealed in these figures.” And yet without doubt if an Occultist were to give out an estimate, each of these gentlemen would vehemently protest in the name of “exact” Science at the rejection of his special result.

† See *Correlation of the Physical Forces*, Preface.

‡ *Soirées*, vol. ii.

perverted, and of his great mathematical learning only the mere physical husk was turned to account.

According to one atheistic Idealist, Dr. Lewins :

When Sir Isaac, in 1687 showed mass and atom acted upon by innate activity he effectually disposed of Spirit, Anima, or Divinity, as supererogatory.

Had poor Sir Isaac foreseen to what use his successors and followers would apply his "gravity," that pious and religious man would surely have quietly eaten his apple, and never have breathed a word about any mechanical ideas connected with its fall.

Great contempt is shown by Scientists for Metaphysics generally and for Ontological Metaphysics especially. But whenever the Occultists are bold enough to raise their diminished heads, we see that Materialistic, Physical Science is honey-combed with Metaphysics;* that its most fundamental principles, while inseparably wedded to transcendentalism, are nevertheless, in order to show Modern Science divorced from such "dreams," tortured and often ignored in the maze of contradictory theories and hypotheses. A very good corroboration of this charge lies in the fact that Science finds itself absolutely compelled to accept the "hypothetical" Ether, and to try to explain it on the materialistic grounds of atomo-mechanical laws. This attempt has led directly to the most fatal discrepancies and radical inconsistencies

* Stallo's above-cited work, *Concepts of Modern Physics*, a volume which has called forth the liveliest protests and criticisms, is recommended to anyone inclined to doubt this statement. "The professed antagonism of science to metaphysical speculation," he writes, "has led the majority of scientific specialists to assume that the methods and results of empirical research are wholly independent of the control of the laws of thought. They either silently ignore, or openly repudiate, the simplest canons of logic, including the laws of non-contradiction, and . . . resent with the utmost vehemence every application of the rule of consistency to their hypotheses and theories . . . and they regard an examination (of them) . . . in the light of these laws as an impertinent intrusion of 'à priori principles and methods' into the domains of empirical science. Persons of this cast of mind find no difficulty in holding that atoms are absolutely inert, and at the same time asserting that these atoms are perfectly elastic; or in maintaining that the physical universe, in its last analysis, resolves itself into 'dead' matter and motion, and yet denying that all physical energy is in reality kinetic; or in proclaiming that all phenomenal differences in the objective world are ultimately due to the various motions of absolutely simple material units, and, nevertheless, repudiating the proposition that these units are equal." (p. xix.) The blindness of eminent Physicists to some of the most obvious consequences of their own theories is marvellous. "When Prof. Tait, in conjunction with Prof. Stewart, announces that 'matter is simply passive' (*The Unseen Universe*, sec. 104), and then, in connection with Sir William Thomson, declares that 'matter has an innate power of resisting external influences' (*Treat. on Nat. Phil.*, Vol. I. sec. 216), it is hardly impertinent to inquire how these statements are to be reconciled. When Prof. Du Bois Reymond . . . insists upon the necessity of reducing all the processes of nature to motions of a substantial, indifferent substratum, wholly destitute of quality (*Ueber die Grenzen des Naturerkennens*, p. 5), having declared shortly before in the same lecture that 'resolution of all changes in the material world into motions of atoms caused by their constant central forces would be the completion of natural science,' we are in a perplexity from which we have the right to be relieved." (Pref. xliii.)

between the assumed nature of Ether and its physical behaviour. A second proof is found in the many contradictory statements made about the Atom—the most metaphysical object in creation.

Now, what does the modern science of Physics know of Ether, the first concept of which belongs undeniably to ancient Philosophers, the Greeks having borrowed it from the Âryans, and the origin of modern Ether being found in, and disfigured from, Âkâsha? This disfigurement is claimed as a modification and refinement of the idea of Lucretius. Let us then examine the modern concept, from several scientific volumes containing the admissions of the Physicists themselves.

As Stallo shows, the existence of Ether is accepted in Physical Astronomy, in ordinary Physics, and in Chemistry.

By the astronomers, this æther was originally regarded as a fluid of extreme tenuity and mobility, offering no sensible resistance to the motions of celestial bodies, and the question of its continuity or discontinuity was not seriously mooted. Its main function in modern astronomy has been to serve as a basis for hydrodynamical theories of gravitation. In physics this fluid appeared for some time in several rôles in connection with the "imponderables" [so cruelly put to death by Sir William Grove], some physicists going so far as to identify it with one or more of them.*

Stallo then points out the change caused by the kinetic theories; that from the date of the dynamical theory of heat, Ether was chosen in Optics as a substratum for luminous undulations. Next, in order to explain the dispersion and polarization of light, Physicists had to resort once more to their "scientific imagination," and forthwith endowed the Ether with (a) atomic or molecular structure, and (b) with an enormous elasticity, "so that its resistance to deformation far exceeded that of the most rigid elastic bodies." This necessitated the *theory of the essential discontinuity of Matter*, hence of Ether. After having accepted this discontinuity, in order to account for dispersion and polarization, theoretical impossibilities were discovered with regard to such dispersion. Cauchy's "scientific imagination" saw in Atoms "material points without extension," and he proposed, in order to obviate the most formidable obstacles to the undulatory theory (namely, some well-known mechanical theorems which stood in the way), to assume that the ethereal medium of propagation, instead of being continuous, should consist of particles separated by sensible distances. Fresnel rendered the same service to the phenomena of polarization. E. B. Hunt upset the theories of both.† There are now men of Science

* Stallo, *loc. cit.*, p. x.

† *Silliman's Journal*, vol. viii. pp. 364 *et seq.*

who proclaim them "materially fallacious," while others—the "atomo-mechanicalists"—cling to them with desperate tenacity. The supposition of an *atomic* or *molecular constitution* of Ether is upset, moreover, by thermo-dynamics, for Clerk Maxwell showed that such a medium would be simply *gas*.* The hypothesis of "finite intervals" is thus proven of no avail as a supplement to the undulatory theory. Besides, eclipses fail to reveal any such variation of colour as is supposed by Cauchy, on the assumption that the chromatic rays are propagated with different velocities. Astronomy has pointed out more than one phenomenon absolutely at variance with this doctrine.

Thus, while in one department of Physics the atomo-molecular constitution of the Ether is accepted in order to account for one special set of phenomena, in another department such a constitution is found to be quite subversive of a number of well-ascertained facts; and Hirn's charges are thus justified. Chemistry deemed it

Impossible to concede the enormous elasticity of the æther without depriving it of those properties, upon which its serviceableness in the construction of chemical theories mainly depended.

This ended in a final transformation of Ether.

The exigencies of the atomo-mechanical theory have led distinguished mathematicians and physicists to attempt a substitution for the traditional atoms of matter, of peculiar forms of vortical motion in a universal, homogeneous, incompressible, and *continuous* material medium [Ether].†

The present writer—claiming no great scientific education, but only a tolerable acquaintance with modern theories, and a better one with Occult Sciences—picks up weapons against the detractors of the Esoteric Teaching in the very arsenal of Modern Science. The glaring contradictions, the mutually-destructive hypotheses of world-renowned Scientists, their disputes, their accusations and denunciations of each other, show plainly that, whether accepted or not, the Occult Theories have as much right to a hearing as any of the so-called learned and academical hypotheses. Thus, whether the followers of the Royal Society choose to accept Ether as a *continuous* or as a *discontinuous* fluid matters little, and is indifferent for the present purpose. It simply points to one certainty: Official Science *knows nothing to this day of the constitution of Ether*. Let Science call it Matter, if it likes; only

* See Clerk Maxwell's *Treatise on Electricity*, and compare with Cauchy's *Mémoire sur la Dispersion de la Lumière*.

† Stallo, *loc. cit.*, p. x.

neither as Âkâsha, nor as the one sacred Æther of the Greeks, is it to be found in any of the states of Matter known to modern Physics. It is Matter on quite another plane of perception and being, and it can neither be analyzed by scientific apparatus, nor appreciated or even conceived by the "scientific imagination," unless the possessors thereof study the Occult Sciences. That which follows proves this statement.

It is clearly demonstrated by Stallo as regards the crucial problems of modern Physics, as was done by De Quatrefages and several others in those of Anthropology, Biology, etc., that, in their efforts to support their individual hypotheses and systems, most of the eminent and learned Materialists very often utter the greatest fallacies. Let us take the following case. Most of them reject *actio in distans*—one of the fundamental principles in the question of Æther or Âkâsha in Occultism—while, as Stallo justly observes, there is no physical action "which, on close examination, does not resolve itself into *actio in distans*"; and he proves it.

Now, metaphysical arguments, according to Professor Lodge,* are "unconscious appeals to experience." And he adds that if such an experience *is not conceivable*, then it does not exist. In his own words:

If a highly-developed mind or set of minds, find a doctrine about some comparatively simple and fundamental matter absolutely unthinkable, it is an evidence . . . that the unthinkable state of things has no existence.

And thereupon, toward the end of his lecture, the Professor indicates that the explanation of cohesion, as well as of gravity, "is to be looked for in the vortex-atom theory of Sir William Thomson."

It is needless to stop to inquire whether it is to this vortex-atom theory, also, that we have to look for the dropping down on earth of the first life-germ by a passing meteor or comet—Sir William Thomson's hypothesis. But Prof. Lodge might be reminded of the wise criticism on his lecture in Stallo's *Concepts of Modern Physics*. Noticing the above-quoted declaration by the Professor, the author asks

Whether . . . the elements of the vortex-atom theory are familiar, or even possible, facts of experience? For, if they are not, clearly that theory is obnoxious to the same criticism which is said to invalidate the assumption of *actio in distans*.†

And then the able critic shows clearly what the Ether is not, nor can ever be, notwithstanding all scientific claims to the contrary. And thus he opens widely, if unconsciously, the entrance door to our Occult Teachings. For, as he says:

* *Nature*, vol. xxvii. p. 304.

† *Op. cit.*, p. xxiv.

The medium in which the vortex-movements arise is, according to Professor Lodge's own express statement (*Nature*, vol. xxvii. p. 305), "a perfectly homogeneous, incompressible, continuous body, incapable of being resolved into simple elements or atoms; it is, in fact, continuous, not molecular." And after making this statement Professor Lodge adds: "*There is no other body of which we can say this, and hence the properties of the æther must be somewhat different from those of ordinary matter.*" It appears, then, that the whole vortex-atom theory, which is offered to us as a substitute for the "metaphysical theory" of *actio in distans*, rests upon the hypothesis of the existence of a material medium which is utterly unknown to experience, and which has properties *somewhat* different* from those of ordinary matter. Hence this theory, instead of being, as is claimed, a reduction of an unfamiliar fact of experience to a familiar fact, is, on the contrary, a reduction of a fact which is perfectly familiar, to a fact which is not only unfamiliar, but wholly unknown, unobserved and unobservable. Furthermore, the alleged vortical motion of, or rather in, the assumed ethereal medium is . . . impossible, because "motion in a perfectly homogeneous, incompressible, and therefore continuous fluid, is not sensible motion." It is manifest, therefore that, wherever the vortex-atom theory may land us, it certainly does not land us anywhere in the region of physics, or in the domain of *veræ causæ*.† And I may add that, inasmuch as the hypothetical undifferentiated‡ and undifferentiable medium is clearly an involuntary reification of the old ontological concept *pure being*, the theory under discussion has all the attributes of an inapprehensible metaphysical phantom.§

A "phantom," indeed, which can be made apprehensible only by Occultism. From such scientific Metaphysics to Occultism there is hardly one step. Those Physicists who hold the view that the atomic constitution of Matter is consistent with its penetrability, need not go far out of their way to be able to account for the greatest phenomena of Occultism, now so derided by Physical Scientists and Materialists. Cauchy's "material points without extension" are Leibnitz's Monads, and at the same time are the materials out of which the "Gods" and other invisible Powers clothe themselves in bodies. The disintegration and reintegration of "material" particles without extension, as a chief factor in phenomenal manifestations, ought to suggest themselves very easily as a clear possibility, at any rate to those few scientific minds

* "*Somewhat* different!" exclaims Stallo. "The real import of this 'somewhat' is, that the medium in question is *not, in any intelligible sense, material at all*, having none of the properties of matter." All the properties of matter depend upon differences and changes, and the "hypothetical" Ether here defined is not only destitute of differences, but incapable of difference and change—in the physical sense let us add. This proves that if Ether is "matter," it is so only as something visible, tangible and existing, for *spiritual* senses alone; that it is a Being indeed—but not of our plane—Pater Æther, or Ākāśha.

† *Veræ causæ* for Physical Science are *mâyāvīc* or illusionary causes for the Occultist, and *vice versa*.

‡ Very much "differentiated," on the contrary, since the day it left its *laya* condition.

§ *Op. cit.*, pp. xxiv-xxvi.

which accept M. Cauchy's views. For, disposing of that property of Matter which they call impenetrability, by simply regarding the Atoms as "material points exerting on each other attractions and repulsions which vary with the distances that separate them," the French theorist explains that:

From this it follows that, if it pleased the author of nature simply to modify the laws according to which the atoms attract or repel each other, we might instantly see the hardest bodies penetrating each other, the smallest particles of matter occupying immense spaces, or the largest masses reducing themselves to the smallest volumes, the entire universe concentrating itself, as it were, in a single point.*

And that "point," *invisible on our plane of perception and matter*, is quite visible to the eye of the Adept who can follow and see it present on other planes. For the Occultists, who say that the author of Nature *is Nature itself*, something indistinct and inseparable from the Deity, it follows that those who are conversant with the Occult laws of Nature, and know how to change and provoke new conditions in Ether, may—*not* modify the laws, but work and do the same in accordance with these immutable laws.

* *Sept Leçons de Physique Générale*, p. 38, et seq., Ed. Moigno.

SECTION III.

IS GRAVITATION A LAW?

THE corpuscular theory has been unceremoniously put aside; but gravitation—the principle that all bodies attract each other with a force proportional directly to their masses, and inversely to the squares of the distances between them—survives to this day and reigns, supreme as ever, in the alleged ethereal waves of Space. As a hypothesis, it had been threatened with death for its inadequacy to embrace all the facts presented to it; as a physical law, it is the King of the late and once all-potent “Imponderables.” “It is little short of blasphemy an insult to Newton’s grand memory to doubt it!”—is the exclamation of an American reviewer of *Isis Unveiled*. Well; what is finally that invisible and intangible God in whom we should believe on blind faith? Astronomers who see in gravitation an easy-going solution for many things, and a universal force which allows them to calculate planetary motions, care little about the Cause of Attraction. They call Gravity a law, a cause in itself. We call the forces acting under that name effects, and very secondary effects, too. One day it will be found that the scientific hypothesis does not answer after all; and then it will follow the corpuscular theory of light, and be consigned to rest for many scientific æons in the archives of all exploded speculations. Has not Newton himself expressed grave doubts about the nature of Force and the corporeality of the “Agents,” as they were then called? So has Cuvier, another scientific light shining in the night of research. He warns his readers, in the *Révolution du Globe*, about the doubtful nature of the so-called Forces, saying that “it is not so sure whether those agents were not after all Spiritual Powers [*des agents spirituels*].” At the outset of his *Principia*, Sir Isaac Newton took the greatest care to impress upon his school that he did not use the word “attraction,” with regard to the mutual action of bodies in a physical sense. To him it was, he said, a purely mathematical conception, involving no

consideration of real and primary physical causes. In a passage of his *Principia*,* he tells us plainly that, physically considered, attractions are rather impulses. In Section xi (Introduction), he expresses the opinion that "there is some subtle spirit by the force and action of which all movements of matter are determined";† and in his *Third Letter* to Bentley he says:

It is inconceivable that inanimate brute matter should, without the mediation of something else *which is not material*, operate upon and affect other matter, without mutual contact, as it must do if gravitation, in the sense of Epicurus, be essential and inherent in it. . . . That gravity should be innate, inherent and essential to matter, so that one body may act upon another at a distance, through a vacuum, without the mediation of anything else by and through which their action may be conveyed from one to another, is to me so great an absurdity that I believe no man, who has in philosophical matters a competent faculty of thinking, can ever fall into it. Gravity must be caused by an agent acting constantly according to certain laws; but *whether this agent be material or immaterial* I have left to the consideration of my readers.

At this, even Newton's contemporaries got frightened—at the apparent return of Occult Causes into the domain of Physics. Leibnitz called his principle of attraction "an incorporeal and inexplicable power." The supposition of an attractive faculty and a perfect void was characterized by Bernouilli as "revolting," the principle of *actio in distans* finding then no more favour than it does now. Euler, on the other hand, thought the action of gravity was due to either a *Spirit* or some subtle medium. And yet Newton knew of, if he did not accept, the Ether of the Ancients. He regarded the intermediate space between the sidereal bodies as vacuum. Therefore he believed in "subtle Spirit" and Spirits as we do, guiding the so-called attraction. The above-quoted words of the great man have produced poor results. The "absurdity" has now become a dogma in the case of pure Materialism, which repeats: "No Matter without Force, no Force without Matter; Matter and Force are inseparable, eternal and indestructible [*true*]; there can be no independent Force, since all Force is an inherent and necessary property of Matter [*false*]; consequently, there is no immaterial Creative Power." Oh, poor Sir Isaac!

If, leaving aside all the other eminent men of Science who agreed in opinion with Euler and Leibnitz, the Occultists claim as their authorities and supporters Sir Isaac Newton and Cuvier only, as above cited, they need fear little from Modern Science, and may loudly and proudly

* Defin. 8, B. I. Prop. 69, "Scholium." † See *Modern Materialism*, by the Rev. W. F. Wilkinson.

proclaim their beliefs. But the hesitation and doubts of the above cited authorities, and of many others, too, whom we could name, did not in the least prevent scientific speculation from wool-gathering in the fields of brute matter just as before. First it was matter and an imponderable fluid distinct from it; then came the imponderable fluid so much criticized by Grove; then Ether, which was at first discontinuous and then became continuous; after which came the "mechanical" Forces. These have now settled in life as "modes of motion," and the Ether has become more mysterious and problematical than ever. More than one man of Science objects to such crude materialistic views. But then, from the days of Plato, who repeatedly asks his readers not to confuse *incorporeal* Elements with their Principles—the transcendental or spiritual Elements; from those of the great Alchemists, who, like Paracelsus, made a great difference between a phenomenon and its cause, or the Noumenon; to Grove, who, though he sees "no reason to divest universally diffused matter of the functions common to all matter," yet uses the term Forces where his critics, "who do not attach to the word any idea of a specific action," say Force; from those days to this, nothing has proved competent to stem the tide of brutal Materialism. Gravitation is the sole cause, the acting God, and Matter is its prophet, said the men of Science only a few years ago.

They have changed their views several times since then. But do the men of Science understand the innermost thought of Newton, one of the most spiritual-minded and religious men of his day, any better now than they did then? It is certainly to be doubted. Newton is credited with having given the death-blow to the Elemental Vortices of Descartes—the idea of Anaxagoras, resurrected, by the bye—though the last modern "vortical atoms" of Sir William Thomson do not, in truth, differ much from the former. Nevertheless, when his disciple Forbes wrote in the Preface to the chief work of his master a sentence declaring that "attraction was the cause of the system," Newton was the first to solemnly protest. That which in the mind of the great mathematician assumed the shadowy, but firmly rooted image of God, as the Noumenon of all,* was called more philosophically by ancient and

* "Attraction," Le Couturier, a Materialist, writes, "has now become for the public that which it was for Newton himself—a simple word, an Idea" (*Panorama des Mondes*), since its cause is unknown. Herschell virtually says the same, when remarking, that whenever studying the motion of the heavenly bodies, and the phenomena of attraction, he feels penetrated at every moment with the idea of "the existence of causes that act for us under a veil, disguising their direct action." (*Musée des Sciences*, August, 1856.)

modern Philosophers and Occultists—"Gods," or the creative fashioning Powers. The modes of expression may have been different, and the ideas more or less philosophically enunciated by all sacred and profane Antiquity; but the fundamental thought was the same.* For Pythagoras the Forces were Spiritual Entities, Gods, independent of planets and Matter as we see and know them on Earth, who are the rulers of the Sidereal Heaven. Plato represented the planets as moved by an intrinsic Rector, one with his dwelling, like "a boatman in his boat." As for Aristotle, he called those rulers "immaterial substances"; † though as one who had never been initiated, he rejected the Gods as Entities. ‡ But this did not prevent him from recognizing the fact that the stars and planets "were not inanimate masses but acting and living bodies indeed." As if sidereal spirits were the "diviner portions of their phenomena (τὰ θεϊότερα τῶν φανερώων)." §

If we look for corroboration in more modern and scientific times, we find Tycho Brahe recognizing in the stars a triple force, divine, spiritual and vital. Kepler, putting together the Pythagorean sentence, "the Sun, guardian of Jupiter," and the verses of David, "He placed his throne in the Sun," and "the Lord is the Sun," etc., said that he understood perfectly how the Pythagoreans could believe that all the Globes disseminated through Space were rational Intelligences (*facultates ratiocinativæ*), circulating round the Sun, "in which resides a pure spirit of fire; the source of the general harmony." ||

When an Occultist speaks of Fohat, the energizing and guiding Intelligence in the Universal Electric or Vital Fluid, he is laughed at.

* If we are taken to task for believing in operating Gods and Spirits while rejecting a personal God, we answer to the Theists and Monotheists: Admit that your Jehovah is *one of the Elohim*, and we are ready to recognize him. Make of him, as you do, the Infinite, the ONE and the Eternal God, and we will never accept him in this character. Of tribal Gods there were many; the One Universal Deity is a principle, an abstract Root-Idea, which has nought to do with the unclean work of finite Form. We do not worship the Gods, we only honour Them, as beings superior to ourselves. In this we obey the Mosaic injunction, while Christians disobey their *Bible*—missionaries foremost of all. "Thou shalt not revile the Gods," says one of them—Jehovah—in *Exodus*, xxii. 28; but at the same time in verse 20 it is commanded: "He that sacrificeth to any God, save unto the Lord only, he shall be utterly destroyed." Now in the original texts it is not "God" but Elohim—and we challenge contradiction—and Jehovah is one of the Elohim, as proved by his own words in *Genesis*, iii. 22, when "the Lord God said: Behold the Man is become as one of us." Hence both those who worship and sacrifice to the Elohim, the Angels, and to Jehovah, and those who revile the Gods of their fellow-men, are far greater transgressors than the Occultists or than any Theosophist. Meanwhile many of the latter prefer believing in some one "Lord" or other, and are quite welcome to do as they like.

† To liken the "immaterial species to wooden iron," and to laugh at Spiller for referring to them as "incorporeal matter" does not solve the mystery. (See *Concepts of Modern Physics*, p. 165 et *infra*.)

‡ See *Vossius*, Vol. II. p. 528.

§ *De Cælo*, I. 9.

|| *De Motibus Planetarum Harmonicis*, p. 248.

Withal, as now shown, the nature neither of electricity, nor of life, nor even of light, is to this day understood. The Occultist sees in the manifestation of every force in Nature, the action of the quality, or the special characteristic of its Noumenon; which Noumenon is a distinct and intelligent Individuality *on the other side of the manifested mechanical Universe*. Now the Occultist does not deny—on the contrary he will support the view—that light, heat, electricity and so on are affections, not properties or qualities, of Matter. To put it more clearly: Matter is the condition, the necessary basis or vehicle, a *sine quâ non*, for the manifestation of these Forces, or Agents, on this plane.

But in order to gain the point, the Occultists have to examine the credentials of the law of gravity, first of all, of "Gravitation, the King and Ruler of Matter," under every form. To do so effectually, the hypothesis, in its earliest appearance, has to be recalled to mind. To begin with, is it Newton who was the first to discover it? *The Athenæum* of Jan. 26, 1867, has some curious information upon this subject. It says:

Positive evidence can be adduced that Newton derived all his knowledge of Gravitation and its laws from Bœhme, with whom Gravitation or Attraction is the first property of Nature. . . . For with him, his [Bœhme's] system shows us the inside of things, while modern physical science is content with looking at the outside.

Then again:

The science of electricity, which was not yet in existence when he [Bœhme] wrote, is there anticipated [in his writings]; and not only does Bœhme describe all the now known phenomena of that force, but he even gives us the origin, generation, and birth of electricity, itself.

Thus Newton, whose profound mind easily read between the lines, and fathomed the spiritual thought of the great Seer, in its mystic rendering, owes his great discovery to Jacob Bœhme, the nursling of the Genii, Nirmânakâyas who watched over and guided him, of whom the author of the article in question so truly remarks:

Every new scientific discovery goes to prove his profound and intuitive insight into the most secret workings of Nature.

And having *discovered* gravity, Newton, in order to render possible the action of attraction in space, had, so to speak, to annihilate every physical obstacle capable of impeding its free action; Ether among others, though he had more than a presentiment of its existence. Advocating the corpuscular theory, he made an *absolute vacuum* between the heavenly bodies. Whatever may have been his suspicions and

inner convictions about Ether; however many friends he may have unbosomed himself to—as in the case of his correspondence with Bentley—his teachings never showed that he had any such belief. If he was “persuaded that the power of attraction could not be exerted by matter across a vacuum,”* how is it that so late as 1860, French astronomers, Le Couturier, for instance, combated “the *disastrous* results of the theory of vacuum established by the great man”? Le Couturier says:

Il n'est plus possible aujourd'hui, de soutenir comme Newton, que les corps célestes se meuvent au milieu du vide immense des espaces. . . . Parmi les conséquences de la théorie du vide établie par Newton, il ne reste plus debout que le mot “attraction.” . . . Nous voyons venir le jour où le mot attraction disparaîtra du vocabulaire scientifique.†

Professor Winchell writes:

These passages [Letter to Bentley] show what were his views respecting the nature of the interplanetary medium of communication. Though declaring that the heavens “are void of sensible matter,” he elsewhere excepted “perhaps some very thin vapours, steams, and effluvia, arising from the atmospheres of the earth, planets, and comets, and from such an exceedingly rare ethereal medium as we have elsewhere described.”‡

This only shows that even such great men as Newton have not always the courage of their opinions. Dr. T. S. Hunt

Called attention to some long-neglected passages in Newton's works, from which it appears that a belief in such universal, intercosmical medium gradually took root in his mind.§

But such attention was never called to the said passages before Nov. 28, 1881, when Dr. Hunt read his “Celestial Chemistry, from the time of Newton.” As Le Couturier says:

Till then the idea was universal, even among the men of Science, that Newton had, while advocating the corpuscular theory, preached a *void*.

The passages had been “long neglected,” no doubt because they contradicted and clashed with the preconceived pet theories of the day, till finally the undulatory theory imperiously required the presence of an “ethereal medium” to explain it. This is the whole secret.

Anyhow, it is from this theory of Newton of a universal void, taught, if not believed in by himself, that dates the immense scorn now shown by modern Physics for ancient. The old sages had maintained that “Nature abhorred a vacuum,” and the greatest mathematicians of the

* *World-Life*, Prof. Winchell, LL.D., pp. 49 and 50.

† *Panorama des Mondes*, pp. 47 and 53.

‡ Newton, *Optics*, III. Query 28, 1704; quoted in *World-Life*, p. 50.

† *Ibid.*

world—read of the Western races—had discovered the antiquated “fallacy” and exposed it. And now Modern Science, however ungracefully, vindicates Archaic Knowledge, and has, moreover, to vindicate Newton’s character and powers of observation at this late hour, after having neglected, for one century and a half, to pay any attention to such very important passages—perchance, because it was wiser not to attract any notice to them. **Better late than never!**

And now Father *Æther* is *re-welcomed* with open arms and wedded to gravitation, linked to it for weal or woe, until the day when it, or both, shall be replaced by something else. Three hundred years ago it was *plenum* everywhere, then it became one dismal *vacuity*; later still the sidereal ocean-beds, dried up by Science, rolled onward once more their ethereal waves. *Recede ut procedas* must become the motto of exact Science—“exact,” chiefly, in finding itself inexact every leap-year.

But we will not quarrel with the great men. They had to go back to the earliest “Gods of Pythagoras and old Kanāda” for the very backbone and marrow of their correlations and “newest” discoveries, and this may well afford good hope to the Occultists for their minor Gods. For we believe in Le Couturier’s prophecy about gravitation. We know the day is approaching when an absolute reform will be demanded in the present modes of Science by the Scientists themselves, as was done by Sir William Grove, F.R.S. Till that day there is nothing to be done. For if gravitation were dethroned to-morrow, the Scientists would discover some other new mode of mechanical motion the day after.* Rough and up-hill is the path of true Science, and its days are full of vexation of spirit. But in the face of its “thousand” contradictory hypotheses offered as explanations of physical phenomena, there has been no better hypothesis than “motion”—however paradoxically interpreted by Materialism. As may be found in the first pages of this Volume, Occultists have nothing to say against Motion,† the Great Breath of Mr. Herbert Spencer’s “Unknowable.”

* When read in a fair and unprejudiced spirit, Sir Isaac Newton’s works are an ever ready witness to show how he must have hesitated between gravitation and attraction, impulse, and some other *unknown cause*, to explain the regular course of the planetary motion. But see his *Treatise on Colour* (Vol. III. Question 31). We are told by Herschell that Newton left with his successors the duty of drawing all the scientific conclusions from his discovery. How Modern Science has abused the privilege of building its newest theories upon the law of gravitation, may be realized when one remembers how profoundly religious was that great man.

† The materialistic notion that because, in Physics, real or sensible motion is impossible in pure space or vacuum, therefore, the eternal Motion of and in Cosmos—regarded as infinite Space—is a *fiction*, only shows once more that such expressions of Eastern metaphysics as “pure Space,” “pure Being,” the “Absolute,” etc., have never been understood in the West.

But, believing that everything on Earth is the shadow of something in Space, they believe in smaller "Breaths," which, living, intelligent and independent of all but Law, blow in every direction during manvantaric periods. These Science will reject. But whatever may be made to replace attraction, *alias* gravitation, the result will be the same. Science will be as far then from the solution of its difficulties as it is now, unless it comes to some compromise with Occultism, and even with Alchemy—a supposition which will be regarded as an impertinence, but remains, nevertheless, a fact. As Faye says:

Il manque quelque chose aux géologues pour faire la géologie de la Lune; c'est d'être astronomes. À la vérité, il manque aussi quelque chose aux astronomes pour aborder avec fruit cette étude, c'est d'être géologues.*

But he might have added, with still more pointedness:

Ce qui manque à tous les deux, c'est l'intuition du mystique.

Let us remember Sir William Grove's wise "concluding remarks," on the ultimate structure of Matter, or the minutæ of molecular actions, which, he thought, man will never know.

Much harm has already been done by attempting hypothetically to dissect matter and to discuss the shapes, sizes, and numbers of atoms, and their atmospheres of heat, ether, or electricity. Whether the regarding electricity, light, magnetism, etc., as simply motions of ordinary matter, be or be not admissible, certain it is that all past theories have resolved, and all existing theories do resolve, the action of these forces into motion. Whether it be that, on account of our familiarity with motion, we refer other affections to it, as to a language which is most easily construed, and most capable of explaining them, or whether it be that it is in reality the only mode in which our minds, as contra-distinguished from our senses, are able to conceive material agencies, certain it is that since the period at which the mystic notions of spiritual or preternatural powers were applied to account for physical phenomena, all hypotheses framed to explain them have resolved them into motion.

And then the learned gentleman states a purely Occult tenet:

The term perpetual motion, which I have not infrequently used in these pages, is itself equivocal. If the doctrines here advanced be well founded, all motion is, in one sense, perpetual. In masses, whose motion is stopped by mutual concussion, heat or motion of the particles is generated; and thus the motion continues, so that if we could venture to extend such thoughts to the universe, we should assume the same amount of motion affecting the same amount of matter for ever.†

This is precisely what Occultism maintains, and on the same principle, that:

Where force is made to oppose force, and produce static equilibrium, the balance of preëxisting equilibrium is affected, and fresh motion is started equivalent to that which is withdrawn into a state of abeyance.

* From Winchell's *World-Life*, p. 379.

† *Correl. Phys. Forces*, p. 173.

This process finds intervals in the Pralaya, but is eternal and ceaseless as the "Breath," even when the manifested Kosmos rests.

Thus, supposing attraction or gravitation should be given up in favour of the Sun being a huge magnet—a theory already accepted by some Physicists—a magnet that acts on the planets as attraction is now supposed to do, whereto, or how much farther, would it lead the Astronomers from where they are now? Not an inch farther. Kepler came to this "curious hypothesis" nearly 300 years ago. He had not discovered the theory of attraction and repulsion in Kosmos, for it was known from the days of Empedocles, by whom the two opposite forces were called "love" and "hate"—words implying the same idea. But Kepler gave a pretty fair description of cosmic magnetism. That such magnetism exists in Nature, is as certain as that gravitation does not; not at any rate, in the way in which it is taught by Science, which has never taken into consideration the different modes in which the dual Force, that Occultism calls attraction and repulsion, may act within our Solar System, the Earth's atmosphere and beyond in the Kosmos.

As the great Humboldt writes:

Trans-solar space has not hitherto shown any phenomenon analogous to our solar system. It is a peculiarity of *our* system, that matter should have condensed within it in nebulous rings, the nuclei of which condense into earths and moons. I say again, heretofore, *nothing of the kind has ever been observed beyond our planetary system.**

True, that since 1860 the Nebular Theory has sprung up, and being better known, a few identical phenomena were supposed to be observed beyond the Solar System. Yet the great man is quite right; and no *earths* or *moons* can be found, *except in appearance*, beyond, or of the same order of Matter as found in, our System. Such is the Occult Teaching.

This was proven by Newton himself; for there are many phenomena in our Solar System, which he confessed his inability to explain by the law of gravitation; "such were the uniformity in the directions of planetary movements, the nearly circular forms of the orbits, and their remarkable conformity to one plane."† And if there is one single exception, then the law of gravitation has no right to be referred to as a universal law. "These adjustments," we are told, "Newton, in his general Scholium, pronounces to be 'the work of an intelligent and

* See *Revue Germanique* of the 31st Dec. 1860, art., "Lettres et Conversations d'Alexandre Humboldt."

† Prof. Winchell.

all-powerful Being'." Intelligent that "Being" may be; as to "all-powerful," there would be every reason to doubt the claim. A poor "God" he, who would work upon minor details and leave the most important to secondary forces! The poverty of this argument and logic is surpassed only by that of Laplace, who, seeking very correctly to substitute Motion for Newton's "all-powerful Being," and ignorant of the true nature of that Eternal Motion, saw in it a blind physical law. "Might not those arrangements be an effect of the laws of motion?" he asks, forgetting, as do all our modern Scientists, that this law and this motion are a vicious circle, so long as the *nature of both* remains unexplained. His famous answer to Napoleon: "*Dieu est devenu une hypothèse inutile,*" could be correctly made only by one who adhered to the philosophy of the Vedântins. It becomes a pure fallacy, if we exclude the interference of operating, intelligent, powerful (never "all-powerful") Beings, who are called "Gods."

But we would ask the critics of the mediæval Astronomers, why should Kepler be denounced as most unscientific, for offering just the same solution as did Newton, only showing himself more sincere, more consistent and even more logical? Where may be the difference between Newton's "all-powerful Being" and Kepler's Rectores, his Sidereal and Cosmic Forces, or Angels? Kepler again is criticized for his "curious hypothesis which made use of a vortical movement within the solar system," for his theories in general, and for favouring Empedocles' idea of attraction and repulsion, and "solar magnetism" in particular. Yet several modern men of Science, as will be shown—Hunt, if Metcalfe is to be excluded, Dr. Richardson, etc.—very strongly favour the same idea. He is half excused, however, on the plea that:

To the time of Kepler no interaction between masses of matter had been distinctly recognized which was generically different from magnetism.*

Is it *distinctly* recognized now? Does Professor Winchell claim for Science any serious knowledge whatever of the nature of either electricity or magnetism—except that both seem to be the effects of some result arising from an undetermined cause.

The ideas of Kepler, when their theological tendencies are weeded out, are purely Occult. He saw that:

(I) The Sun is a great Magnet.† This is what some eminent modern Scientists and also the Occultists believe in.

* *World-Life*, p. 553.

† But see *Astronomie du Moyen Age*, by Delambre.

(II) The Solar substance is immaterial.* In the sense, of course, of Matter existing in states unknown to Science.

(III) For the constant motion and restoration of the Sun's energy and planetary motion, he provided the perpetual care of a Spirit, or Spirits. The whole of Antiquity believed in this idea. The Occultists do not use the word Spirit, but say Creative Forces, which they endow with intelligence. But we may call them Spirits also. We shall be taken to task for contradiction. It will be said that while we deny God, we admit Souls and operative Spirits, and quote from bigoted Roman Catholic writers in support of our argument. To this we reply: We deny the anthropomorphic God of the Monotheists, but never the Divine Principle in Nature. We combat Protestants and Roman Catholics on a number of dogmatic theological beliefs of human and sectarian origin. We agree with them in their belief in Spirits and intelligent operative Powers, though we do not worship "Angels" as the Roman Latinists do.

This theory is tabooed a great deal more on account of the "Spirit" that is given room in it, than of anything else. Herschell, the elder, believed in it likewise, and so do several modern Scientists. Nevertheless Professor Winchell declares that "a hypothesis more fanciful, and less in accord with the requirements of physical principles, has not been offered in ancient or modern times."†

The same was said, once upon a time, of the universal Ether, and now it is not only accepted perforce, but is advocated as the only possible theory to explain certain mysteries.

Grove's ideas, when he first enunciated them in London about 1840, were denounced as unscientific; nevertheless, his views on the Correlation of Forces are now universally accepted. It would, very likely, require one more conversant with Science than is the writer, to combat with any success some of the now prevailing ideas about gravitation and other similar "solutions" of cosmic mysteries. But, let us recall a few objections that came from recognized men of Science; from Astronomers and Physicists of eminence, who rejected the theory of rotation, as well as that of gravitation. Thus one reads in the *French Encyclopædia* that "Science agrees, in the face of all its representatives, that it is *impossible* to explain the *physical* origin of the rotatory motion of the solar system."

If the question is asked: "What causes rotation?" We are answered:

* See *Isis Unveiled*, I. 270, 271.

† *World-Life*, 554.

“It is the centrifugal force.” “And this force, what is it that produces it?” “The force of rotation,” is the grave answer.* It will be well, perhaps, to examine both these theories as being directly or indirectly connected.

* Godefroy, *Cosmogonie de la Révélation*.

SECTION IV.

THE THEORIES OF ROTATION IN SCIENCE.

CONSIDERING that "final cause is pronounced a chimera, and the First Great Cause is remanded to the sphere of the Unknown," as a reverend gentleman justly complains, the number of hypotheses put forward, a nebula of them, is most remarkable. The profane student is perplexed, and does not know in which of the theories of *exact* Science he has to believe. We give below hypotheses enough for every taste and power of brain. They are all extracted from a number of scientific volumes.

CURRENT HYPOTHESES EXPLAINING THE ORIGIN OF ROTATION.

Rotation has originated:

(a) By the collision of nebular masses wandering aimlessly in Space; or by attraction, "in cases where no actual impact takes place."

(b) By the tangential action of currents of nebulous matter (in the case of an amorphous nebula) descending from higher to lower levels,* or simply by the action of the central gravity of the mass.†

"It is a fundamental principle in physics that *no rotation could be generated in such a mass by the action of its own parts*. As well attempt to change the course of a steamer by pulling at the deck railing," remarks on this Prof. Winchell in *World-Life*.‡

HYPOTHESES OF THE ORIGIN OF PLANETS AND COMETS.

(a) We owe the birth of the planets (1) to an explosion of the Sun—a parturition of its central mass;§ or (2) to some kind of disruption of the nebular rings.

* The terms "high" and "low" being only relative to the position of the observer in Space, any use of those terms tending to convey the impression that they stand for abstract realities, is necessarily fallacious.

† Jacob Ennis, *The Origin of the Stars*.

‡ P. 99, note.

§ If such is the case, how does Science explain the comparatively small size of the planets nearest the Sun? The theory of meteoric aggregation is only a step farther from truth than the nebular conception, and has not even the quality of the latter—its metaphysical element.

(b) "The comets are strangers to the planetary system."* "The comets are undeniably generated in our solar system."†

(c) The "fixed stars are motionless," says one authority. "All the stars are actually in motion," answers another authority. "Undoubtedly every star is in motion."‡

(d) "For over 350,000,000 years, the slow and majestic movement of the sun around its axis has never for a moment ceased."§

(e) "Maedler believes that . . . our sun has Alcyone in the Pleiades for the centre of its orbit, and consumes 180,000,000 of years in completing a single revolution."||

(f) "The sun has existed no more than 15,000,000 of years, and will emit heat for no longer than 10,000,000 years more."¶

A few years ago this eminent Scientist was telling the world that the time required for the Earth to cool from incipient incrustation to its present state, could not exceed 80,000,000 years.** If the encrusted age of the world is only 40,000,000, or half the duration once allowed, and the Sun's age is only 15,000,000, have we to understand that the Earth was at one time independent of the Sun?

Since the ages of the Sun, of the planets, and of the Earth, as they are stated in the various scientific hypotheses of the Astronomers and Physicists, are given elsewhere below, we have said enough to show the disagreement between the ministers of Modern Science. Whether we accept the *fifteen* million years of Sir William Thomson or the *thousand* millions of Mr. Huxley, for the rotational evolution of our Solar System, it will always come to this; that by accepting self-generated rotation for the heavenly bodies composed of inert Matter and yet moved by their own internal motion, for millions of years, this teaching of Science amounts to:

(a) An evident denial of that fundamental physical law, which states that "a body in motion tends constantly to inertia, *i.e.*, to continue in the same state of motion or rest, unless it is stimulated into further action by a superior active force."

* Laplace, *Système du Monde*, p. 414, ed. 1824.

† Faye, *Comptes Rendus*, t. xc. pp. 640-2.

‡ Wolf.

§ *Panorama des Mondes*, Le Couturier.

|| *World-Life*, Winchell, p. 140.

¶ Sir William Thomson's lecture on "The latent dynamical theory regarding the probable origin, total amount of heat, and duration of the Sun," 1887.

** Thomson and Tait, *Natural Philosophy*. And even on these figures Bischof disagrees with Thomson, and calculates that 350,000,000 years would be required for the Earth to cool from a temperature of 20,000° to 200° centigrade. This is, also, the opinion of Helmholtz.

(b) An original impulse, which culminates in an unalterable motion, within a resisting Ether that Newton had declared incompatible with that motion.

(c) Universal gravity, which, we are taught, always tends to a centre in rectilinear descent—alone the cause of the revolution of the whole Solar System, which is performing an eternal double gyration, each body around its axis and orbit. Another occasional version is:

(d) A magnet in the Sun; or, that the said revolution is due to a magnetic force, which acts, just as gravitation does, in a straight line, and varies inversely as the square of the distance.*

(e) The whole acting under invariable and changeless laws, which are, nevertheless, often shown variable, as during some well-known freaks of planets and other bodies, as also when the comets approach or recede from the Sun.

(f) A Motor Force always proportionate to the mass it is acting upon; but independent of the specific nature of that mass, to which it is proportionate; which amounts to saying, as Le Couturier does, that:

Without that force independent from, and of quite another nature than, the said mass, the latter, were it as huge as Saturn, or as tiny as Ceres, would always fall with the same rapidity. †

A mass, furthermore, which derives its weight from the body on which it weighs.

Thus neither Laplace's perceptions of a solar atmospheric fluid, which would extend beyond the orbits of the planets, nor Le Couturier's electricity, nor Foucault's heat, ‡ nor this, nor the other, can ever help any of the numerous hypotheses about the origin and permanency of rotation to escape from this squirrel's wheel, any more than can the theory of gravity itself. This mystery is the Procrustean bed of Physical Science. If Matter is passive, as we are now taught, the simplest movement cannot be said to be an essential property of Matter—the latter being considered simply as an inert mass. How, then, can such a complicated movement, compound and multiple, harmonious and equilibrated, lasting in the eternities for millions and millions of years, be attributed simply to its own inherent force, unless the latter is an Intelligence? A physical will is something new—a conception that the Ancients would never have entertained, indeed! For over a century all distinction between body and force has been made away with. "Force is but the property of a body in motion," say the

* Coulomb's Law. † *Musée des Sciences*, 15 August, 1857. ‡ *Panorama des Mondes*, p. 55.

Physicists; "life—the property of our animal organs—is but the result of their molecular arrangement," answer the Physiologists. As Littré teaches:

In the bosom of that aggregate which is named planet, are developed all the forces immanent in matter . . . *i.e.*, that matter possesses *in itself* and *through itself* the forces that are proper to it . . . and which are *primary*, not *secondary*. Such forces are the property of weight, the property of electricity, of terrestrial magnetism, the property of life. . . . Every planet can develop life . . . as earth, for instance, which had not always mankind on it, and now bears (*produit*) men.*

An Astronomer says:

We talk of the weight of the heavenly bodies, but since it is recognized that weight decreases in proportion to the distance from the centre, it becomes evident that, at a certain distance, that weight must be forcibly reduced to zero. Were there any *attraction* there would be equilibrium And since the modern school recognizes neither a *beneath* nor an *above* in universal space, it is not clear what should cause the earth to fall, were there even no gravitation, nor attraction.†

Methinks the Count de Maistre was right in solving the question in his own theological way. He cuts the Gordian knot by saying:—"The planets rotate because they are made to rotate and the modern physical system of the universe is a physical impossibility."‡ For did not Herschell say the same thing when he remarked that there is a Will needed to impart a circular motion, and another Will to restrain it?§ This shows and explains how a retarded planet is cunning enough to calculate its time so well as to hit off its arrival at the fixed minute. For, if Science sometimes succeeds, with great ingenuity, in explaining some of such stoppages, retrograde motions, angles outside the orbits, etc., by appearances resulting from the inequality of their progress and ours in the course of our mutual and respective orbits, we still know that there are others, and "very real and considerable deviations," according to Herschell, "which cannot be explained except by the mutual and irregular action of those planets and by the perturbing influence of the sun."

We understand, however, that there are, besides those little and accidental perturbations, continuous perturbations called "secular"—because of the extreme slowness with which the irregularity increases and affects the relations of the elliptic movement—and that these perturbations can be corrected. From Newton, who found that this world needed repairing very often, down to Reynaud, all say the same. In his *Ciel et Terre*, the latter says:

* *Revue des Deux Mondes*, July 15, 1860. † *Cosmographie*. ‡ *Soirées*. † *Discours*, 165.

The orbits described by the planets are far from immutable, and are, on the contrary, subject to a perpetual mutation in their position and form.*

Proving gravitation and the peripatetic laws to be as negligent as they are quick to repair their mistakes. The charge as it stands seems to be that:

These orbits are alternately widening and narrowing, their great axis lengthens and diminishes, or oscillates at the same time from right to left around the sun, the plane itself, in which they are situated, raising and lowering itself periodically while pivoting around itself with a kind of tremor.

To this, De Mirville, who believes in intelligent "workmen" invisibly ruling the Solar System—as we do—observes very wittily:

Voilà, certes, a voyage which has little in it of mechanical precision; at the utmost, one could compare it to a steamer, pulled to and fro and tossed on the waves, retarded or accelerated, all and each of which impediments might put off its arrival indefinitely, were there not the intelligence of a pilot and engineers to catch up the time lost, and to repair the damages.†

The law of gravity, however, seems to be becoming an obsolete law in starry heaven. At any rate those long-haired sidereal Radicals, called comets, appear to be very poor respecters of the majesty of that law, and to beard it quite impudently. Nevertheless, and though presenting in nearly every respect "phenomena not yet fully understood," comets and meteors are credited by the believers in Modern Science with obeying the same laws and consisting of the same Matter, "as the suns, stars and nebulae," and even "the earth and its inhabitants."‡

This is what one might call taking things on trust, aye, even to blind faith. But exact Science is not to be questioned, and he who rejects the hypotheses imagined by her students—gravitation, for instance—would be regarded as an ignorant fool for his pains; yet we are told by the just cited author a queer legend from the scientific annals.

The comet of 1811 had a tail 120 millions of miles in length and 25 millions of miles in diameter at the widest part, while the diameter of the nucleus was about 127,000 miles, more than ten times that of the earth.

He tells us that:

In order that bodies of this magnitude, passing near the earth, should not affect its motion or change the length of the year by even a single second, their actual substance must be inconceivably rare.

It must be so indeed, yet:

* P. 28.

† *Des Esprits*, III. 155, Deuxième Mémoire.

‡ Laing's *Modern Science and Modern Thought*.

The extreme tenuity of a comet's mass is also proved by the phenomenon of the tail, which, as the comet approaches the sun, is thrown out sometimes to a length of 90 millions of miles in a few hours. And what is remarkable, this tail is thrown out against the force of gravity by some repulsive force, probably electrical, so that it always points away from the sun [! ! !]. . . . And yet, thin as the matter of comets must be, it obeys the common Law of Gravity [! ?], and whether the comet revolves in an orbit within that of the outer planets, or shoots off into the abysses of space, and returns only after hundreds of years, its path is, at each instant, regulated by the same force as that which causes an apple to fall to the ground.*

Science is like Cæsar's wife, and must not be suspected—this is evident. But it can be respectfully criticized, nevertheless, and at all events, it may be reminded that the "apple" is a dangerous fruit. For the second time in the history of mankind, it may become the cause of the Fall—this time, of "exact" Science. A comet whose tail defies the law of gravity right in the Sun's face can hardly be credited with obeying that law.

In a series of scientific works on Astronomy and the Nebular Theory, written between 1865 and 1866, the present writer, a poor tyro in Science, has counted in a few hours, no less than thirty-nine contradictory hypotheses offered as explanations for the self-generated, primitive rotatory motion of the heavenly bodies. The writer is no Astronomer, no Mathematician, no Scientist; but she was obliged to examine these errors in defence of Occultism, in general, and what is still more important, in order to support the Occult Teachings concerning Astronomy and Cosmology. Occultists were threatened with terrible penalties for questioning scientific truths. But now they feel braver; Science is less secure in its "impregnable" position than they were led to expect, and many of its strongholds are built on very shifting sands.

Thus, even this poor and unscientific examination of it has been useful, and it has certainly been very instructive. We have learned a good many things, in fact, having especially studied with particular care those astronomical data, that would be the most likely to clash with our heterodox and "superstitious" beliefs.

Thus, for instance, we have found there, concerning gravitation, the axial and orbital motions, that synchronous movement having been once overcome, in the early stage, this was enough to originate a rotatory motion till the end of Manvantara. We have also come to know, in all the aforesaid combinations of possibilities with regard to

* *Ibid.*, p. 17.

incipient rotation, most complicated in every case, some of the causes to which it may have been due, as well as some others to which it ought and should have been due, but, in some way or other, was not. Among other things, we are informed that incipient rotation may be provoked with equal ease in a mass in igneous fusion, and in one that is characterized by glacial opacity.* That gravitation is a law which nothing can overcome, but which is, nevertheless, overcome, in and out of season, by the most ordinary celestial or terrestrial bodies—the tails of impudent comets, for instance. That we owe the universe to the holy Creative Trinity, called Inert Matter, Senseless Force and Blind Chance. Of the real essence and nature of any of these three, Science knows nothing, but this is a trifling detail. Ergo, we are told that, when a mass of cosmic or nebular Matter—whose nature is entirely unknown, and which may be in a state of fusion (Laplace), or dark and cold (Thomson), for “this intervention of heat is itself a pure hypothesis” (Faye)—decides to exhibit its mechanical energy under the form of rotation, it acts in this wise. It (the mass) either bursts into spontaneous conflagration, or it remains inert, tenebrous, and frigid, both states being equally capable of sending it, without any adequate cause, spinning through Space for millions of years. Its movements may be retrograde, or they may be direct, about a hundred various reasons being offered for both motions, in about as many hypotheses; anyhow, it joins the maze of stars, whose origin belongs to the same miraculous and spontaneous order—for:

The nebular theory does not profess to discover the ORIGIN of things, but only a stadium in material history.†

Those millions of suns, planets, and satellites, composed of inert matter, will whirl on in most impressive and majestic symmetry round the firmament, moved and guided only, notwithstanding their inertia, “by their own internal motion.”

Shall we wonder, after this, if learned Mystics, pious Roman Catholics, and even such learned Astronomers as were Chaubard and Godefroy,‡ have preferred the *Kabalah* and the ancient systems to the modern dreary and contradictory exposition of the Universe? The *Zohar* makes a distinction, at any rate, between “the Hajaschar [the

* *Heaven and Earth.*

† Winchell, *World-Life*, p. 100.

‡ *L'Univers expliqué par la Révélation*, and *Cosmogonie de la Révélation*. But see De Mirville's *Deuxième Mémoire*. The author, a terrible enemy of Occultism, was yet one who wrote great truths.

‘Light Forces’], the Hachoser [‘Reflected Lights’], and the simple *phenomenal exteriority* of their spiritual types.”*

The question of “gravity” may now be dismissed, and other hypotheses examined. That Physical Science knows nothing of “Forces” is clear. We may close the argument, however, by calling to our help one more man of Science—Professor Jaumes, Member of the Academy of Medicine at Montpellier. Says this learned man, speaking of Forces:

A cause is that which is essentially acting in the genealogy of phenomena, in every production as in every modification. I said that activity (or force) was invisible. . . . To suppose it corporeal and *residing in the properties of matter* would be a gratuitous hypothesis. . . . To reduce all the causes to God, . . . would amount to embarrassing oneself with a hypothesis hostile to many verities. But to speak of a *plurality of forces* proceeding from the Deity and possessing inherent powers of their own, is not unreasonable, . . . and I am disposed to admit phenomena produced by intermediate agents called Forces or Secondary Agents. The *distinction* of Forces is the principle of the division of Sciences; so many real and separate Forces, so many mother-Sciences. . . . No; Forces are not suppositions and abstractions, but realities, and the only acting realities whose attributes can be determined with the help of direct observation and induction.†

* See *Kabbala Denudata*, II. 67.

† “Sur la Distinction des Forces,” published in the *Mémoires de l’Académie des Sciences de Montpellier*, Vol. II. fasc. i, 1854.

SECTION V.

THE MASKS OF SCIENCE.

PHYSICS OR METAPHYSICS?

IF there is anything like progress on earth, Science will some day have to give up, *nolens volens*, such monstrous ideas as her physical, self-guiding laws, void of Soul and Spirit, and will then have to turn to the Occult Teachings. It has already done so, however altered may be the title-pages and revised editions of the Scientific Catechism. It is now over half a century since, in comparing modern with ancient thought, it was found that, however different our Philosophy may appear from that of our ancestors, it is, nevertheless, composed only of additions and subtractions taken from the old Philosophy and transmitted drop by drop through the filter of antecedents.

This fact was well known to Faraday, and to other eminent men of Science. Atoms, Ether, Evolution itself—all come to Modern Science from ancient notions, all are based on the conceptions of the archaic nations. "Conceptions" for the profane, under the shape of allegories; plain truths taught during the Initiations to the Elect, which truths have been partially divulged through Greek writers and have descended to us. This does not mean that Occultism has ever had the same views on Matter, Atoms and Ether as may be found in the exotericism of the classical Greek writers. Yet, if we may believe Mr. Tyndall, even Faraday was an Aristotelean, and was more an Agnostic than a Materialist. In his *Faraday, as a Discoverer*,* the author shows the great Physicist using "old reflections of Aristotle" which are "concisely found in some of his works." Faraday, Boscovitch, and all others, however, who see, in the Atoms and molecules, "centres of force," and in the corresponding element, Force, an Entity by itself, are far nearer the truth, perchance, than those, who, denouncing them, denounce at the same time the "old corpuscular Pythagorean theory"

* P. 123.

—one, by the way, which never passed to posterity as the great Philosopher really taught it—on the ground of its “delusion that the conceptual elements of matter can be grasped as separate and real entities.”

The chief and most fatal mistake and fallacy made by Science, in the view of the Occultists, lies in the idea of the possibility of such a thing existing in Nature as inorganic, or dead Matter. Is anything dead or inorganic which is capable of transformation or change?—Occultism asks. And is there anything under the sun which remains immutable or changeless?

For a thing to be *dead* implies that it had been at some time *living*. When, at what period of cosmogony? Occultism says that in all cases Matter is the most active, when it appears inert. A wooden or a stone block is motionless and impenetrable to all intents and purposes. Nevertheless, and *de facto*, its particles are in ceaseless eternal vibration which is so rapid that to the physical eye the body seems absolutely devoid of motion; and the spacial distance between those particles in their vibratory motion is—considered from another plane of being and perception—as great as that which separates snow flakes or drops of rain. But to Physical Science this will be an absurdity.

This fallacy is nowhere better illustrated than in the scientific work of a German *savant*, Professor Philip Spiller. In this cosmological treatise, the author attempts to prove that:

No material constituent of a body, no atom, is in itself originally endowed with force, but that every such atom is absolutely dead, and without any inherent power to act at a distance.*

This statement, however, does not prevent Spiller from enunciating an Occult doctrine and principle. He asserts the *independent substantiality of Force*, and shows it as an “incorporeal stuff” (*unkörperlicher Stoff*) or Substance. Now *Substance* is not *Matter* in Metaphysics, and for argument’s sake it may be granted that it is a wrong expression to use. But this is due to the poverty of European languages, and especially to the paucity of scientific terms. Then this “stuff” is identified and connected by Spiller with the Æther. Expressed in Occult language it might be said with more correctness that this “Force-Substance” is the ever-active phenomenal positive Ether—Prakriti; while the omnipresent all-pervading Æther is the Noumenon of the former, the substratum of all, or Âkâsha. Nevertheless, Stallo falls foul of

* *Der Weltæther als Kosmische Kraft*, p. 4.

Spiller, as he does of the Materialists. He is accused of "utter disregard of the fundamental correlation of Force and Matter," of neither of which Science knows anything certain. For this "hypostasized half-concept" is, in the view of all other Physicists, not only *imponderable*, but destitute of cohesive, chemical, thermal, electric, and magnetic forces, of all of which forces—according to Occultism—Æther is the Source and Cause.

Therefore Spiller, with all his mistakes, exhibits more intuition than does any other modern Scientist, with the exception, perhaps, of Dr. Richardson, the theorist on "Nerve-Force," or Nervous Ether, also on "Sun-Force and Earth-Force."* For Æther, in Esotericism, is the very quintessence of all possible energy, and it is certainly to this Universal Agent (composed of many agents) that are due all the manifestations of energy in the material, psychic and spiritual worlds.

What, in fact, are electricity and light? How can Science know that one is a fluid and the other a "mode of motion"? Why is no reason given why a difference should be made between them, since both are considered as force-correlations? Electricity is a fluid, we are told, immaterial and non-molecular—though Helmholtz thinks otherwise—and the proof of it is that we can bottle it up, accumulate it and store it away. Then, it must be simply Matter, and no peculiar "fluid." Nor is it only "a mode of motion," for motion could hardly be stored in a Leyden jar. As for light, it is a still more extraordinary "mode of motion"; since, "marvellous as it may appear, light [also] can *actually be stored up for use*," as was demonstrated by Grove nearly half a century ago.

Take an engraving which has been kept for some days in the dark, expose it to full sunshine—that is, insulate it for 15 minutes; lay it on sensitive paper in a dark place, and at the end of 24 hours it will have left an impression of itself on the sensitive paper, the whites coming out as blacks. . . . There seems to be no limit for the reproduction of engravings.†

What is it that remains fixed, nailed, so to say, on the paper? It is a Force certainly that fixed the thing, but what is *that thing*, the residue of which remains on the paper?

Our learned men will get out of this by some scientific technicality; but what is it that is intercepted, so as to imprison a certain quantity of it on glass, paper, or wood? Is it "Motion" or is it "Force"? Or shall we be told that what remains behind is only the effect of the

* See *Popular Science Review*, Vol. V. pp. 329-34.

† See *Correlation of Physical Forces*, p. 120.

Force or Motion? Then what is this Force? Force or Energy is a quality; but every quality must belong to a something, or a somebody. In Physics, Force is defined as "that which changes or tends to change any physical relation between bodies, whether mechanical, thermal, chemical, electrical, magnetic, etc." But it is not that Force or that Motion which remains behind on the paper, when the Force or Motion has ceased to act; and yet something, which our physical senses cannot perceive, has been left there, to become a cause in its turn and to produce effects. What is it? It is not Matter, as defined by Science—*i.e.*, Matter in any of its known states. An Alchemist would say it was a spiritual secretion—and he would be laughed at. But yet, when the Physicist said that electricity, stored up, is a fluid, or that light fixed on paper is still sunlight—that was *Science*. The newest authorities have, indeed, rejected these explanations as "exploded theories," and have now deified "Motion" as their sole idol. But, surely, they and their idol will one day share the fate of their predecessors! An experienced Occultist, one who has verified the whole series of Nidânas, of causes and effects, that finally project their last effect on to this our plane of manifestations, one who has traced Matter back to its Noumenon, holds the opinion that the explanation of the Physicist is like calling anger, or its effects—the exclamation provoked by it—a secretion or a fluid, and man, the cause of it, its *material* conductor. But, as Grove prophetically remarked, the day is fast approaching when it will be confessed that the Forces we know are but the phenomenal manifestations of Realities we know nothing about—but which were known to the Ancients, and by them worshipped.

He made one still more suggestive remark which ought to have become the motto of Science, but has not. Sir William Grove said that: "*Science should have neither desires nor prejudices. Truth should be her sole aim.*"

Meanwhile, in our days, Scientists are more self-opinionated and bigoted than even the Clergy. For they minister to, if they do not actually worship, "Force-Matter," which is their *Unknown God*. And how unknown it is, may be inferred from the many confessions of the most eminent Physicists and Biologists, with Faraday at their head. Not only, he said, could he never presume to pronounce whether Force was a property or function of Matter, but he actually did not know what was meant by the word Matter.

There was a time, he added, when he believed he knew something of

Matter. But the more he lived, and the more carefully he studied it, the more he became convinced of his utter ignorance of the nature of Matter.*

This ominous confession was made, we believe, at a Scientific Congress at Swansea. Faraday held a similar opinion, however, as stated by Tyndall:

What do we know of the atom apart from its force? You imagine a nucleus which may be called *a* and surround it by forces which may be called *m*; to my mind the *a* or nucleus vanishes and the substance consists of the powers *m*. And indeed, what notion can we form of the nucleus independent of its powers? What thought remains on which to hang the imagination of an *a* independent of the acknowledged forces?

The Occultists are often misunderstood because, for lack of better terms, they apply to the Essence of Force, *under certain aspects*, the descriptive epithet of *Substance*. Now the names for the varieties of Substance on different planes of perception and being are legion. Eastern Occultism has a special appellation for each kind; but Science—like England, in the recollection of a witty Frenchman, blessed with thirty-six religions and only one fish-sauce—has but one name for all, namely "Substance." Moreover, neither the orthodox Physicists nor their critics seem to be very certain of their premisses, and are as apt to confuse the effects as they are the causes. It is incorrect, for instance, to say, as Stallo does, that "Matter can no more be realized or conceived as mere positive spatial presence than as a concretion of forces," or that "Force is nothing without mass, and mass is nothing without force"—for one is the Noumenon and the other the phenomenon. Again; Schelling, when saying that

It is a mere delusion of the phantasy that something, we know not what, remains after we have denuded an object of all the predicates belonging to it,† could never have applied the remark to the realm of transcendental Metaphysics. It is true that pure Force is *nothing* in the world of Physics; it is All in the domain of Spirit. Says Stallo:

If we reduce the mass upon which a given force, however small, acts to its limit zero—or, mathematically expressed, until it becomes infinitely small—the consequence is that the velocity of the resulting motion is infinitely great, and that the "thing" . . . is at any given moment neither here nor there, but everywhere—that there is no real presence; it is impossible, therefore, to construct matter by a synthesis of forces.‡

This may be true in the phenomenal world, inasmuch as the illusive reflection of the One Reality of the supersensual world may appear true to the dwarfed conceptions of a Materialist. It is absolutely incorrect:

* See Buckwell's *Electric Science*.

† Schelling, *Ideen*, etc., p. 18.

‡ *Op. cit.*, p. 161.

when the argument is applied to things in what the Kabalists call the supermundane spheres. Inertia, so-called, is Force, according to Newton,* and for the student of Esoteric Sciences the greatest of the Occult Forces. A body can only conceptually, only on this plane of illusion, be considered divorced from its relations with other bodies—which, according to the physical and mechanical sciences, give rise to its attributes. In fact, it can never be so detached; death itself being unable to detach it from its relation with the Universal Forces, of which the One Force, or Life, is the synthesis: the inter-relation simply continues on another plane. But what, if Stallo is right, can Dr. James Croll mean when, in speaking “On the Transformation of Gravity,” he brings forward the views advocated by Faraday, Waterston, and others? For he says very plainly that gravity

Is a force pervading Space external to bodies, and that, on the mutual approach of the bodies, the force is not increased, as is generally supposed, but the bodies merely pass into a place where the force exists with greater intensity.†

No one will deny that a Force, whether gravity, electricity, or any other Force, which exists *outside* bodies and in open Space—be it Ether or a vacuum—must be *something*, and not a pure *nothing*, when conceived apart from a mass. Otherwise it could hardly exist in one place with a greater and in another with reduced “intensity.” G. A. Hirn declares the same in his *Théorie Mécanique de l'Univers*. He tries to demonstrate:

That the atom of the chemists is not an entity of pure convention, or simply an explicative device, but that it exists really, that its volume is unalterable, and that consequently it is *not* elastic [! !]. Force, therefore, is not in the atom; it is *in the space* which separates the atoms from each other.

The above-cited views, expressed by two men of Science of great eminence in their respective countries, show that it is not in the least *unscientific* to speak of the substantiality of the so-called Forces. Subject to some future specific name, this Force is Substance of some kind, and can be nothing else; and perhaps one day Science will be the first to réadopt the derided name of phlogiston. Whatever may be the future name given to it, to maintain that Force does not reside in the Atoms, but only in the “space between them,” may be scientific enough; nevertheless it is not true. To the mind of an Occultist it is like saying that water does not reside in the drops of which the ocean is composed, but only in the space between those drops!

* *Princ.*, Def. iii.

† *Philosophical Magazine*, Vol. II. p. 252.

The objection that there are two distinct schools of Physicists, by one of which

This force is assumed to be an independent substantial entity, which is not a property of matter nor essentially related to matter,*

is hardly likely to help the profane to any clearer understanding. It is, on the contrary, more calculated to throw the question into still greater confusion than ever. For Force is, then, neither this nor the other. By viewing it as "an independent substantial entity," the theory extends the right hand of fellowship to Occultism, while the strange contradictory idea that it is not "related to Matter otherwise than by its power to act upon it,"† leads Physical Science to the most absurd contradictory hypotheses. Whether "Force" or "Motion" (Occultism, seeing no difference between the two, never attempts to separate them), it cannot act for the adherents of the atomo-mechanical theory in one way, and for those of the rival school in another. Nor can the Atoms be, in one case, absolutely uniform in size and weight, and in another, vary in their weight (Avogadro's law). For, in the words of the same able critic:

While the absolute equality of the primordial units of mass is thus an essential part of the very foundations of the mechanical theory, the whole modern science of chemistry is based upon a principle directly subversive of it—a principle of which it has recently been said that "it holds the same place in chemistry that the law of gravitation does in astronomy."‡ This principle is known as the law of Avogadro or Ampère.§

This shows that either modern Chemistry, or modern Physics, is entirely wrong in the respective fundamental principles. For if the assumption of Atoms of different specific gravities is deemed absurd, on the basis of the atomic theory in Physics; and if Chemistry, nevertheless, on this very assumption, meets with "unfailing experimental verification," in the formation and transformation of chemical compounds; then it becomes apparent that it is the atomo-mechanical theory which

* *Concepts of Modern Physics*, xxxi., Introductory to the 2nd Edition.

† *Loc. cit.*

‡ J. P. Cooke, *The New Chemistry*, p. 13.

§ "It imports that equal volumes of all substances, when in the gaseous state, and under like conditions of pressure and temperature, contain the same number of molecules—whence it follows that the weights of the molecules are proportional to the specific gravities of the gases; that therefore, these being different, the weights of the molecule are different also; and inasmuch as the molecules of certain elementary substances are monatomic (consist of but one atom each) while the molecules of various other substances contain the same number of atoms, that the ultimate atoms of such substances are of different weights." (*Concepts of Modern Physics*, p. 34.) As shown further on in the same volume, this cardinal principle of modern theoretical chemistry is in utter and irreconcilable conflict with the first proposition of the atomo-mechanical theory—namely, the absolute equality of the primordial units of mass.

is untenable. The explanation of the latter, that "the differences of weight are only differences of density, and differences of density are differences of distance between the particles contained in a given space," is not really valid, because, before a Physicist can argue in his defence that "as in the atom there is no multiplicity of particles and no void space, hence differences of density or weight are impossible in the case of atoms," he must first know what an Atom is, in reality, and that is just what he cannot know. He must bring it under the observation of at least one of his physical senses—and that he cannot do: for the simple reason that no one has ever seen, smelt, heard, touched or tasted an Atom. The Atom belongs wholly to the domain of Metaphysics. It is an entified abstraction—at any rate for Physical Science—and has nought to do with Physics, strictly speaking, as it can never be brought to the test of retort or balance. The mechanical conception, therefore, becomes a jumble of the most conflicting theories and dilemmas, in the minds of the many Scientists who disagree on this, as on other subjects; and its evolution is beheld with the greatest bewilderment by the Eastern Occultist, who follows this scientific strife.

To conclude, on the question of gravity. How can Science presume to know anything certain of it? How can it maintain its position and its hypotheses against those of the Occultists, who see in gravity only sympathy and antipathy, or attraction and repulsion, caused by physical polarity on our terrestrial plane, and by spiritual causes outside its influence? How can they disagree with the Occultists before they agree among themselves? Indeed one hears of the Conservation of Energy, and in the same breath of the perfect hardness and inelasticity of the Atoms; of the kinetic theory of gases being identical with "potential energy," so called, and, at the same time, of the elementary units of mass being absolutely hard and inelastic! An Occultist opens a scientific work and reads as follows:

Physical atomism derives all the qualitative properties of matter from the forms of atomic motion. *The atoms themselves remain as elements utterly devoid of quality.**

And further:

Chemistry in its ultimate form must be atomic mechanics.†

And a moment after he is told that:

Gases consist of atoms which behave like solid, *perfectly elastic* spheres.‡

Finally, to crown all, Sir W. Thomson is found declaring that:

* Wundt, *Die Theorie der Materie*, p. 381.

† Nazesmann, *Thermochemie*, p. 150.

‡ Krœnig, Clausius, Maxwell, etc., *Philosophical Magazine*, Vol. XIX. p. 18.

We are forbidden by the modern theory of the conservation of energy to assume inelasticity, or anything short of perfect elasticity of the ultimate molecules whether of ultra-mundane or mundane matter.*

But what do the men of true Science say to all this? By the "men of true Science" we mean those who care too much for truth and too little for personal vanity to dogmatize on anything, as do the majority. There are several among them—perhaps more than dare openly publish their secret conclusions, for fear of the cry "Stone him to death!"—men, whose intuitions have made them span the abyss that lies between the terrestrial aspect of Matter, and the, to us, on our plane of illusion, subjective, *i.e.*, transcendently objective Substance, and have led them to proclaim the existence of the latter. Matter, to the Occultist, it must be remembered, is that totality of existences in the Kosmos, which falls within any of the planes of possible perception. We are but too well aware that the orthodox theories of sound, heat and light, are against the Occult Doctrines. But, it is not enough for the men of Science, or their defenders, to say that they do not deny dynamic power to light and heat, and to urge, as a proof, the fact that Mr. Crookes' radiometer has unsettled no views. If they would fathom the ultimate nature of these Forces, they have first to admit their *substantial* nature, however *supersensuous* that nature may be. Neither do the Occultists deny the correctness of the vibratory theory.† Only they limit its functions to our Earth—declaring its inadequacy on other planes than ours, since Masters in the Occult Sciences perceive the Causes that produce ethereal vibrations. Were all these only the fictions of the Alchemists, or dreams of the Mystics, such men as Paracelsus, Philalethes, Van Helmont, and so many others, would have to be regarded as worse than visionaries; they would become impostors and deliberate mystifiers.

The Occultists are taken to task for calling the Cause of light, heat, sound, cohesion, magnetism, etc., etc., a Substance.‡ Mr. Clerk Maxwell has stated that the pressure of strong sunlight on a square mile is about $3\frac{1}{4}$ lbs. It is, they are told, "the energy of the myriad ether

* *Philosophical Magazine*, Vol. XIV. p. 321.

† Referring to the "Aura," one of the Masters says in the *Occult World*: "How could you make yourself understood by, command in fact, those semi-intelligent Forces, whose means of communication with us are not through spoken words, but through sounds and colours in correlation between the vibrations of the two." It is this "correlation" that is unknown to Modern Science, although it has been many times explained by the Alchemists.

‡ The Substance of the Occultist, however, is to the most refined Substance of the Physicist, what Radiant Matter is to the leather of the Chemist's boots.

waves"; and when they call it a Substance impinging on that area, their explanation is proclaimed unscientific.

There is no justification for such an accusation. In no way—already more than once stated—do the Occultists dispute the explanations of Science, as affording a solution of the immediate objective agencies at work. Science only errs in believing that, because it has detected in vibratory waves the *proximate* cause of these phenomena, it has, therefore, revealed *all* that lies beyond the threshold of Sense. It merely traces the sequence of phenomena on a plane of effects, illusory projections from the region that Occultism has long since penetrated. And the latter maintains that those etheric tremors are not set up, as asserted by Science, by the vibrations of the molecules of known bodies, the Matter of our terrestrial objective consciousness, but that we must seek for the ultimate Causes of light, heat, etc., in Matter existing in supersensuous states—states, however, as fully objective to the spiritual eye of man, as a horse or a tree is to the ordinary mortal. Light and heat are the ghost or shadow of Matter in motion. Such states can be perceived by the Seer or the Adept during the hours of trance, under the Sushumnâ Ray—the first of the Seven Mystic Rays of the Sun.*

Thus, we put forward the Occult teaching which maintains the reality of a supersubstantial and supersensible essence of that Âkâsha—not Ether, which is only an aspect of the latter—the nature of which cannot be inferred from its remoter manifestations, its merely phenomenal phalanx of effects, on this terrene plane. Science, on the contrary, informs us that heat can never be regarded as Matter in any conceivable state. To cite a most impartial critic, one whose authority no one can call in question, as a reminder to Western dogmatists, that the question cannot be in any way considered as settled.

There is no fundamental difference between light and heat . . . each is merely a metamorphosis of the other. . . . Heat is light in complete repose. Light is heat in rapid motion. Directly light is combined with a body, it becomes heat; but when it is thrown off from that body it again becomes light.†

* The names of the Seven Rays—which are, Sushumnâ, Harikesha, Vishvakarman, Vishvatryarchâs, Sannaddha, Sarvâvasu and Svarâj—are all mystical, and each has its distinct application in a distinct state of consciousness, for Occult purposes. The Sushumnâ, which, as said in the Nirukta (11, 6), is only to light up the Moon, is the Ray nevertheless cherished by the initiated Yogis. The totality of the Seven Rays spread through the Solar System constitutes, so to say, the physical Upâdhi (Basis) of the Ether of Science; in which Upâdhi, light, heat, electricity, etc., the Forces of orthodox Science, correlate to produce their terrestrial effects. As psychic and spiritual effects, they emanate from, and have their origin in, the supra-solar Upâdhi, in the Æther of the Occultist—or Âkâsha.

† Leslie's *Fluid Theory of Light and Heat*.

Whether this is true or false we cannot tell, and many years, perhaps many generations, will have to elapse before we shall be able to tell.* We are also told that the two great obstacles to the fluid (?) theory of heat undoubtedly are:

(1) The production of heat by friction—excitation of molecular motion.

(2) The conversion of heat into mechanical motion.

The answer given is: There are fluids of various kinds. Electricity is called a fluid, and so was heat quite recently, but it was on the supposition that heat was some imponderable substance. This was during the supreme and autocratic reign of Matter. When Matter was dethroned, and Motion was proclaimed the sole sovereign ruler of the Universe, heat became a "mode of motion." We need not despair; it may become something else to-morrow. Like the Universe itself, Science is ever becoming, and can never say, "I am that I am." On the other hand, Occult Science has its changeless traditions from pre-historic times. It may err in particulars; it can never become guilty of a mistake in questions of Universal Law, simply because that Science, justly referred to by Philosophy as the Divine, was born on higher planes, and was brought to Earth by Beings who were wiser than man will be, even in the Seventh Race of his Seventh Round. And *that* Science maintains that Forces are not what modern learning would have them; *e.g.*, magnetism is not a "mode of motion"; and, in this particular case, at least, exact Modern Science is sure to come to grief some day. Nothing, at the first blush, can appear more ridiculous, more outrageously absurd than to say, for instance: The Hindû initiated Yogi knows really ten times more than the greatest European Physicist of the ultimate nature and constitution of light, both solar and lunar. Yet why is the Sushumnâ Ray believed to be that Ray which furnishes the Moon with its borrowed light? Why is it "the Ray cherished by the initiated Yogi"? Why is the Moon considered as the Deity of the Mind, by those Yogis? We say, because light, or rather all its Occult properties, every combination and correlation of it with other forces, mental, psychic, and spiritual, was perfectly known to the old Adepts.

Therefore, although Occult Science may be less well-informed than modern Chemistry as to the behaviour of compound elements in various cases of physical correlation, yet it is immeasurably higher

* Buckle's *History of Civilization*, Vol. III. p. 384.

in its knowledge of the ultimate Occult states of Matter, and of the true nature of Matter, than all the Physicists and Chemists of our modern day put together.

Now, if we state the truth openly and in full sincerity, namely, that the ancient Initiates had a far wider knowledge of Physics, as a Science of Nature, than is possessed by our Academies of Science, all taken together, the statement will be characterized as an impertinence and an absurdity; for Physical Sciences are considered to have been carried in our age to the apex of perfection. Hence, the twitting query: Can the Occultists meet successfully the two points, namely (*a*) the production of heat by friction—excitation of molecular motion; and (*b*) the conversion of heat into mechanical force, if they hold to the old exploded theory of heat being a substance or a fluid?

To answer the question, it must first be observed that the Occult Sciences do not regard either electricity, or any of the Forces supposed to be generated by it, as Matter in any of the states known to Physical Science; to put it more clearly, none of these Forces, so-called, is a solid, gas, or fluid. If it did not look pedantic, an Occultist would even object to electricity being called a fluid—as it is an effect and not a cause. But its Noumenon, he would say, is a Conscious Cause. The same in the cases of “Force” and the “Atom.” Let us see what an eminent Academician, Butlerof, the Chemist, had to say about these two abstractions. This great man of Science argues:

What is Force? What is it from a strictly scientific stand-point, and as warranted by the law of conservation of energy? Conceptions of Force are resumed by our conceptions of this, that, or another mode of motion. Force is thus simply the passage of one state of motion into another state of the same; of electricity into heat and light, of heat into sound or some mechanical function, and so on.* The first time electric fluid was produced by man on earth it must have been by friction; hence, as well known, it is heat that produces it by disturbing its zero state,† and electricity exists no more on earth *per se* than heat or light, or any other force. They are all correlations, as Science says. When a given quantity of heat, assisted by a steam engine, is transformed into mechanical work, we speak of steam power (or force). When a falling body strikes an obstacle in its way, thereby generating heat and sound—we call it the power of collision. When electricity decomposes water or heats a platinum wire, we speak of the force of the electric fluid. When the rays of the sun are intercepted by the thermometer bulb and its quicksilver expands, we speak of the calorific energy of the sun. In short, when one state of

* On the plane of manifestation and illusionary matter it may be so; not that it is nothing more, for it is vastly more.

† Neutral, or Laya.

a determined quantity of motion ceases, another state of motion equivalent to the preceding takes its place, and the result of such a transformation or correlation is—Force. In all cases where such a transformation, or the passage of one state of motion into another, is entirely absent, there no force is possible. Let us admit for a moment an absolutely homogeneous state of the Universe, and our conception of Force falls down to nought.

Therefore it becomes evident that the Force, which Materialism considers as the cause of the diversity that surrounds us, is in sober reality only an effect, a result of that diversity. From such point of view Force is not the cause of motion, but a result, while the cause of that Force, or forces, is not the Substance or Matter, but Motion itself. Matter thus must be laid aside, and with it the basic principle of Materialism, which has become unnecessary, as Force brought down to a state of motion can give no idea of the Substance. If Force is the result of motion, then it becomes incomprehensible why that motion should become witness to Matter and not to Spirit or a Spiritual essence. True, our reason cannot conceive of a motion minus something moving (and our reason is right); but the nature or *esse* of that something moving remains to Science entirely unknown; and the Spiritualist, in such case, has as much right to attribute it to a "Spirit," as a Materialist to creative and all-potential Matter. A Materialist has no special privileges in this instance, nor can he claim any. The law of the conservation of energy, as thus seen, is shown to be illegitimate in its pretensions and claims in this case. The "great dogma"—*no force without matter and no matter without force*—falls to the ground, and loses entirely the solemn significance with which Materialism has tried to invest it. The conception of Force still gives no idea of Matter, and compels us in no way to see in it "the origin of all origins."*

We are assured that Modern Science is not Materialistic; and our own conviction tells us that it cannot be so, when its learning is real. There is good reason for this, well defined by some Physicists and Chemists themselves. Natural Sciences cannot go hand in hand with Materialism. To be at the height of their calling, men of Science have to reject the very possibility of Materialistic doctrines having aught to do with the Atomic Theory; and we find that Lange, Butlerof, Du Bois Reymond—the last probably unconsciously—and several others, have proved it. And this is, furthermore, demonstrated by the fact, that Kanâda in India, and Leucippus and Democritus in Greece, and after them Epicurus—the earliest Atomists in Europe—while propagating their doctrine of definite proportions, believed in Gods or supersensuous Entities, at the same time. Their ideas upon Matter thus differed from those now prevalent. We must be allowed to make our statement clearer by a short synopsis of the ancient and modern

* *Scientific Letters*, Professor Butlerof.

views of Philosophy upon Atoms, and thus prove that the Atomic Theory kills Materialism.

From the standpoint of Materialism, which reduces the beginnings of all to Matter, the Universe consists, in its fulness, of Atoms and vacuity. Even leaving aside the axiom taught by the Ancients, and now absolutely demonstrated by telescope and microscope, that Nature abhors a vacuum, what is an Atom? Professor Butlerof writes:

It is, we are answered by Science, the limited division of Substance, the indivisible particle of Matter. To admit the divisibility of the atom, amounts to an admission of an infinite divisibility of Substance, which is equivalent to reducing Substance to *nihil*, or nothingness. Owing to a feeling of self-preservation alone, Materialism cannot admit infinite divisibility; otherwise, it would have to bid farewell for ever to its basic principle and thus sign its own death-warrant.*

Büchner, for instance, like a true dogmatist in Materialism declares that:

To accept infinite divisibility is absurd, and amounts to doubting the very existence of Matter.

The Atom is indivisible then, saith Materialism? Very well. Butlerof answers:

See now what a curious contradiction this fundamental principle of the Materialists is leading them into. The atom is *indivisible*, and at the same time we know it to be *elastic*. An attempt to deprive it of elasticity is unthinkable; it would amount to an absurdity. Absolutely non-elastic atoms could never exhibit a single one of those numerous phenomena that are attributed to their correlations. Without any elasticity, the atoms could not manifest their energy, and the Substance of the Materialists would remain weeded of every force. Therefore, if the Universe is composed of atoms, then those atoms must be elastic. It is here that we meet with an insuperable obstacle. For, what are the conditions requisite for the manifestation of elasticity? An elastic ball, when striking against an obstacle, is flattened and contracts, which it would be impossible for it to do, were not that ball to consist of particles, the relative position of which experiences at the time of the blow a temporary change. This may be said of elasticity in general; no elasticity is possible without change with respect to the position of the compound particles of an elastic body. This means that the elastic body is changeful and consists of particles, or, in other words, that elasticity can pertain only to those bodies that are divisible. And the atom *is* elastic.†

This is sufficient to show how absurd are the simultaneous admissions of the non-divisibility and of the elasticity of the Atom. The Atom is elastic, *ergo*, the Atom is divisible, and must consist of particles, or of sub-atoms. And these sub-atoms? They are either non-

* *Ibid.*

† *Ibid.*

elastic, and in such case they represent no dynamic importance, or, they are elastic also; and in that case, they, too, are subject to divisibility. And thus *ad infinitum*. But infinite divisibility of Atoms resolves Matter into simple centres of Force, *i.e.*, precludes the possibility of conceiving Matter as an objective substance.

This vicious circle is fatal to Materialism. It finds itself caught in its own nets, and no issue out of the dilemma is possible for it. If it says that the Atom is indivisible, then it will have Mechanics asking it the awkward question:

How does the Universe move in this case, and how do its forces correlate? A world built on absolutely non-elastic atoms, is like an engine without steam, it is doomed to eternal inertia.*

Accept the explanations and teachings of Occultism, and—the blind inertia of Physical Science being replaced by the intelligent active Powers behind the veil of Matter—motion and inertia become subservient to those Powers. It is on the doctrine of the illusive nature of Matter, and the infinite divisibility of the Atom, that the whole Science of Occultism is built. It opens limitless horizons to Substance, informed by the divine breath of its Soul in every possible state of tenuity, states still undreamed of by the most spiritually disposed Chemists and Physicists.

The above views were enunciated by an Academician, the greatest Chemist in Russia, and a recognized authority even in Europe, the late Professor Butlerof. True, he was defending the phenomena of the Spiritualists, the materializations, so-called, in which he believed, as Professors Zöllner and Hare did, as Mr. A. Russel Wallace, Mr. W. Crookes, and many another Fellow of the Royal Society, do still, whether openly or secretly. But his argument with regard to the nature of the Essence that acts behind the physical phenomena of light, heat, electricity, etc., is no less scientific and authoritative for all that, and applies admirably to the case in hand. Science has no right to deny to the Occultists their claim to a more profound knowledge of the so-called Forces, which, they say, are only the effects of causes generated by Powers, substantial, yet supersensuous, and beyond any kind of Matter with which Scientists have hitherto become acquainted. The most Science can do is to assume and to maintain the attitude of Agnosticism. Then it can say: Your case is no more proven than is ours; but we confess to knowing nothing in reality either about

* *Ibid.*

Force or Matter, or about that which lies at the bottom of the so-called correlation of Forces. Therefore, time alone can prove who is right and who is wrong. Let us wait patiently, and meanwhile show mutual courtesy, instead of scoffing at each other.

But to do this requires a boundless love of truth and the surrender of that prestige—however false—of infallibility, which the men of Science have acquired among the ignorant and flippant, though cultured, masses of the profane. The blending of the two Sciences, the Archaic and the Modern, requires first of all the abandonment of the actual Materialistic lines. It necessitates a kind of religious Mysticism and even the study of old Magic, which our Academicians will never take up. The necessity is easily explained. Just as in old Alchemical works the real meaning of the Substances and Elements mentioned is concealed under the most ridiculous metaphors, so are the physical, psychic, and spiritual natures of the Elements (say of Fire) concealed in the *Vedas*, and especially in the *Purānas*, under allegories comprehensible only to the Initiates. Had they no meaning, then indeed all these long legends and allegories about the sacredness of the three types of Fire, and the *Forty-Nine original Fires*—personified by the Sons of Daksha's Daughters and the Rishis, their Husbands, "who with the first Son of Brahmā and his three descendants constitute the Forty-nine Fires"—would be idiotic verbiage and no more. But it is not so. Every Fire has a distinct function and meaning in the worlds of the physical and the spiritual. It has, moreover, in its essential nature a corresponding relation to one of the human psychic faculties, besides its well determined chemical and physical potencies when coming in contact with terrestrially differentiated Matter. Science has no speculations to offer upon Fire *per se*; Occultism and ancient religious Science have. This is shown even in the meagre and purposely veiled phraseology of the *Purānas*, where, as in the *Vāyu Purāna*, many of the qualities of the personified Fires are explained. Thus, Pāvaka is Electric Fire, or Vaidyuta; Pavamāna, the Fire produced by Friction, or Nirmathya; and Shuchi is Solar Fire, or Saura*—all these three being the sons of Abhimānin, the Agni (Fire), eldest son of Brahmā and of Svāhā. Pāvaka, moreover, is made parent to Kavyavāhana, the Fire of the Pitris; Shuchi to Havyavāhana, the Fire of the Gods; and Pavamāna to Saharaksha, the Fire of the Asuras. Now all this shows that the writers of the *Purānas* were perfectly conversant

* Called the "drinker of waters," solar heat causing water to evaporate.

with the Forces of Science and their correlations, as well as with the various qualities of the latter in their bearing upon those psychic and physical phenomena which receive no credit and are now unknown to Physical Science. Very naturally, when an Orientalist, especially one with materialistic tendencies, reads that these are only appellations of Fire employed in the invocations and rituals, he calls this "Tântrika superstition and mystification"; and he becomes more careful to avoid errors in spelling than to give attention to the secret meaning attached to the personifications, or to seek their explanation in the physical correlations of Forces, so far as these are known. So little credit, indeed, is given to the ancient Âryans for knowledge, that even such glaring passages as that in *Vishnu Purâna*, are left without any notice. Nevertheless, what can this sentence mean?

Then ether, air, light, water, and earth, severally united with the properties of sound and the rest, existed as distinguishable according to their qualities, . . . but, possessing many and various energies and being unconnected, they could not, without combination, create living beings, not having blended with each other. Having combined therefore with one another, they assumed through their mutual association, the character of one mass of entire unity; and, from the direction of Spirit, etc.*

This means, of course, that the writers were perfectly acquainted with correlation, and were well posted about the origin of Kosmos from the "Indiscrete Principle," Avyaktânugrahena, as applied to Parabrahman and Mûlaprakriti conjointly, and not to "Avyakta, either First Cause, or Matter," as Wilson gives it. The old Initiates knew of no "miraculous creation," but taught the evolution of Atoms, on our physical plane, and their first differentiation from Laya into Protyle, as Mr. Crookes has suggestively named Matter, or primordial substance, *beyond* the zero-line—there where we place Mûlaprakriti, the Root-Principle of the World-Stuff and of all in the World.

This can be easily demonstrated. Take, for instance, the newly-published catechism of the Vishishtâdvaita Vedântins, an orthodox and exoteric system, yet fully enunciated and taught in the XIth century † at a time when European "Science" still believed in the squareness and flatness of the Earth of Cosmas Indicopleustes of the VIth century. It teaches that before Evolution began, Prakriti, Nature, was in a condition of Laya, or of absolute homogeneity, as "Matter exists in two conditions, the Sûkshma, or latent and undifferentiated, and the Sthûla, or differentiated, condition." Then it became Anu,

* I. ii. (Wilson, I. 38.)

† Its founder, Râmânujâchârya, was born A.D. 1017.

atomic. It teaches of Suddasattva—"a substance not subject to the qualities of Matter, from which it is quite different," and adds that out of that Substance the bodies of the Gods, the inhabitants of Vaikunthaloka, the Heaven of Vishnu, are formed. That every particle or atom of Prakriti contains Jiva (divine life), and is the Sharira (body) of that Jiva which it contains, while every Jiva is in its turn the Sharira of the Supreme Spirit, as "Parabrahman pervades every Jiva, as well as every particle of Matter." Dualistic and anthropomorphic as may be the philosophy of the Vishishthâdvaita, when compared with that of the Advaita—the non-dualists—it is yet supremely higher in logic and philosophy than the Cosmogony accepted either by Christianity or by its great opponent, Modern Science. The followers of one of the greatest minds that ever appeared on Earth, the Advaita Vedântins are called Atheists, because they regard all save Parabrahman, the Secondless, or the Absolute Reality as an illusion. Yet the wisest Initiates came from their ranks, as also the greatest Yogis. The *Upanishads* show that they most assuredly knew not only what is the causal substance in the effects of friction, and that their forefathers were acquainted with the conversion of heat into mechanical force, but that they were also acquainted with the Noumenon of every spiritual as well as of every cosmic phenomenon.

Truly the young Brâhman who graduates in the Universities and Colleges of India with the highest honours; who starts in life as an M.A. and an LL.B., with a tail initialed from Alpha to Omega after his name, and a contempt for his national Gods proportioned to the honours received in his education in Physical Science; truly he has but to read in the light of the latter, and with an eye to the correlation of physical Forces, certain passages in his *Purânas*, if he would learn how much more his ancestors knew than he will ever know—unless he becomes an Occultist. Let him turn to the allegory of Purûravas and the celestial Gandharva,* who furnished the former with a vessel full

* The Gandharva of the *Veda* is the deity who knows and reveals the secrets of heaven and divine truths to mortals. Cosmically, the Gandharvas are the aggregate Powers of the Solar Fire, and constitute its Forces; psychically, the Intelligence residing in the Sushumnâ, the Solar Ray, the highest of the Seven Rays; mystically, the Occult Force in the Soma, the Moon, or lunar plant, and the drink made of it; physically, the phenomenal, and spiritually, the noumenal, causes of Sound and the "Voice of Nature." Hence, they are called the 6,333 heavenly singers, and musicians of Indra's Loka, who personify, even in number, the various and manifold sounds in Nature, both above and below. In the later allegories they are said to have mystic power over women, and to be fond of them. The Esoteric meaning is plain. They are one of the forms, if not the prototypes, of Enoch's Angels, the Sons of God, who saw that the daughters of men were fair (*Gen.*, vi.), who married them, and taught the daughters of Earth the secrets of Heaven.

of heavenly fire. The primeval mode of obtaining fire by friction has its scientific explanation in the *Vedas*, and is pregnant with meaning for him who reads between the lines. The Tretâgni (sacred triad of fires) obtained by the attrition of sticks made of the wood of the Ashvattha tree, the Bo-tree of Wisdom and Knowledge, sticks "as many finger-breadths long as there are syllables in the Gâyatrî," must have a secret meaning, or else the writers of the *Vedas* and *Purânas* were no sacred writers but mystificators. That it has such a meaning, the Hindû Occultists are a proof, and they alone are able to enlighten Science, as to why and how the Fire, that was primevally One, was made three-fold (tretâ) in our present Manvantara, by the Son of Ilâ (Vâch), the Primeval Woman after the Deluge, the wife and daughter of Vaivasvata Manu. The allegory is suggestive, in whatever *Purâna* it may be read and studied.

SECTION VI.

AN ATTACK ON THE SCIENTIFIC THEORY OF FORCE BY A MAN OF SCIENCE.

THE wise words of several English men of Science have now to be quoted in our favour. Ostracized for "principle's sake" by the few, they are tacitly approved of by the many. That one of them preaches almost Occult doctrines—in some things identical with, and often amounting to a public recognition of, our "Fohat and his seven Sons," the Occult Gandharva of the *Vedas*—will be recognized by every Occultist, and even by some profane readers.

If such readers will open Volume V of the *Popular Science Review*,* they will find in it an article on "Sun-Force and Earth-Force," by Dr. B. W. Richardson, F.R.S., which reads as follows:

At this moment, when the theory of mere motion as the origin of all varieties of force is again becoming the prevailing thought, it were almost heresy to reöpen a debate, which for a period appears, by general consent, to be virtually closed; but I accept the risk, and shall state, therefore, what were the precise views of the immortal heretic, whose name I have whispered to the readers, (Samuel Metcalfe,) respecting Sun-Force. Starting with the argument on which nearly all physicists are agreed, that there exist in nature two agencies—matter which is ponderable, visible, and tangible, and a something which is imponderable, invisible, and appreciable only by its influence on matter—Metcalfe maintains that the imponderable and active agency which he calls "caloric" is *not a mere form of motion*, not a vibration amongst the particles of ponderable matter, but *itself a material substance flowing from the sun* through space,† filling the voids between the particles of solid bodies, and conveying by sensation the property called heat. The nature of caloric, or Sun-Force, is contended for by him on the following grounds:

(i) That it may be added to, and abstracted from other bodies and measured with mathematical precision.

* Pp. 329-334.

† Not only "through space," but filling every point of our Solar System, for it is the physical residue, so to say, of Ether, its "lining" (envelope) on our plane: Ether having to serve other cosmic and terrestrial purposes besides being the "agent" for transmitting light. It is the Astral Fluid or Light of the Kabalists, and the Seven Rays of Sun-Vishnu.

(ii) That it augments the volume of bodies, which are again reduced in size by its abstraction.

(iii) That it modifies the forms, properties, and conditions of all other bodies.

(iv) That *it passes by radiation through the most perfect vacuum** that can be formed, in which it produces the same effects on the thermometer as in the atmosphere.

(v) That it exerts mechanical and chemical forces which nothing can restrain, as in volcanoes, the explosion of gunpowder, and other fulminating compounds.

(vi) That it operates in a sensible manner on the nervous system, producing intense pain; and when in excess, disorganization of the tissues.

As against the vibratory theory, Metcalfe further argues that if caloric were a *mere property or quality*, it could not augment the volume of other bodies; for this purpose it must itself have volume, it must occupy space, and it must, therefore, be a material agent. If caloric were *only the effect of vibratory motion* amongst the particles of ponderable matter, *it could not radiate from hot bodies* without the simultaneous transition of the vibrating particles; but the fact stands out that heat can radiate from material ponderable substance without loss of weight of such substance. . . . With this view as to the material nature of caloric or sun-force; with the impression firmly fixed on his mind that "everything in Nature is composed of two descriptions of matter, the one essentially active and ethereal, the other passive and motionless,"† Metcalfe based the hypothesis that the sun-force, or caloric, is a self-active principle. For its own particles, he holds, it has repulsion; for the particles of all ponderable matter it has affinity; it attracts the particles of ponderable matter with forces which vary inversely as the squares of the distance. It thus acts *through* ponderable matter. If universal space were filled with caloric, sun-force, alone (without ponderable matter), caloric would also be inactive and would constitute a boundless ocean of powerless or quiescent ether, because it would then have nothing on which to act, while ponderable matter, however inactive of itself, has "certain properties by which it modifies and controls the actions of caloric, both of which are governed by immutable laws that have their origin in the mutual relations and specific properties of each."

And he lays down a law which he believes is absolute, and which is thus expressed:

"By the attraction of caloric for ponderable matter, it unites and holds together all things; by its self-repulsive energy it separates and expands all things."

This, of course, is almost the Occult explanation of cohesion. Dr. Richardson continues:

As I have already said, *the tendency of modern teaching is to rest upon the hypothesis*

* What need, then, of etheric waves for the transmission of light, heat, etc., if *this substance can pass through vacuum*.

† And how can it be otherwise? Gross ponderable matter is the body, the shell, of Matter or Substance, the female passive principle; and this Fohatic Force is the second principle, Prāna—the male and the active. On our globe this Substance is the second principle of the septenary Element—Earth; in the atmosphere, it is that of Air, which is the cosmic gross body; in the Sun it becomes the Solar Body and that of the Seven Rays; in Sidereal Space it corresponds with another principle, and so on. The whole is a homogeneous Unity alone, the parts are all differentiations.

. . . . *that heat is motion*, or, as it would, perhaps, be better stated, a specific force or form of motion.*

But this hypothesis, popular as it is, is not one that ought to be accepted to the exclusion of the simpler views of the material nature of sun-force, and of its influence in modifying the conditions of matter. *We do not yet know sufficient to be dogmatic.*†

The hypothesis of Metcalfe respecting sun-force and earth-force is not only very simple, but most fascinating. . . . Here are two elements in the universe, the one is ponderable matter The second element is the all-pervading ether, solar fire. It is *without weight, substance, form, or colour; it is matter infinitely divisible*, and its particles repel each other; its rarity is such that we have no word, except ether,‡ by which to express it. It pervades and fills space, but alone it too is quiescent—dead.§ We bring together the two elements, the inert matter, the self-repulsive ether [?] and thereupon dead [?] ponderable matter is vivified; [*Ponderable matter may be inert but never dead—this is Occult Law.*] through the particles of the ponderable substance the ether [*Ether's second principle*] penetrates, and, so penetrating, it combines with the ponderable particles and holds them in mass, holds them together in bond of union; they are dissolved in the ether.

This distribution of solid ponderable matter through ether extends, according to the theory before us, to everything that exists at this moment. The ether is all-pervading. The human body itself is charged with the ether [*Astral Light rather*]; its minute particles are held together by it; the plant is in the same condition; the most solid earth, rock, adamant, crystal, metal, all are the same. But there are differences in the capacities of different kinds of ponderable matter to receive sun-force, and upon this depends the various changing conditions of matter; the solid, the liquid, the gaseous condition. Solid bodies have attracted caloric in excess over fluid bodies, and hence their firm *cohesion*; when a portion of molten zinc is poured upon a plate of solid zinc, the molten zinc becomes as solid because there is a rush of caloric from the liquid to the solid, and in the equalization the particles, previously loose or liquid, are more closely brought together. . . . Metcalfe himself, dwelling on the above-named phenomena, and accounting for them by the unity of principle of action, which has already been explained, sums up his argument in very clear terms, in a comment on the densities of various bodies. "Hardness and softness," he says, "solidity and liquidity, are not essential conditions of bodies,

* Or the reverberation, and for Sound repercussion, *on our plane* of that which is a perpetual motion of that Substance on higher planes. Our world and senses are ceaselessly victims of Mâyâ.

+ An honest admission, this.

‡ Yet it is not Ether, but only one of the principles of Ether, the latter being itself one of the principles of Ākāsha.

‡ And so does Prāna (Jiva) pervade the whole living body of man; but alone, without having an atom to act upon, it would be quiescent—dead; *i.e.*, would be in Laya, or, as Mr. Crookes has it, "locked in Protyle." It is the action of Fohat upon a compound or even upon a simple, body that produces life. When a body dies, it passes into the same polarity as its male energy, and repels therefore the active agent, which, losing hold of the whole, fastens on the parts or molecules, this action being called chemical. Vishnu, the Preserver, transforms himself into Rudra-Shiva, the Destroyer—a correlation seemingly unknown to Science.

but depend on the relative proportions of ethereal and ponderable matter of which they are composed. The most elastic gas may be reduced to the liquid form by the abstraction of caloric, and again converted into a firm solid, the particles of which would cling together with a force proportional to their augmented affinity for caloric. On the other hand, by adding a sufficient quantity of the same principle to the densest metals, their attraction for it is diminished when they are expanded into the gaseous state, and their cohesion is destroyed."

Having thus quoted at length the heterodox views of the great "heretic"—views that to be correct, need only a little alteration of terms here and there—Dr. Richardson, undeniably an original and liberal thinker, proceeds to sum up these views, and continues:

I shall not dwell at great length on this unity of sun-force and earth-force, which this theory implies. But I may add that out of it, or out of the hypothesis of mere motion as force, and of virtue without substance, we may gather, as the nearest possible approach to the truth on this, the most complex and profound of all subjects, the following inferences:

(a) Space, inter-stellary, inter-planetary, inter-material, inter-organic, is not a vacuum, but is filled with a subtle fluid or gas, which for want of a better term* we may still call, as the ancients did, *Aith-ur*—Solar Fire—Æther. This fluid, unchangeable in composition, indestructible, invisible,† pervades everything and all [*ponderable*] matter,‡ the pebble in the running brook, the tree overhanging, the man looking on, is charged with the ether in various degrees; the pebble less than the tree, the tree less than man. All in the planet is in like manner so charged! A world is built up in ethereal fluid, and moving through a sea of it.

(b) The ether, whatever its nature is, is from the sun and from the suns:§ the suns are the generators of it, the store-houses of it, the diffusers of it.||

(c) Without the ether there could be no motion; without it particles of ponderable matter could not glide over each other; without it there could be no impulse to excite those particles into action.

(d) Ether determines the constitution of bodies. Were there no ether there could be no change of constitution in substance; water, for instance, could only

* Verily, unless the Occult terms of the Kabalists are adopted!

† "Unchangeable" only during manvantaric periods, after which it merges once more into *Nāla-prakriti*; "invisible" for ever, in its own essence, but seen in its reflected coruscations, called the Astral Light by the modern Kabalists. Yet, conscious and grand Beings, clothed in that same Essence, move in it.

‡ One has to add ponderable, to distinguish it from that Ether which is Matter still, though a substratum.

§ The Occult Sciences reverse the statement, and say that it is the Sun, and all the Suns that are from it, which emanate at the manvantaric dawn from the Central Sun.

|| Here, we decidedly beg to differ from the learned gentleman. Let us remember that this Ether—whether *Ākāsha*, or its lower principle, Ether, is meant by the term—is septenary. *Ākāsha* is *Aditi* in the allegory, and the mother of *Mārttānda*, the Sun, the *Devamātri*, Mother of the Gods. In the Solar System, the Sun is her *Buddhi* and *Vāhana*, the Vehicle, hence the sixth principle; in *Kosmos* all the Suns are the *Kāma Rūpa* of *Ākāsha* and so is ours. It is only when regarded as an individual Entity in his own Kingdom, that *Sūrya*, the Sun, is the seventh principle of the great body of Matter.

exist as a substance, compact and insoluble beyond any conception we could form of it. It could never even be ice, never fluid, never vapour, except for ether.

(e) Ether connects sun with planet, planet with planet, man with planet, man with man. Without ether there could be no communication in the Universe; no light, no heat, no phenomenon of motion.

Thus we find that Ether and elastic Atoms are, in the alleged mechanical conception of the Universe, the Spirit and Soul of Kosmos, and that the theory—put it in any way and under any disguise—always leaves a more widely opened issue for men of Science to speculate upon beyond the line of modern Materialism* than the majority avails itself of. Atoms, Ether, or both, modern speculation cannot get out of the circle of ancient thought; and the latter was soaked through with archaic Occultism. Undulatory or corpuscular theory—it is all one. It is speculation from the aspects of phenomena, not from the knowledge of the essential nature of the cause and causes. When Modern Science has explained to its audience the late achievements of Bunsen and Kirchoff; when it has shown the seven colours, the primary of a ray which is decomposed in a fixed order on a screen; and has described the respective lengths of luminous waves, what has it proved? It has justified its reputation for exactness in mathematical achievement by measuring even the length of a luminous wave—“varying from about seven hundred and sixty millionths of a millimètre at the red end of the spectrum to about three hundred and ninety-three millionths of a millimètre at the violet end.” But when the exactness of the calculation with regard to the effect on the light-wave is thus vindicated, Science is forced to admit that the Force, which is the supposed cause, is *believed* to produce “inconceivably minute undulations” in some medium—“generally regarded as identical with the ethereal medium”†—and that medium itself is still only—a “hypothetical agent”!

Auguste Comte's pessimism with respect to the possibility of knowing some day the chemical composition of the Sun, has not, as has been averred, been belied thirty years later by Kirchoff. The

* To be more correct, let us rather call it Agnosticism. Brutal but frank Materialism is more honest than Janus-faced Agnosticism in our days. Western Monism, so-called, is the Pecksniff of modern Philosophy, turning a pharisaical face to Psychology and Idealism, and its natural face of a Roman Augur, swelling his cheek with his tongue, to Materialism. Such Monists are worse than Materialists; because, while looking at the Universe and at psycho-spiritual man from the same negative stand-point, the latter put their case far less plausibly than do sceptics of Mr. Tyndall's or even of Mr. Huxley's stamp. Herbert Spencer, Bain and Lewes are more dangerous to universal truths than is Büchner.

† *Geology*, by Professor A. Winchell.

spectroscope has helped us to see that the elements, with which the modern Chemist is familiar, must in all probability be present in the Sun's outward "robes"—*not in the Sun itself*; and, taking these "robes," the solar cosmic veil, for the Sun itself, the Physicists have declared its luminosity to be due to combustion and flame, and mistaking the vital principle of that luminary for a purely material thing, have called it "chromosphere."* We have only hypotheses and theories so far, not law—by any means.

* See *Five Years of Theosophy*, pp. 245-262—Arts. "Do the Adepts deny the Nebular Theory?" and "Is the Sun merely a Cooling Mass?"—for the true Occult teaching.

SECTION VII.

LIFE, FORCE, OR GRAVITY.

THE imponderable fluids have had their day; mechanical Forces are less talked about; Science has put on a new face for this last quarter of a century; but gravitation has remained, owing its life to new combinations after the old ones had nearly killed it. It may answer scientific hypotheses very well, but the question is whether it answers as well to truth, and represents a fact in nature. Attraction by itself is not sufficient to explain even planetary motion; how can it then presume to explain the rotatory motion in the infinitudes of Space? Attraction alone will never fill all the gaps, unless a special impulse is admitted for every sidereal body, and the rotation of every planet with its satellites is shown to be due to some one cause combined with attraction. And even then, says an Astronomer,* Science would have to name that cause.

Occultism has named it for ages, and so have all the ancient Philosophers; but then all such beliefs are now proclaimed exploded superstitions. The extra-cosmic God has killed every possibility of belief in intra-cosmic intelligent Forces; yet who, or what, is the original "pusher" in that motion? Says Francœur:†

When we have learned the cause, *unique et speciale*, that pushes, we will be ready to combine it with the one which attracts.

And again:

Attraction between the celestial bodies is only repulsion: it is the sun that drives them incessantly onward; for otherwise, their motion would stop.

If ever this theory of the Sun-Force being the primal cause of all life on earth, and of all motion in heaven, is accepted, and if that other far bolder theory of Herschell, about certain organisms in the Sun, is accepted even as a provisional hypothesis, then will our teachings be vindicated, and Esoteric allegory will be shown to have anticipated

* *Philosophie Naturelle*, art. 142.

† *Astronomie*, p. 342.

Modern Science by millions of years, probably, for such are the Archaic Teachings. Mârtânda, the Sun, watches and threatens his seven brothers, the planets, without abandoning the central position to which his Mother, Aditi, relegated him. The Commentary* says:

He pursues them, turning slowly around himself, . . . following from afar the direction in which his brothers move, on the path that encircles their houses—or the orbit.

It is the sun-fluids or emanations that impart all motion, and awaken all into life, in the Solar System. It is attraction and repulsion, but not as understood by modern Physics or according to the law of gravity, but in harmony with the laws of *manvantaric motion* designed from the early Sandhyâ, the Dawn of the rebuilding and higher reformation of the System. These laws are immutable; but the motion of all the bodies—which motion is diverse and alters with every minor Kalpa—is regulated by the Movers, the Intelligences within the Cosmic Soul. Are we so very wrong in believing all this? Well, here is a great and modern man of Science who, speaking of vital electricity, uses language far more akin to Occultism than to modern Materialistic thought. We refer the sceptical reader to an article on “The Source of Heat in the Sun,” by Robert Hunt, F.R.S.,† who, speaking of the luminous envelope of the Sun and its “peculiar curdy appearance,” says:

Arago proposed that this envelope should be called the Photosphere, a name now generally adopted. By the elder Herschell, the surface of this photosphere was compared to mother-of-pearl. . . . It resembles the ocean on a tranquil summer-day, when its surface is slightly crisped by a gentle breeze. . . . Mr. Nasmyth has discovered a more remarkable condition than any that had previously been suspected, . . . objects which are peculiarly lens-shaped . . . like “willow leaves,” . . . different in size . . . not arranged in any order. . . . crossing each other in all directions . . . with an irregular motion among themselves. . . . They are seen approaching to and receding from each other, and sometimes assuming new angular positions, so that the appearance . . . has been compared to a dense shoal of fish, which, indeed, they resemble in shape. . . . The size of these objects gives a grand idea of the gigantic scale upon which physical (?) operations are carried out in the sun. They cannot be less than 1,000 miles in length, and from two to three hundred miles in breadth. The most probable conjecture which has been offered respecting those leaf or lens-like objects, is that the photosphere ‡ is an immense ocean of gaseous matter [what kind

* Commentary on Stanza IV, *ante*, pp. 126-7.

† *Popular Science Review*, Vol. IV, p. 148.

‡ And the *central mass*, too, as will be found, or rather the centre of the reflection.

of "matter"?] . . . in a state of intense [apparent] incandescence, and that they are perspective projections of the sheets of flame.

Solar "flames" seen through telescopes are reflections, says Occultism. But the reader has already seen what Occultists have to say to this.

Whatever they [those sheets of flame] may be, it is evident they are the immediate sources of solar heat and light. Here we have a surrounding envelope of photogenic matter,* which pendulates with mighty energies, and by communicating its motion to the ethereal medium in stellar space, produces heat and light in far distant worlds. We have said that those forms have been compared to certain organisms, and Herschell says, "Though it would be too daring to speak of such organizations as *partaking of life* [why not?],† yet we do not know that vital action is competent to develop heat, light, and electricity." . . . Can it be that there is truth in this fine thought? May the pulsing of vital matter in the central sun of our system be the source of all that life which crowds the earth, and without doubt overspreads the other planets, to which the sun is the mighty minister?

Occultism answers these queries in the affirmative; and Science will find this to be the case, one day.

Again, Mr. Hunt writes:

But regarding Life—Vital Force—as a power far more exalted than either light, heat, or electricity, and indeed capable of exerting a controlling power over them all [this is absolutely Occult] . . . we are certainly disposed to view with satisfaction that speculation which supposes the photosphere to be the primary seat of vital power, and to regard with a poetic pleasure that hypothesis which refers the solar energies to Life.‡

Thus, we have an important scientific corroboration for one of our fundamental dogmas—namely, that (a) the Sun is the store-house of Vital Force, which is the Noumenon of Electricity; and (b) that it is from its mysterious, never-to-be-fathomed depths, that issue those life-currents which thrill through Space, as through the organisms of every living thing on Earth. For see what another eminent Physician says, who calls this, our life-fluid, "Nervous Ether." Change a few sentences in the article, extracts from which now follow, and you have another quasi-Occult treatise on Life-Force. It is again Dr. B. W. Richardson, F.R.S., who gives his views as follows on "Nervous Ether," as he has on "Sun-Force" and "Earth-Force":

The idea attempted to be conveyed by the theory is, that between the molecules of the matter, solid or fluid, of which the nervous organisms, and, indeed, of which

* This "matter" is just like the reflection in a mirror of the flame from a "photogenic" lamp-wick.

† See *Five Years of Theosophy*, p. 258, for an answer to this speculation of Herschell.

‡ *Ibid.*, p. 156.

all the organic parts of a body are composed, there exists a refined subtle medium, vaporous or gaseous, which holds the molecules in a condition for motion upon each other, and for arrangement and re-arrangement of form; a medium by and through which all motion is conveyed; by and through which the one organ or part of the body is held in communion with the other parts, by which and through which the outer living world communicates with the living man; a medium, which, being present, enables the phenomena of life to be demonstrated, and which, being universally absent, leaves the body actually dead.

And the whole Solar System falls into Pralaya—the author might have added. But let us read further:

I use the word ether in its general sense as meaning a very light, vaporous or gaseous matter; I use it, in short, as the astronomer uses it when he speaks of the ether of Space, by which he means a subtle but material medium. . . . When I speak of a *nervous ether*, I do not convey that the ether is existent in nervous structure only: I believe truly that it is a special part of the nervous organization; but, as nerves pass into all structures that have capacities for movement and sensibilities, so the nervous ether passes into all such parts; and as the nervous ether is, according to my view, a direct product from blood, so we may look upon it as a part of the atmosphere of the blood. . . . The evidence in favour of the existence of an elastic medium pervading the nervous matter and capable of being influenced by simple pressure is all-convincing. . . . In nervous structure there is, unquestionably, a true nervous fluid, as our predecessors taught.* The precise chemical (?)† composition of this fluid is not yet well known; the physical characters of it have been little studied. Whether it moves in currents, we do not know; whether it circulates, we do not know; whether it is formed in the centres and passes from them to the nerves, or whether it is formed everywhere where blood enters nerve, we do not know. The exact uses of the fluid we do not consequently know. It occurs to my mind, however, that the veritable fluid of nervous matter is not of itself sufficient to act as the subtle medium that connects the outer with the inner universe of man and animal. I think—and this is the modification I suggest to the older theory—there must be another form of matter present during life; a matter which exists in the condition of vapour or gas, which pervades the whole nervous organism, surrounds as an enveloping atmosphere‡ each molecule of nervous structure, and is the medium of all motion, communicated to and from the nervous centres. . . . When it is once fairly presented to the mind that during life *there is in the animal body a finely diffused form of matter*, a vapour filling every part—and even stored in some parts; a matter constantly renewed by the vital chemistry; a matter as easily disposed of as the breath, after it has served its purpose—a new flood of light breaks on the intelligence.§

A new flood of light is certainly thrown on the wisdom of ancient

* Paracelsus for one, who called it *Liquor Vitæ*, and *Archæus*.

† *Alchemical* "composition," rather.

‡ "This vital force . . . radiates around man like a luminous sphere," says Paracelsus in *Paragranum*.

§ *Popular Science Review*, Vol. X. pp. 380-3.

and mediæval Occultism and its votaries. For Paracelsus wrote the same thing more than three hundred years ago, in the sixteenth century, as follows:

The whole of the Microcosm is potentially contained in the Liquor Vitæ, a nerve fluid . . . in which is contained the nature, quality, character, and essence of beings.*

The Archæus is an essence that is equally distributed in all parts of the human body. . . . The Spiritus Vitæ takes its origin from the Spiritus Mundi. Being an emanation of the latter, it contains the elements of all cosmic influences, and is therefore the cause by which the action of the stars [cosmic forces] upon the invisible body of man [his *vital Linga Sharira*] may be explained.†

Had Dr. Richardson studied all the secret works of Paracelsus, he would not have been obliged to confess so often, "we do not know," "it is not known to us," etc. Nor would he ever have written the following sentence, recanting the best portions of his independent rediscovery.

It may be urged that in this line of thought is included no more than the theory of the existence of the ether . . . supposed to pervade space. . . . It may be said that this universal ether pervades all the organism of the animal body as from without, and as part of every organization. This view would be Pantheism physically discovered, *if it were true* [!]. It fails to be true because it would destroy the individuality of every individual sense.‡

We fail to see this, and we *know* it is not so. Pantheism *may* be "physically rediscovered." It was known, seen, and felt by the whole of antiquity. Pantheism manifests itself in the vast expanse of the starry heavens, in the breathing of the seas and oceans, and in the quiver of life of the smallest blade of grass. Philosophy rejects one *finite* and *imperfect* God in the universe, the anthropomorphic deity of the Monotheist as represented by his followers. It repudiates, in its name of *Philo-theo-sophia*, the grotesque idea that Infinite, Absolute Deity should, or rather could, have any direct or indirect relation to finite illusive evolutions of Matter, and therefore it cannot imagine a universe *outside* that Deity, or the absence of that Deity from the smallest speck of animate or inanimate Substance. This does not mean that every bush, tree or stone is God or *a* God; but only that every speck of the manifested material of Kosmos belongs to, and is the Substance of, God, however low it may have fallen in its cyclic

* *De Generatione Hominis.*

† *De Viribus Membrorum.* See *Life of Paracelsus*, by Franz Hartmann, M.D., F.T.S.

‡ P. 384.

gyration through the Eternities of the Ever-Becoming; and also that every such speck individually, and Kosmos collectively, is an aspect and a reminder of that universal One Soul—which Philosophy refuses to call God, thus limiting the eternal and ever-present Root and Essence.

Why either the Ether of Space or “Nervous Ether” should “destroy the individuality of every sense,” seems incomprehensible to one acquainted with the real nature of that “Nervous Ether” under its Sanskrit, or rather Esoteric and Kabalistic name. Dr. Richardson agrees that:

If we did not individually produce the medium of communication between ourselves and the outer world, if it were produced from without and adapted to one kind of vibration alone, there were fewer senses required than we possess: for, taking two illustrations only—ether of light is not adapted for sound, and yet we hear as well and see; while air, the medium of motion of sound, is not the medium of light, and yet we see and hear.

This is not so. The opinion that Pantheism “fails to be true because it would destroy the individuality of every individual sense” shows that all the conclusions of the learned doctor are based on the modern physical theories, though he would fain reform them. But he will find it impossible to do this unless he allows the existence of spiritual senses to replace the gradual atrophy of the physical. “We see and hear,” in accordance (of course, in Dr. Richardson’s mind) with the explanations of the phenomena of sight and hearing, afforded by that same Materialistic Science which postulates that we cannot see and hear otherwise. The Occultists and Mystics know better. The Vedic Âryans were as familiar with the mysteries of sound and colour on the physical plane as are our Physiologists, but they had also mastered the secrets of both on planes inaccessible to the Materialist. They knew of a double set of senses; spiritual and material. In a man who is deprived of one or more senses, the remaining senses become the more developed; for instance, the blind man will recover his sight through the senses of touch, of hearing, etc., and he who is deaf will be able to hear through sight, by seeing *audibly* the words uttered by the lips and mouth of the speaker. But these are cases that belong to the world of Matter still. The spiritual senses, those that act on a higher plane of consciousness, are rejected *à priori* by Physiology, because the latter is ignorant of the Sacred Science. It limits the action of Ether to vibrations, and, dividing it from air—though air is

simply differentiated and compound Ether—makes it assume functions to fit in with the special theories of the Physiologist. But there is more real Science in the teachings of the *Upanishads*, when these are correctly understood, than the Orientalists, who do not understand them at all, are ready to admit. Mental as well as physical correlations of the seven senses—seven on the physical and seven on the mental planes—are clearly explained and defined in the *Vedas*, and especially in the *Upanishad* called *Anugîtâ*:

The indestructible and the destructible, such is the double manifestation of the Self. Of these the indestructible is the existent [the true essence or nature of Self, the underlying principles], the manifestation as an individual (entity) is called the destructible.*

Thus speaks the Ascetic in the *Anugîtâ*, and also:

Every one who is twice-born [initiated] knows such is the teaching of the ancients. . . . Space is the first entity. . . . Now Space [Âkâsha, or the Noumenon of Ether] has one quality . . . and that is stated to be sound only . . . [and the] qualities of sound [are] Shadja, Rishabha, together with Gândhâra, Madhyama, Panchama, and beyond these [should be understood to be] Nishâda and Dhaivata [the Hindû gamut].†

These seven notes of the scale are the principles of sound. The qualities of every Element, as of every sense, are septenary, and to judge and dogmatize on them from their manifestation on the material or objective plane—likewise sevenfold in itself—is quite arbitrary. For it is only by the SELF emancipating itself from these seven causes of illusion, that we can acquire the knowledge (Secret Wisdom) of the qualities of objects of sense on their dual plane of manifestation, the visible and the invisible. Thus it is said:

Hear me . . . state this wonderful mystery. . . . Hear also the assignment of causes exhaustively. The nose, and the tongue, and the eye, and the skin, and the ear as the fifth [organ of sense] mind and understanding,‡ these seven [senses] should be understood to be the causes of (the knowledge of) qualities. Smell, and taste, and colour, sound, and touch as the fifth, the object of the mental operation,

* Ch. xiii; Telang's translation, p. 292.

† *Ibid.*, ch. xxxvi; p. 385.

‡ The division of the physical senses into five, comes to us from a great antiquity. But while adopting the number, no modern Philosopher has asked himself how these senses could exist, *i.e.*, be perceived and used in a self-conscious way, unless there were the *sixth* sense, mental perception, to register and record them; and—this for the Metaphysicians and Occultists—the *seventh* to preserve the spiritual fruitage and remembrance thereof, as in a Book of Life which belongs to Karma. The Ancients divided the senses into five, simply because their teachers, the Initiates, stopped at *hearing*, as being that sense which developed on the physical plane, or rather, got dwarfed and limited to this plane, only at the beginning of the Fifth Race. The Fourth Race already had begun to lose the *spiritual* condition, so preëminently developed in the Third Race.

and the object of the understanding [the highest spiritual sense or perception], these seven are causes of action. He who smells, he who eats, he who sees, he who speaks, and he who hears as the fifth, he who thinks, and he who understands, these seven should be understood to be the causes of the agents. These [the agents] being possessed of qualities (sattva, rajas, tamas), enjoy their own qualities, agreeable and disagreeable.*

The modern commentators, failing to comprehend the subtle meaning of the ancient Scholiasts, take the sentence, "causes of the agents," to mean "that the powers of smelling, etc., when attributed to the Self, make him appear as an agent, as an active principle" (!), which is entirely fanciful. These "seven" are understood to be the causes of the agents, because "the objects are causes, as their enjoyment causes an impression." It means esoterically that they, these seven senses, are caused by the agents, which are the "deities," for otherwise what does, or can, the following sentence mean? "Thus," it is said, "these seven [senses] are the causes of emancipation"—*i.e.*, when these causes are made ineffectual. And, again, the sentence, "among the learned [the wise Initiates] who understand everything, the qualities *which are in the position* [in the nature, rather] *of the deities*, each in its place," etc., means simply that the "learned" understand the nature of the Noumena of the various phenomena: and that "qualities," in this instance, mean the qualities of the high Planetary or Elementary Gods or Intelligences, which rule the elements and their products, and not at all the "senses," as the modern commentator thinks. For the learned do not suppose their senses to have aught to do with them, any more than with their SELF.

Then we read in the *Bhagavadgītā* of *Krishna*, the Deity, saying:

Only some know me truly. Earth, water, fire, air, space [or *Ākāsha*, *Æther*], mind, understanding and egoism [or the perception of all the former on the illusive plane], . . . this is a lower form of my nature. Know (that there is) another (form of my) nature, and higher than this, which is animate, O you of mighty arms! and by which this universe is upheld. . . . All this is woven upon me, like numbers of pearls upon a thread.† I am the taste in the water, O son of Kunti! I am the light of the sun and moon. I am . . . sound ("*i.e.*, the occult essence which underlies all these and the other qualities of the various things mentioned"—Transl.), in space . . . the fragrant smell in the earth, refulgence in the fire . . . etc.‡

Truly, then, one should study Occult Philosophy before one begins

* *Ibid.*, ch. x: pp. 277, 278.

† *Mundakopanishad*, p. 298.

‡ *Bhagavadgītā*, ch. vii; *ibid.*, pp. 73, 74.

to seek for and verify the mysteries of Nature on its surface alone, as he alone "who knows the truth about the qualities of Nature, who understands the creation of all entities . . . is emancipated" from error. Says the Preceptor:

Accurately understanding the great (tree) of which the unperceived [Occult Nature, the root of all] is the sprout from the seed [Parabrahman], which consists of the understanding [Mahat, or the Universal Intelligent Soul] as its trunk, the branches of which are the great egoism,* in the holes of which are the sprouts, namely, the senses, of which the great [occult, or invisible] elements are the flower-bunches,† the gross elements [the gross objective matter], the smaller boughs, which are always possessed of leaves, always possessed of flowers . . . which is eternal and the seed of which is the Brahman [the Deity]; and cutting it with that excellent sword—knowledge [Secret Wisdom]—one attains immortality and casts off birth and death.‡

This is the Tree of Life, the Ashvattha tree, after the cutting of which only, Man, the slave of life and death, can be emancipated.

But the men of Science know nought, nor will they hear of the "Sword of Knowledge" used by the Adepts and Ascetics. Hence the one-sided remarks of even the most liberal among them, based on and flowing from undue importance given to the arbitrary divisions and classification of Physical Science. Occultism heeds them very little, and Nature heeds them still less. The whole range of physical phenomena proceeds from the Primary of Æther—Ākâsha, as dual-natured Ākâsha proceeds from undifferentiated Chaos, so-called, the latter being the primary aspect of Mûlaprakriti, the Root-Matter and the first abstract Idea one can form of Parabrahman. Modern Science may divide its hypothetically conceived Ether in as many ways as it likes; the real Æther of Space will remain as it is throughout. It has its seven "principles," as all the rest of Nature has, and where there was no Æther there would be *no* "sound," as it is the vibrating sounding-board in Nature in all its seven differentiations. This is the first mystery the Initiates of old have learned. Our present normal physical senses were, from our present point of view, abnormal in those days of slow and progressive downward evolution and fall into Matter. And there was a day when all that in our modern times is regarded as exceptional, so puzzling to the Physiologists now compelled to believe in them—such as thought-transference, clairvoyance, clairaudience,

* Ahankâra, I suppose, that "Egoship," or "Ahamship," which leads to every error.

† The Elements are the five Tanmâtras of earth, water, fire, air and ether, the producers of the grosser elements.

‡ *Anugiti*, ch. xx; *ibid.*, p. 313.

etc.; in short, all that is now called "wonderful and abnormal"—when all that and much more belonged to the senses and faculties common to all humanity. We are, however, cycling back and cycling forward; that is to say, that having lost in spirituality what we acquired in physical development until almost the end of the Fourth Race, we are now as gradually and imperceptibly losing in the physical all that we regain once more in the spiritual reëvolution. This process must go on, until the period which will bring the Sixth Root-Race on a line parallel with the spirituality of the Second Race, a long extinct mankind.

But this will hardly be understood at present. We must return to Dr. Richardson's hopeful, though somewhat incorrect hypothesis about "Nervous Ether." Under the misleading translation of the word as "Space," Âkâsha has just been shown in the ancient Hindû system as the "first born" of the One, having but one quality, "Sound," which is septenary. In Esoteric language this One is the Father-Deity, and Sound is synonymous with the Logos, Verbum, or Son. Whether consciously or otherwise, it must be the latter; and Dr. Richardson, while preaching an Occult doctrine, chooses the lowest form of the septenary nature of that Sound, and speculates upon it, adding:

The theory, I offer, is that the nervous ether is an *animal product*. In different classes of animals it may differ in physical quality so as to be adapted to the special wants of the animal, but essentially it plays one part in all animals, and is produced, in all, in the same way.

Herein lies the nucleus of error leading to all the resultant mistaken views. This "Nervous Ether" is the lowest principle of the Primordial Essence which is Life. It is Animal Vitality diffused in all Nature, and acting according to the conditions it finds for its activity. It is not an "animal product," but the living animal, the living flower and plant, are its products. The animal tissues only absorb it according to their more or less morbid or healthy state—as do physical materials and structures (in their primogenial state, *nota bene*)—and, from the moment of the birth of the Entity, are regulated, strengthened, and fed by it. It descends in a larger supply to vegetation in the Sushumnâ Sun-Ray which lights and feeds the Moon, and it is through her beams that it pours its light upon, and penetrates man and animal, more during their sleep and rest, than when they are in full activity. Therefore Dr. Richardson errs again in stating that:

The nervous ether is not, according to my idea of it, *in itself active, nor an excitant of animal motion in the sense of a force*; but it is essential as supplying the conditions

by which the motion is rendered possible. [It is *just the reverse*.] It is the conductor of all vibrations of heat, of light, of sound, of electrical action, of mechanical friction.* It holds the nervous system throughout in perfect tension, during states of life [true]. By exercise it is disposed of [*rather generated*] . . . and when demand for it is greater than the supply, its deficiency is indicated by nervous collapse or exhaustion.† It accumulates in the nervous centres during sleep, bringing them, if I may so speak, to their due tone, and therewith raising the muscles to awakening and renewed life.

Just so; this is quite correct and comprehensible. Therefore:

The body fully renewed by it, presents capacity for motion, fulness of form, *life*. The body bereft of it presents inertia, the configuration of shrunken death, *the evidence of having lost something physical that was in it when it lived*.

Modern Science denies the existence of a "vital principle." This extract is a clear proof of its grand mistake. But this "physical something," that we call life-fluid—the *Liquor Vitæ* of Paracelsus—has not deserted the body, as Dr. Richardson thinks. It has only changed its state from activity to passivity, and has become latent, owing to the too morbid state of the tissues, on which it has hold no longer. Once the *rigor mortis* is absolute, the *Liquor Vitæ* will reawaken into action, and will begin its work on the atoms *chemically*. Brahmâ-Vishnu, the Creator and the Preserver of Life, will have transformed himself into Shiva the Destroyer.

Lastly Dr. Richardson writes:

The nervous ether may be poisoned; it may, I mean, have diffused through it, by simple gaseous diffusion, other gases or vapours derived from without; it may derive from within products of substances swallowed and ingested, or gases of decomposition produced during disease in the body itself.‡

And the learned gentleman might have added on the same Occult principle: That the "Nervous Ether" of one person can be poisoned by the "Nervous Ether" of another person or by his "auric emanations." But see what Paracelsus said of this "Nervous Ether":

The Archæus is of a magnetic nature, and attracts or repulses other sympathetic or antipathetic forces belonging to the same plane. The less power of resistance for astral influences a person possesses, the more will he be subject to such influences. The vital force is not enclosed in man, but radiates [within and] around

* The conductor in the sense of Upâdhi—a material or physical basis; but, as the second principle of the universal Soul and Vital Force in Nature, it is intelligently guided by the fifth principle thereof.

† And too great an exuberance of it in the nervous system leads as often to disease and death. If it were the animal system which generated it, such would not be the case, surely. Hence, the latter emergency shows its independence of the system, and its connection with the Sun-Force, as Metcalfe and Hunt explain.

‡ P. 387.

him like a luminous sphere [aura] and it may be made to act at a distance. . . . It may poison the essence of life [blood] and cause diseases, or it may purify it after it has been made impure, and restore the health.*

That the two, "Archæus" and "Nervous Ether," are identical, is shown by the English Scientist, who says that *generally* the tension of it may be too high or too low; that it may be so:

Owing to local changes in the nervous matter it invests. . . . Under sharp excitation it may vibrate as if in a storm and plunge every muscle under cerebral or spinal control into uncontrolled motion—unconscious convulsions.

This is called nervous excitation, but no one, except the Occultist, knows the reason of such nervous perturbation, or explains the primary causes of it. The principle of Life may kill when too exuberant, as much as when there is too little of it. But this "principle" on the manifested plane, that is to say, our plane, is but the effect and the result of the intelligent action of the "Host," or collective Principle, the manifesting Life and Light. It is itself subordinate to, and emanates from, the ever-invisible, eternal and Absolute One Life, in a descending and reascending scale of hierarchic degrees, a true septenary ladder, with Sound, the Logos, at the upper end, and the Vidyâdharas,† the inferior Pitris, at the lower.

Of course, the Occultists are fully aware of the fact that the vitalist "fallacy," so derided by Vogt and Huxley, is, nevertheless, still coun-

* *Paragranum; Life of Paracelsus*, by Dr. F. Hartmann.

† In a recent work on Symbolism in Buddhism and Christianity—in Buddhism and Roman Catholicism, rather, many later rituals and dogmas in Northern Buddhism, in its popular exoteric form, being identical with those of the Latin Church—some curious facts are to be found. The author of this volume, with more pretensions than erudition, has indiscriminately crammed into his work ancient and modern Buddhist teachings, and has sorely confused Lamaism with Buddhism. On page 404 of this volume, called *Buddhism in Christendom, or Jesus the Essene, our pseudo-Orientalist* devotes himself to criticizing the "Seven Principles" of the "Esoteric Buddhists," and attempts to ridicule them. On page 405, the closing page, he speaks enthusiastically of the Vidyâdharas, "the seven great legions of dead men made wise." Now, these Vidyâdharas, whom some Orientalists call "demi-gods," are in fact, exoterically, a kind of Siddhas, "affluent in devotion," and, esoterically, they are identical with the seven classes of Pitris, one class of which endow man in the Third Race with Self-consciousness, by incarnating in the human shells. The "Hymn to the Sun," at the end of his queer volume of mosaic, which endows Buddhism with a Personal God (! !), is an unfortunate thrust at the very proofs so elaborately collected by the unlucky author.

Theosophists are fully aware that Mr. Rhys Davids has likewise expressed his opinion on their beliefs. He said that the theories propounded by the author of *Esoteric Buddhism* "were not Buddhism, and were not esoteric." The remark is the result of (a) the unfortunate mistake of writing "Buddhism" instead of "Budhâism," or "Buddhism," *i.e.*, of connecting the system with Gautama's religion instead of with the Secret Wisdom taught by Krishna, Shankarâchârya, and many others, as much as by Buddha; and (b) of the impossibility of Mr. Rhys Davids knowing anything of the true Esoteric Teachings. Nevertheless as he is the greatest Pâli and Buddhist scholar of the day, whatever he may say is entitled to respectful hearing. But when one who knows no more of exoteric Buddhism on Scientific and Materialistic lines, than he knows of Esoteric Philosophy, defames those whom he honours with his spite, and assumes with the Theosophists the airs of a profound scholar, one can only smile or—heartily laugh at him.

tenanced in very high scientific quarters, and, therefore, they are happy to feel that they do not stand alone. Thus, Professor de Quatrefages writes:

It is very true that we do not know *what life is*; but no more do we know *what the force is* that set the stars in motion. . . . Living beings are heavy, and therefore subject to gravitation; they are the seat of numerous and various physico-chemical phenomena which are indispensable to their existence, and which must be referred to the action of etherodynamy [electricity, heat, etc.]. But these phenomena are here manifested under the influence of another force. . . . Life is not antagonistic to the inanimate forces, but it governs and rules their action by its laws.*

* *The Human Species*, pp. 10, 11.

SECTION VIII.

THE SOLAR THEORY.

A SHORT ANALYSIS OF THE COMPOUND AND SINGLE ELEMENTS OF SCIENCE AS AGAINST THE OCCULT TEACHINGS. HOW FAR THIS THEORY, AS GENERALLY ACCEPTED, IS SCIENTIFIC.

In his reply to Dr. Gull's attack on the theory of Vitality, which is inseparably connected with the Elements of the Ancients in the Occult Philosophy, Professor Beale, the great Physiologist, has a few words as suggestive as they are beautiful:

There is a mystery in life—a mystery which has never been fathomed, and which appears greater, the more deeply the phenomena of life are studied and contemplated. In living centres—far more central than the centres seen by the highest magnifying powers, in centres of living matter, where the eye cannot penetrate, but towards which the understanding may tend—proceed changes of the nature of which the most advanced physicists and chemists fail to afford us the conception: nor is there the slightest reason to think that the nature of these changes will ever be ascertained by physical investigation, inasmuch as they are certainly of an order or nature totally distinct from that to which any other phenomena known to us can be relegated.

This "mystery," or the origin of the Life Essence, Occultism locates in the same Centre as the nucleus of *prima materia* of our Solar System, for they are one.

As says the Commentary:

The Sun is the heart of the Solar World [System] and its brain is hidden behind the [visible] Sun. Thence, sensation is radiated into every nerve-centre of the great body, and the waves of the life-essence flow into each artery and vein. . . . The planets are its limbs and pulses.

It has been stated elsewhere* that Occult philosophy denies that the Sun is a globe in combustion, but defines it simply as a world, a glow-

* *The Theosophist.*

ing sphere, the real Sun being hidden behind, and the visible Sun being only its reflection, its shell. The Nasmyth willow leaves, mistaken by Sir John Herschell for "solar inhabitants," are the reservoirs of solar vital energy; "the vital electricity that feeds the whole system; the sun *in abscondito* being thus the storehouse of our little Cosmos, self-generating its vital fluid, and ever receiving as much as it gives out," and the visible Sun only a window cut into the real solar palace and presence, which, however, shews without distortion the interior work.

Thus, during the manvantaric solar period, or life, there is a regular circulation of the vital fluid throughout our System, of which the Sun is the heart—like the circulation of the blood in the human body; the Sun contracting as rhythmically as the human heart does at every return of it. Only, instead of performing the round in a second or so, it takes the solar blood ten of its years to circulate, and a whole year to pass through its auricle and ventricle before it washes the lungs, and passes thence back to the great arteries and veins of the System.

This, Science will not deny, since Astronomy knows of the fixed cycle of eleven years when the number of solar spots increases,* the increase being due to the contraction of the Solar Heart. The Universe, our World in this case, breathes, just as man and every living creature, plant, and even mineral does upon the Earth; and as our Globe itself breathes every twenty-four hours. The dark region is not due to the "absorption exerted by the vapours issuing from the bosom of the sun, and interposed between the observer and the photosphere," as Father Secchi would have it,† nor are the spots formed "by the matter [heated gaseous matter] itself which the irruption projects upon the solar disk." The phenomenon is similar to the regular and healthy pulsation of the heart, as the life fluid passes through its hollow muscles. Could the human heart be made luminous, and the living and throbbing organ made visible, so as to have it reflected upon a screen, such as is used by lecturers on Astronomy to show the moon, for instance, then every one would see the sun-spot phenomena repeated every

* Not only does it not deny the occurrence, though attributing it to a wrong cause, as always, each theory contradicting every other (see the theories of Secchi, of Faye, and of Young), the spots depending on the superficial accumulation of vapours cooler than the photosphere (?), etc., etc., but we have men of Science who *astrologize* upon the spots. Professor Jevons attributes all the great periodical commercial crises to the influence of the sun-spots every eleventh cyclic year. (See his *Investigations into Currency and Finance*.) This is worthy of praise and encouragement surely.

† *Le Soleil*, II. 184.

second, and that they were due to contraction and the rushing of the blood.

We read in a work on Geology that it is the dream of Science that :

All the recognized chemical elements will one day be found but modifications of a single material element.*

Occult Philosophy has taught this since the existence of human speech and language, adding, however, on the principle of the immutable law of analogy, "as it is above, so it is below," another of its axioms, that there is neither Spirit nor Matter, in reality, but only numberless aspects of the One ever-hidden Is, or Sat. The homogeneous primordial Element is simple and single, *only on the terrestrial plane* of consciousness and sensation, since Matter, after all, is nothing more than the sequence of our own states of consciousness, and Spirit an idea of psychic intuition. Even on the next higher plane, that single element which is defined on our Earth by current Science, as the ultimate undecomposable constituent of some kind of Matter, would be pronounced in the world of a higher spiritual perception to be something very complex indeed. Our purest water would be found to yield, instead of its two declared simple elements of oxygen and hydrogen, many other constituents, undreamed of by our modern terrestrial Chemistry. As in the realm of Matter, so in the realm of Spirit, the shadow of that which is cognized on the plane of objectivity exists on that of pure subjectivity. The speck of the perfectly homogeneous Substance, the sarcode of the Hæckelian Moneron, is now viewed as the archebiosis of terrestrial existence (Mr. Huxley's protoplasm)†; and Bathybius Hæckelii has to be traced to its pre-terrestrial archebiosis. This is first perceived by the Astronomers at its third stage of evolution, and in the "secondary creation," so-called. But the students of Esoteric Philosophy understand well the secret meaning of the Stanza :

Brahmā . . . has essentially the *aspect of Prakriti*, both evolved and unevolved . . . Spirit, O Twice-born [Initiate], is the leading *aspect of Brahmā*. The next is a two-fold aspect [of Prakriti and Purusha] . . . both evolved and unevolved; and Time is the last!‡

Anu is one of the names of Brahmā, as distinct from Brahman,

* *World-Life*, p. 48.

† Unfortunately, as these pages are being written, the "archebiosis of terrestrial existence" has turned, under a somewhat stricter chemical analysis, into a simple precipitate of sulphate of lime—hence, from the scientific standpoint, not even an organic substance! *Sic transit gloria mundi!*

‡ *Vishnu Purāna*, Wilson, I. 16, Fitzedward Hall's rendering.

and it means "atom"; aniyâmsam aniyasâm, "the most atomic of the atomic," the "immutable and imperishable (achyuta) Purushot-tama."

Surely, then, the elements now known to us—be their number whatever it may—as they are understood and defined at present, are not, nor can they be, the *primordial* Elements. Those were formed from "the curds of the cold radiant Mother" and "the fire-seed of the hot Father," who "are one," or, to express it in the plainer language of Modern Science, those Elements had their genesis in the depths of the primordial Fire-mist, the masses of incandescent vapour of the irresolvable nebulæ; for, as Professor Newcomb shows,* resolvable nebulæ do not constitute a class of proper nebulæ. More than half of those, he thinks, which were at first mistaken for nebulæ, are what he calls "starry clusters."

The elements now known have arrived at their state of permanency in this Fourth Round and Fifth Race. They have a short period of rest before they are propelled once more on their upward spiritual evolution, when the "living fire of Orcus" will dissociate the most irresolvable, and scatter them again into the primordial One.

Meanwhile the Occultist goes further, as has been shown in the Commentaries on the Seven Stanzas. Hence he can hardly hope for any help or recognition from Science, which will reject both his "aniyâmsam aniyasâm," the absolutely spiritual Atom, and his Mânasaputras or Mind-born Men. In resolving the "single material element" into one absolute irresolvable Element, Spirit, or Root-Matter, thus placing it at once outside the reach and province of Physical Philosophy—he has, of course but little in common with the orthodox men of Science. He maintains that Spirit and Matter are two Facets of the unknowable Unity, their apparently contrasted aspects depending, (a) on the various degrees of differentiation of Matter, and (b) on the grades of consciousness attained by man himself. This is, however, Metaphysics, and has little to do with Physics—however great in its own terrestrial limitation that physical Philosophy may now be.

Nevertheless, once that Science admits, if not the actual existence, at any rate, the possibility of the existence, of a Universe with its numberless forms, conditions, and aspects built out of a "single Sub-

* *Popular Astronomy*, p. 444.

stance,"* it has to go further. Unless it also admits the possibility of One Element, or the One Life of the Occultists, it will have to hang up that "single Substance," especially if limited to only the solar nebulæ, in mid air, like the coffin of Mahomet, though minus the attractive magnet that sustained that coffin. Fortunately for the speculative Physicists, if we are unable to state with any degree of precision what the nebular theory does imply, we have, thanks to Professor Winchell, and several dissident Astronomers, been able to learn what it does not imply.

Unfortunately, this is far from clearing even the most simple of the problems that have vexed, and do still vex, the men of learning in their search after truth. We have to proceed with our enquiries, starting with the earliest hypotheses of Modern Science, if we would discover *where* and *why* it sins. Perchance it may be found that Stallo is right, after all, and that the blunders, contradictions and fallacies made by the most eminent men of learning are simply due to their abnormal attitude. They are, and want to remain Materialistic *quand même*, and yet "the general principles of the atomo-mechanical theory—the basis of modern Physics—are substantially identical with the cardinal doctrines of ontological Metaphysics." Thus, "the fundamental errors of ontology become apparent in proportion to the advance of physical science."† Science is honeycombed with metaphysical conceptions, but the Scientists will not admit the charge, and fight desperately to put atomo-mechanical masks on purely incorporeal and spiritual laws in Nature, on our plane—refusing to admit their

* In his *World-Life* (page 48), in the appended footnotes, Professor Winchell says, "It is generally admitted that at excessively high temperatures matter exists in a state of dissociation—that is, no chemical combination can exist"; and, to prove the unity of Matter, would appeal to the spectrum, which in every case of homogeneity will show a *bright* line, whereas in the case of several molecular arrangements existing—in the nebulæ say, or a star—"the spectrum should consist of two or three bright lines"! This would be no proof either way to the Physicist-Occultist, who maintains that beyond a certain limit of visible Matter, no spectrum, no telescope and no microscope are of any use. The unity of Matter, of that which is real cosmic Matter to the Alchemist, or "Adam's Earth" as the Kabalists call it, can hardly be proved or disproved, by either the French *savant* Dumas, who suggests "the composite nature" of the "elements" on "certain relations of atomic weights," or even by Mr. Crookes' "radiant matter," though his experiments may seem "to be best understood on the hypothesis of the homogeneity of the elements of matter, and the continuity of the states of matter." For all this does not go beyond *material* Matter, so to say, even in what is shown by the spectrum, that modern "eye of Shiva" of physical experiments. It is only of this Matter, that H. St. Clair Deville could say that "when bodies, deemed to be simple, combine with one another, they vanish. they are individually annihilated"; simply because he could not follow those bodies in their further transformation in the world of spiritual cosmic Matter. Verily Modern Science will never be able to dig deep enough into the cosmological formations to find the Roots of the World-Stuff or Matter, unless she works on the same lines of thought as the mediæval Alchemist did.

† *Concepts of Modern Physics*, p. vi.

substantiality even on other planes, the bare existence of which they reject *à priori*.

It is easy to show, however, how Scientists, wedded to their materialistic views, have, ever since the days of Newton, endeavoured to put false masks on fact and truth. But their task is becoming every year more difficult; and every year also, Chemistry, beyond all the other sciences, approaches nearer and nearer the realm of the Occult in Nature. It is assimilating the very truths taught by the Occult Sciences for ages, but hitherto bitterly derided. "Matter is eternal," says the Esoteric Doctrine. But the Matter the Occultists conceive of in its *laya*, or *zero* state, is not the matter of Modern Science, not even in its most rarefied gaseous state. Mr. Crookes' "radiant matter" would appear Matter of the grossest kind in the realm of the beginnings, as it becomes pure Spirit before it returns back even to its first point of differentiation. Therefore, when the Adept or Alchemist adds that, though Matter is eternal, for it is Pradhâna, yet Atoms are born at every new Manvantara, or reconstruction of the universe, it is no such contradiction as a Materialist, who believes in nothing beyond the Atom, might think. There is a difference between *manifested* and *unmanifested* Matter, between Pradhâna, the beginningless and endless cause, and Prakriti, or the manifested effect. Says the Shloka:

That which is the unevolved cause is emphatically called by the most eminent sages, Pradhâna, original base, which is subtile Prakriti, *viz.*, that which is eternal and which at once is, and is not, a mere process.*

That which in modern phraseology is referred to as Spirit and Matter, is ONE in eternity as the Perpetual Cause, and it is neither Spirit nor Matter, but IT—rendered in Sanskrit by TAD, "that"—all that is, was, or will be, all that the imagination of man is capable of conceiving. Even the exoteric Pantheism of Hindûism renders it as no monotheistic Philosophy ever did, for in superb phraseology its Cosmogony begins with the well-known words:

There was neither day nor night, neither heaven nor earth, neither darkness nor light. And there was not aught else apprehensible by the senses or by the mental faculties. There was then, however, one Brahma, essentially Prakriti [Nature] and Spirit. For the two aspects of Vishnu which are other than his supreme essential aspect are Prakriti and Spirit, O Brâhman. When these two other *aspects* of his no longer subsist, but are dissolved, *then* that *aspect* whence form and the rest, *i.e.*, *creation*, proceed *anew*, is denominated time, O twice-born.

* Book I. ch. II. p. 25. *Vishnu Purâna*, Fitzedward Hall's Translation.

It is that which is dissolved, or the illusionary *dual* aspect of **That**, the essence of which is eternally One, that we call **Eternal Matter**, or **Substance**, formless, sexless, inconceivable, even to our sixth sense or mind,* in which, therefore, we refuse to see that which Monotheists call a personal, anthropomorphic God.

How are these two propositions—that “Matter is eternal,” and that “the Atom is periodical, and not eternal”—viewed by exact Modern Science? The materialistic Physicist will criticize and laugh them to scorn. The liberal and progressive man of Science, however, the true and earnest scientific searcher after truth, such as the eminent Chemist, Mr. Crookes, will corroborate the probability of the two statements. For hardly had the echo of his lecture on the “Genesis of the Elements” died away—the lecture which, delivered by him before the Chemical Section of the British Association, at the Birmingham meeting in 1887, so startled every evolutionist who heard or read it—than there came another in March, 1888. Once more the President of the Chemical Society brought before the world of Science and the public the fruits of some new discoveries in the realm of Atoms, and these discoveries justified the Occult Teachings in every way. They are more startling even than the statements made by him in the first lecture, and well deserve the attention of every Occultist, Theosophist, and Metaphysician. This is what he says in his “Elements and *Meta-Elements*,” thus justifying Stallo’s charges and prevision, with the fearlessness of a scientific mind which loves Science for truth’s sake, regardless of any consequences to his own glory and reputation. We quote his own words:

Permit me, gentlemen, now to draw your attention for a short time to a subject which concerns the fundamental principles of chemistry, a subject which may lead us to admit the possible existence of bodies which, though neither compounds nor mixtures, are not elements in the strictest sense of the word—bodies which I venture to call “meta-elements.” To explain my meaning it is necessary for me to revert to our conception of an element. What is the criterion of an element? Where are we to draw the line between distinct existence and identity? No one doubts that oxygen, sodium, chlorine, sulphur are separate elements; and when we come to such groups as chlorine, bromine, iodine, etc., we still feel no doubt, although were degrees of “elementicity” admissible—and to that we may ultimately have to come—it might be allowed that chlorine approximates much more closely to bromine than to oxygen, sodium, or sulphur. Again, nickel and cobalt are near to each other, very near, though no one questions their claim to rank as distinct elements. Still I cannot help asking what would have been the prevalent

* *Vide* in preceding Section VII., “Life, Force, or Gravity,” quotation from *Augilia*.

opinion among chemists had the respective solutions of these bodies and their compounds presented identical colours, instead of colours which, approximately speaking, are mutually complementary. Would their distinct nature have even now been recognized? When we pass further and come to the so-called rare earths the ground is less secure under our feet. Perhaps we may admit scandium, yttrium, and others of the like sort to elemental rank; but what are we to say in the case of praseo- and neo-dymium, between which there may be said to exist no well-marked chemical difference, their chief claim to separate individuality being slight differences in basicity and crystallizing powers, though their physical distinctions, as shown by spectrum observations, are very strongly marked? Even here we may imagine the disposition of the majority of chemists would incline toward the side of leniency, so that they would admit these two bodies within the charmed circle. Whether in so doing they would be able to appeal to any broad principle is an open question. If we admit these candidates how in justice are we to exclude the series of elemental bodies or meta-elements made known to us by Krüss and Nilson? Here the spectral differences are well marked, while my own researches on didymium show also a slight difference in basicity between some at least of these doubtful bodies. In the same category must be included the numerous separate bodies into which it is probable that yttrium, erbium, samarium, and other "elements"—commonly so-called—have been and are being split up. Where then are we to draw the line? The different groupings shade off so imperceptibly the one into the other that it is impossible to erect a definite boundary between any two adjacent bodies and to say that the body on this side of the line is an element, while the one on the other side is non-elementary, or merely something which simulates or approximates to an element. Wherever an apparently reasonable line might be drawn it would no doubt be easy at once to assign most bodies to their proper side, as in all cases of classification the real difficulty comes in when the border-line is approached. Slight chemical differences, of course, are admitted, and, up to a certain point, so are well-marked physical differences. What are we to say, however, when the only chemical difference is an almost imperceptible tendency for the one body—of a couple or of a group—to precipitate before the other? Again, there are cases where the chemical differences reach the vanishing point, although well-marked physical differences still remain. Here we stumble on a new difficulty: in such obscurities what is chemical and what is physical? Are we not entitled to call a slight tendency of a nascent amorphous precipitate to fall down in advance of another a "physical difference"? And may we not call coloured reactions depending on the amount of some particular acid present and varying, according to the concentration of the solution and to the solvent employed, "chemical differences"? I do not see how we can deny elementary character to a body which differs from another by well-marked colour, or spectrum-reactions, while we accord it to another body whose only claim is a very minute difference in basic powers. Having once opened the door wide enough to admit some spectrum differences, we have to inquire how minute a difference qualifies the candidate to pass? I will give instances from my own experience of some of these doubtful candidates.

Here the great Chemist gives several cases of the very extraordinary behaviour of molecules and earths, apparently the same, but which yet, when examined very closely, were found to exhibit differences which, however minute, still show that none of them are simple bodies, and that the 60 or 70 elements accepted in chemistry can no longer cover the ground. Their name, apparently, is legion, but as the so-called "periodic theory" stands in the way of an unlimited multiplication of elements, Mr. Crookes is obliged to find some means of reconciling the new discovery with the old theory. "That theory," he says:

Has received such abundant verification that we cannot lightly accept any interpretation of phenomena which fails to be in accordance with it. But if we suppose the elements reinforced by a vast number of bodies slightly differing from each other in their properties, and forming, if I may use the expression, aggregations of nebulae where we formerly saw, or believed we saw, separate stars, the periodic arrangement can no longer be definitely grasped. No longer, that is, if we retain our usual conception of an element. Let us, then, modify this conception. For "element" read "elementary group"—such elementary groups taking the place of the old elements in the periodic scheme—and the difficulty falls away. In defining an element, let us take not an external boundary, but an internal type. Let us say, *e.g.*, the smallest ponderable quantity of yttrium is an assemblage of ultimate atoms almost infinitely more like each other than they are to the atoms of any other approximating element. It does not necessarily follow that the atoms shall all be absolutely alike among themselves. The atomic weight which we ascribed to yttrium, therefore, merely represents a mean value around which the actual weights of the individual atoms of the "element" range within certain limits. But if my conjecture is tenable, could we separate atom from atom, we should find them varying within narrow limits on each side of the mean. The very process of fractionation implies the existence of such differences in certain bodies.

Thus fact and truth have once more forced the hand of "exact" Science, and compelled it to enlarge its views and change its terms, which, masking the multitude, reduced them to one body—like the Septenary Elohim and their hosts transformed by the materialistic religionists into one Jehovah. Replace the chemical terms "molecule," "atom," "particle," etc., by the words "Hosts," "Monads," "Devas," etc., and one might think the genesis of Gods, the primeval evolution of manvantaric *intelligent* Forces, was being described. But the learned lecturer adds to his descriptive remarks something still more suggestive; whether consciously or unconsciously, who knoweth? For he says:

Until lately such bodies passed muster as elements. They had definite properties, chemical and physical; they had recognized atomic weights. If we take a

pure dilute solution of such a body, yttrium for instance, and if we add to it an excess of strong ammonia, we obtain a precipitate which appears perfectly homogeneous. But if instead we add very dilute ammonia in quantity sufficient only to precipitate one-half of the base present, we obtain no immediate precipitate. If we stir up the whole thoroughly so as to insure a uniform mixture of the solution and the ammonia, and set the vessel aside for an hour, carefully excluding dust, we may still find the liquid clear and bright, without any vestige of turbidity. After three or four hours, however, an opalescence will declare itself, and the next morning a precipitate will have appeared. Now let us ask ourselves, What can be the meaning of this phenomenon? The quantity of precipitant added was insufficient to throw down more than half the yttria present, therefore a process akin to selection has been going on for several hours. The precipitation has *evidently not been effected at random*, those molecules of the base being decomposed which happened to come in contact with a corresponding molecule of ammonia, for we have taken care that the liquids should be uniformly mixed, so that one molecule of the original salt would not be more exposed to decomposition than any other. If, further, we consider the time which elapses before the appearance of a precipitate, we *cannot avoid coming to the conclusion that the action which has been going on for the first few hours is of a selective character*. The problem is not why a precipitate is produced, but what determines or directs some atoms to fall down and others to remain in solution. Out of the multitude of atoms present, *what power is it that directs each atom to choose the proper path? We may picture to ourselves some directive force passing the atoms one by one in review, selecting one for precipitation and another for solution till all have been adjusted*.

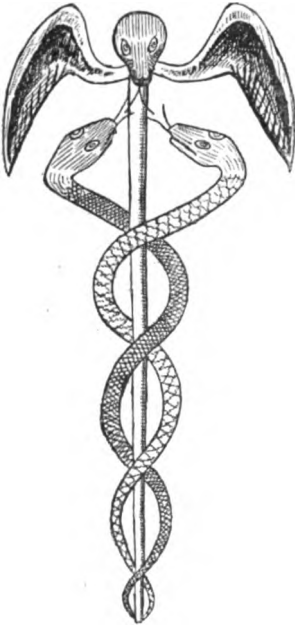
The italics in the above passage are ours. Well may a man of Science ask himself: What power is it that directs each Atom? and what is the meaning of its character being *selective*? Theists would solve the question by answering "God"; and would thereby solve nothing philosophically. Occultism answers on its own Pantheistic grounds, and teaches the student about Gods, Monads, and Atoms. The learned lecturer sees in it that which is his chief concern: the finger-posts and the traces of a path which may lead to the discovery, and the full and complete demonstration, of an homogeneous element in Nature. He remarks:

In order that such a selection can be effected there evidently must be some slight differences between which it is possible to select, and this difference almost certainly must be one of basicity, so slight as to be imperceptible by any test at present known, but susceptible of being nursed and encouraged to a point when the difference can be appreciated by ordinary tests.

Occultism, which knows of the existence and presence in Nature of the One Eternal Element, at the first differentiation of which the roots of the Tree of Life are periodically struck, needs no scientific proofs. It

says: Ancient Wisdom has solved the problem ages ago. Aye; earnest, as well as mocking reader, Science is slowly but surely approaching our domains of the Occult. It is forced by its own discoveries to adopt *nolens volens* our phraseology and symbols. Chemical Science is now compelled, by the very force of things, to accept even our illustration of the evolution of the Gods and Atoms, so suggestively and undeniably figured in the Caduceus of Mercury, the God of Wisdom, and in the allegorical language of the Archaic Sages. Says a Commentary in the Esoteric Doctrine:

The trunk of the ASVATTHA (the tree of Life and Being, the ROD of the Caduceus) grows from and descends at every Beginning (every new Manvantara) from the two dark wings of the Swan (HANSA) of Life. The two Serpents, the ever-living and its illusion (Spirit and matter) whose two heads grow from the one head between the wings, descend along the trunks interlaced in close embrace. The two tails join on earth (the manifested Universe) into one, and this is the great illusion, O Lanoo!



Every one knows what the Caduceus is, modified considerably by the Greeks. The original symbol—with the triple head of the serpent—became altered into a rod with a knob, and the two lower heads were separated, thus disfiguring somewhat the original meaning. Yet it is as good an illustration as can be for our purpose, this lava rod, entwined by two serpents. Verily the wonderful powers of the magic Caduceus were sung by all the ancient poets, with a very good reason for those who understood the secret meaning.

Now what says the learned President of the Chemical Society of Great Britain, in that same lecture, which has any reference to, or bearing upon, our above-mentioned doctrine? Very little; only this—and nothing more:

In the Birmingham address already referred to I asked my audience to picture the action of two forces on the original protyle—one being time, accompanied by a lowering of temperature; the other, swinging to and fro like a mighty pendulum, having periodic cycles of ebb and swell, rest and activity, being intimately connected

with the imponderable matter, essence, or source of energy we call electricity. Now, a simile like this effects its object if it fixes in the mind the particular fact it is intended to emphasize, but it must not be expected necessarily to run parallel with all the facts. Besides the lowering of temperature with the periodic ebb and flow of electricity, positive or negative, requisite to confer on the newly-born elements their particular atomicity, it is evident that a third factor must be taken into account. Nature does not act on a flat plane; she demands space for her cosmogenic operations, and if we introduce space as the third factor, all appears clear. Instead of a pendulum, which, though to a certain extent a good illustration, is impossible as a fact, let us seek some more satisfactory way of representing what I conceive may have taken place. Let us suppose the zigzag diagram not drawn upon a plane, but projected in space of three dimensions. What figure can we best select to meet all the conditions involved? Many of the facts can be well explained by supposing the projection in space of Professor Emerson Reynolds' zigzag curve to be a spiral. This figure is, however, inadmissible, inasmuch as the curve has to pass through a point neutral as to electricity and chemical energy twice in each cycle. We must, therefore, adopt some other figure. A figure of eight (8), or lemniscate, will foreshorten into a zigzag just as well as a spiral, and it fulfils every condition of the problem.

A lemniscate for the evolution downward, from Spirit into Matter; another form of a spiral, perhaps, in its reinvolutionary path onward, from Matter into Spirit; and the necessary gradual and final reabsorption into the *laya* state, that which Science calls, in her own way, "the point neutral as to electricity," or the *zero* point. Such are the Occult facts and statement. They may be left with the greatest security and confidence to Science, to be justified some day. Let us hear some more, however, about this primordial genetic type of the symbolical Caduceus.

Such a figure will result from three very simple simultaneous motions. First, a simple oscillation backwards and forwards (suppose east and west); secondly, a simple oscillation at right angles to the former (suppose north and south) of half the periodic time—*i.e.*, twice as fast; and thirdly, a motion at right angles to these two (suppose downwards), which, in its simplest form, would be with unvarying velocity. If we project this figure in space we find on examination that the points of the curves, where chlorine, bromine, and iodine are formed, come close under each other; so also will sulphur, selenium, and tellurium; again, phosphorus, arsenic, and antimony; and in like manner other series of analogous bodies. It may be asked whether this scheme explains how and why the elements appear in this order? Let us imagine a cyclical translation in space, each evolution witnessing the genesis of the group of elements which I previously represented as produced during one complete vibration of the pendulum. Let us suppose that one cycle has thus been completed, the centre of the unknown creative force in its mighty journey through space having scattered along its track the primitive atoms—the

seeds, if I may use the expression—which presently are to coalesce and develop into the groupings now known as lithium, beryllium, boron, carbon, nitrogen, oxygen, fluorine, sodium, magnesium, aluminium, silicon, phosphorus, sulphur, and chlorine. What is most probably the form of track now pursued? Were it strictly confined to the same plane of temperature and time, the next elementary groupings to appear would again have been those of lithium, and the original cycle would have been eternally repeated, producing again and again the same 14 elements. The conditions, however, are not quite the same. Space and electricity are as at first, but temperature has altered, and thus, instead of the atoms of lithium being supplemented with atoms in all respects analogous with themselves, the atomic groupings which come into being when the second cycle commences form, not lithium, but its lineal descendant, potassium. Suppose, therefore, the *vis generatrix* travelling to and fro in cycles along a lemniscate path, as above suggested, while simultaneously temperature is declining and time is flowing on—variations which I have endeavoured to represent by the downward sink—each coil of the lemniscate track crosses the same vertical line at lower and lower points. Projected in space, the curve shows a central line neutral as far as electricity is concerned, and neutral in chemical properties—positive electricity on the north, negative on the south. Dominant atomicities are governed by the distance east and west from the neutral centre line, monatomic elements being one remove from it, diatomic two removes, and so on. In every successive coil the same law holds good.

And, as if to prove the postulate of Occult Science and Hindû philosophy, that, at the hour of the Pralaya, the two aspects of the Unknowable Deity, “the Swan in darkness,” Prakriti and Purusha, Nature or Matter in all its forms and Spirit, no longer subsist but are absolutely dissolved, we learn the conclusive scientific opinion of the great English Chemist, who caps his proofs by saying:

We have now traced the formation of the chemical elements from knots and voids in a primitive, formless fluid. We have shown the possibility, nay, the probability that the atoms are not eternal in existence, but share with all other created beings the attributes of decay and death.

Occultism says *amen* to this, as the scientific “possibility” and “probability” are for it facts, demonstrated beyond the necessity for further proof, or for any extraneous physical evidence. Nevertheless, it repeats with as much assurance as ever: “MATTER IS ETERNAL, becoming atomic (its aspect) only periodically.” This is as sure as that the other proposition, which is almost unanimously accepted by Astronomers and Physicists—namely, that the wear and tear of the body of the Universe is steadily going on, and that it will finally lead to the extinction of the Solar Fires and the destruction of the Universe—is quite erroneous on the lines traced by men of Science. There will be, as there ever were in time and eternity, periodical dissolutions of

the manifested Universe, such as a partial Pralaya after every Day of Brahmâ; and a Universal Pralaya—the Mahâ-Pralaya—only after the lapse of every Age of Brahmâ. But the scientific causes for such dissolution, as brought forward by exact Science, have nothing to do with the true causes. However that may be, Occultism is once more justified by Science, for Mr. Crookes said:

We have shown, from arguments drawn from the chemical laboratory, that in matter which has responded to every test of an element, there are minute shades of difference which may admit of selection. We have seen that the time-honoured distinction between elements and compounds no longer keeps pace with the developments of chemical science, but must be modified to include a vast array of intermediate bodies—"meta-elements." We have shown how the objections of Clerk-Maxwell, weighty as they are, may be met; and finally, we have adduced reasons for believing that primitive matter was formed by the act of a generative force, throwing off at intervals of time atoms endowed with varying quantities of primitive forms of energy. If we may hazard any conjectures as to the source of energy embodied in a chemical atom, we may, I think, premise that the heat radiations propagated outwards through the ether from the ponderable matter of the universe, by some process of nature not yet known to us, are transformed at the confines of the universe into the primary—the essential—motions of chemical atoms, which, the instant they are formed, gravitate inwards, and thus restore to the universe the energy which otherwise would be lost to it through radiant heat. If this conjecture be well founded, Sir William Thomson's startling prediction of the final decrepitude of the universe through the dissipation of its energy falls to the ground. In this fashion, gentlemen, it seems to me that the question of the elements may be provisionally treated. Our slender knowledge of these first mysteries is extending steadily, surely, though slowly.

By a strange and curious coincidence even our Septenary doctrine seems to force the hand of Science. If we understand rightly, Chemistry speaks of fourteen groupings of primitive atoms—lithium, beryllium, boron, carbon, nitrogen, oxygen, fluorine, sodium, magnesium, aluminium, silicon, phosphorus, sulphur and chlorine; and Mr. Crookes, speaking of the "dominant atomicities," enumerates seven groups of these, for he says:

As the mighty focus of creative energy goes round, we see it in successive cycles sowing in one tract of space seeds of lithium, potassium, rubidium, and caesium; in another tract, chlorine, bromine, and iodine; in a third, sodium, copper, silver, and gold; in a fourth, sulphur, selenium, and tellurium; in a fifth, beryllium, calcium, strontium, and barium; in a sixth, magnesium, zinc, cadmium, and mercury; in a seventh, phosphorus, arsenic, antimony, and bismuth [which makes seven groupings on the one hand. And after showing] . . . in other tracts the other elements—namely, aluminium, gallium, indium, and thallium; silicon, germanium, and tin; carbon, titanium, and zirconium. . . [he adds] while a natural position

near the neutral axis is found for the three groups of elements relegated by Professor Mendeleeff to a sort of Hospital for Incurables—his eighth family.

It might be interesting to compare these seven, and the eighth family of “incurables,” with the allegories concerning the seven primitive sons of “Mother, Infinite Space,” or Aditi, and the eighth son rejected by her. Many a strange coincidence may thus be found between “those intermediate links . . . named meta-elements” or elementoids, and those whom Occult Science names their Noumenoi, the intelligent Minds and Rulers of those groupings of Monads and Atoms. But this would lead us too far. Let us be content with finding the confession of the fact that:

This deviation from absolute homogeneity should mark the constitution of these molecules or aggregations of matter which we designate elements and will perhaps be clearer if we return in imagination to the earliest dawn of our material universe, and, face to face with the Great Secret, try to consider the processes of elemental evolution.

Thus finally Science, in the person of its highest representatives, in order to make itself clearer to the profane, adopts the phraseology of such old Adepts as Roger Bacon, and returns to the “protyle.” All this is hopeful and suggestive of the “signs of the times.”

Indeed these “signs” are many and multiply daily; but none are more important than those just quoted. For now the chasm between the Occult “superstitious and unscientific” teachings and those of “exact” Science is completely bridged, and one, at least, of the few eminent Chemists of the day is in the realm of the infinite possibilities of Occultism. Every new step he will take will bring him nearer and nearer to that mysterious Centre, from which radiate the innumerable paths that lead down Spirit into Matter, and which transform the Gods and the living Monads into man and sentient Nature.

But we have something more to say on this subject in the following Section.

SECTION IX.

THE COMING FORCE.

ITS POSSIBILITIES AND IMPOSSIBILITIES.

SHALL we say that Force is "moving Matter," or "Matter in motion," and a manifestation of Energy; or that Matter and Force are the phenomenal differentiated aspects of the one primary, undifferentiated Cosmic Substance?

This query is made with regard to that Stanza which treats of FOHAT and his "Seven brothers or Sons," in other words, of the *cause* and the *effects* of Cosmic Electricity, the Brothers or Sons of Occult parlance being the seven primary forces of Electricity, whose purely phenomenal, and hence grossest, effects are alone cognizable by Physicists on the cosmic and especially on the terrestrial plane. These include, among other things, Sound, Light, Colour, etc. Now what does Physical Science tell us of these "Forces"? SOUND, it says, is a sensation produced by the impact of atmospheric molecules on the tympanum, which, by setting up delicate tremors in the auditory apparatus, thus communicate their vibrations to the brain. LIGHT is the sensation caused by the impact of inconceivably minute vibrations of ether on the retina of the eye.

So, too, say we. But these are simply the effects produced in our atmosphere and its immediate surroundings, all, in fact, which falls within the range of our terrestrial consciousness. Jupiter Pluvius sent his symbol in drops of rain, of water composed, as is believed, of two "elements," which Chemistry dissociates and recombines. The compound molecules are in its power, but their atoms still elude its grasp. Occultism sees in all these Forces and manifestations a ladder, the lower rungs of which belong to exoteric Physics, and the higher are traced to a living, intelligent, invisible Power, which is, as a rule, the unconcerned, but, exceptionally, the conscious, Cause of the sense-born phenomena designated as this or that natural law.

We say and maintain that SOUND, for one thing, is a tremendous Occult power; that it is a stupendous force, of which the electricity generated by a million of Niagaras could never counteract the smallest potentiality when directed with Occult Knowledge. Sound may be produced of such a nature that the pyramid of Cheops would be raised in the air, or that a dying man, nay, one at his last breath, would be revived and filled with new energy and vigour.

For Sound generates, or rather attracts together, the elements that produce an *ozone* the fabrication of which is beyond Chemistry, but is within the limits of Alchemy. It may even *resurrect* a man or an animal whose astral "vital body" has not been irreparably separated from the physical body by the severance of the magnetic or odic chord. *As one saved thrice from death* by that power, the writer ought to be credited with personally knowing something about it.

And if all this appears too *unscientific* to be even noticed, let Science explain to what mechanical and physical laws, known to it, are due the recently produced phenomena of the so-called Keely motor. What is it that acts as the formidable generator of invisible but tremendous force, of that power which is not only capable of driving an engine of 25 horse-power, but has even been employed to bodily lift the machinery? Yet this is done simply by drawing a fiddle-bow across a tuning fork, as has been repeatedly proven. For the Etheric Force, discovered by John Worrell Keely, of Philadelphia, well-known in America and Europe, is no hallucination. Notwithstanding his failure to utilize it—a failure prognosticated and maintained by some Occultists from the first—the phenomena exhibited by the discoverer during the last few years have been wonderful, almost miraculous, not in the sense of the *supernatural** but of the *superhuman*. Had Keely been permitted to succeed, he might have reduced a whole army to atoms in the space of a few seconds, as easily as he reduced a dead ox to that condition.

The reader is now asked to give serious attention to that newly-

* The word "supernatural" implies *above or outside* nature. Nature and Space are one. Now Space for the metaphysician exists outside any act of sensation, and is a purely subjective representation, notwithstanding the contention of Materialism, which would connect it forcibly with one or another datum of sensation. For our senses, it is fairly subjective when independent of anything within it. How then can any phenomenon, or anything else, step outside, or be performed beyond, that which has no limits? But when spatial extension becomes simply conceptual, and is thought of in an idea connected with certain actions, as by the Materialists and the Physicists, then again they have hardly a right to define and claim that which can, or cannot, be produced by Forces generated within even limited spaces, as they have not even an approximate idea of what those Forces are.

discovered potency, which the discoverer has named Inter-Etheric Force, and Forces.

In the humble opinion of the Occultists, as of his immediate friends, Mr. Keely was, and still is, at the threshold of some of the greatest secrets of the Universe; of that chiefly on which is built the whole mystery of physical Forces, and the Esoteric significance of the "Mundane Egg" symbolism. Occult Philosophy, viewing the manifested and the unmanifested Kosmos as a UNITY, symbolizes the ideal conception of the former by that "Golden Egg" with two poles in it. It is the positive pole that acts in the manifested World of Matter, while the negative loses itself in the unknowable Absoluteness of *SAT-Be-ness*.^{*} Whether this agrees with the philosophy of Mr. Keely, we cannot tell, nor does it really much matter. Nevertheless, his ideas about the ethero-material construction of the Universe look strangely like our own, being *in this respect* nearly identical. This is what we find him saying in an able pamphlet compiled by Mrs. Bloomfield-Moore, an American lady of wealth and position, whose incessant efforts in the pursuit of truth can never be too highly appreciated:

Mr. Keely, in explanation of the working of his engine, says: "In the conception of any machine heretofore constructed, the medium for inducing a neutral centre has never been found. If it had, the difficulties of perpetual-motion seekers would have ended, and this problem would have become an established and operating fact. It would only require an introductory impulse of a few pounds, on such a device, to cause it to run for centuries. In the conception of my vibratory engine, I did not seek to attain perpetual motion; but a circuit is formed that actually has a *neutral centre*, which is in a condition to be vivified by my vibratory ether, and, while under operation by said substance, is really a machine that is virtually independent of the mass (or globe),[†] and it is the wonderful velocity of the vibratory circuit which makes it so. Still, with all its perfection, it requires to be fed with the vibratory ether to make it an independent motor. . . . All structures require a foundation in strength according to the weight of the mass they have to carry, but the foundations of the universe rest on a vacuous point far more minute than a molecule; in fact, to express this truth properly, on an *inter-etheric point*, which requires an infinite mind to understand it. To look down into the depths of an etheric centre is precisely the same as it would be to search into the broad space of heaven's ether to find the end, with this difference: that one is the positive field, while the other is the negative field."

* It is not correct, when speaking of Idealism, to show it based upon "the old ontological assumptions that things or entities exist independently of each other, and otherwise than as terms of relations" (Stallo). At any rate, it is incorrect to say so of Idealism in Eastern Philosophy and its cognition, for it is just the reverse.

† Independent, in a certain sense, but not *disconnected* with it.

This is, as may easily be seen, precisely the Eastern Doctrine. Mr. Keely's inter-etheric point is the *laya*-point of the Occultists; this, however, does not require "an infinite mind to understand it," but only a specific intuition and ability to trace its hiding-place in this World of Matter. Of course, the *laya centre* cannot be produced, but an *inter-etheric vacuum* can be—as is proved by the production of bell-sounds in space. Mr. Keely speaks as an unconscious Occultist, nevertheless, when he remarks, in his theory of planetary suspension:

As regards planetary volume, we would ask in a scientific point of view, How can the immense difference of volume in the planets exist without disorganizing the harmonious action that has always characterized them? I can only answer this question properly by entering into a progressive analysis, starting on the rotating etheric centres that were fixed by the Creator* with their attractive or accumulative power. If you ask what power it is that gives to each etheric atom its inconceivable velocity of rotation (or introductory impulse), I must answer that no finite mind will ever be able to conceive what it is. The philosophy of accumulation is the only proof that such a power has been given. The area, if we can so speak, of such an atom presents to the attractive or magnetic, the elective or propulsive, all the receptive force and all the antagonistic force that characterize a planet of the largest magnitude; consequently, as the accumulation goes on, the perfect equation remains the same. When this minute centre has once been fixed, the power to rend it from its position would necessarily have to be so great as to displace the most immense planet that exists. When this atomic neutral centre is displaced, the planet must go with it. The neutral centre carries the full load of any accumulation from the start, and remains the same, for ever balanced in the eternal space.

Mr. Keely illustrates his idea of "a neutral centre" in this way:

We will imagine that, after an accumulation of a planet of any diameter, say, 20,000 miles, more or less, for the size has nothing to do with the problem, there should be a displacement of all the material, with the exception of a crust 5,000 miles thick, leaving an intervening void between this crust and a centre of the size of an ordinary billiard ball, it would then require a force as great to move this small central mass as it would to move the shell of 5,000 miles thickness. Moreover, this small central mass would carry the load of this crust for ever, keeping it equidistant; and there could be no opposing power, however great, that could bring them together. The imagination staggers in contemplating the immense load which bears upon this point of centre, where weight ceases. . . . This is what we understand by a neutral centre.

And this is what Occultists understand by a *laya centre*.

The above is pronounced to be "unscientific" by many. But so is everything that is not sanctioned and kept on the strictly orthodox lines of Physical Science. Unless the explanation given by the in-

* "By Fohat, more likely," would be an Occultist's reply.

ventor himself is accepted—and his explanations, being quite *orthodox* from the Spiritual and the Occult standpoints, if not from that of materialistic speculative Science, called *exact*, are therefore ours in this particular—what can Science answer to facts already seen, which it is no longer possible for anyone to deny? Occult Philosophy divulges few of its most important vital mysteries. It drops them like precious pearls, one by one, far and wide apart, and even this only when forced to do so by the evolutionary tidal wave that carries on Humanity slowly, silently, but steadily, toward the dawn of the Sixth Race mankind. For once out of the safe custody of their legitimate heirs and keepers, those mysteries cease to be Occult: they fall into the public domain, and have to run the risk of becoming curses more often than blessings in the hands of the selfish—of the Cains of the human race. Nevertheless, whenever such individuals as the discoverer of Etheric Force are born, men with peculiar psychic and mental capacities,* they are generally and more frequently helped, than allowed to go unassisted, groping on their way; if left to their own resources, they very soon fall victims to martyrdom or become the prey of unscrupulous speculators. But they are helped only on the condition that they should not become, whether consciously or unconsciously, an additional peril to their age: *a danger to the poor*, now offered in daily holocaust by the less wealthy to the very wealthy.† This necessitates a short digression and an explanation.

Some twelve years back, during the Philadelphia Centennial Exhibition, the writer, in answering the earnest queries of a Theosophist, one of the earliest admirers of Mr. Keely, repeated to him what she had heard in quarters, information from which she could never doubt.

It had been stated that the inventor of the "Self-Motor" was what is called, in the jargon of the Kabalists, a "*natural-born* magician." That he was and would remain unconscious of the full range of his powers, and would work out merely those which he had found out and ascertained in his own nature—*firstly*, because, attributing them to a

* The reason for such psychic capacities is given farther on.

† The above was written in 1886, at a time when hopes of success for the "Keely Motor" were at their highest. Every word then said by the writer proved true, and now only a few remarks are added with regard to the failure of Mr. Keely's expectations, so far, a failure now admitted by the discoverer himself. Though, however, the word *failure* is here used, the reader should understand it in a relative sense, for, as Mrs. Bloomfield-Moore explains: "What Mr. Keely does admit is that, baffled in applying vibratory force to mechanics, upon his first and second lines of experimental research, he was obliged either to confess a *commercial* failure, or to try a third departure from his base or principle, seeking success through another channel." And this "channel" is on the *physical* plane.

wrong source, he could never give them full sway; and *secondly*, because it was beyond his power to pass to others that which was *a capacity inherent in his own special nature*. Hence, the whole secret could not be made over permanently to anyone, for practical purposes or use.*

Individuals born with such a capacity are not very rare. That they are not heard of more frequently is due to the fact that they live and die, in almost every case, in utter ignorance that they are possessed of abnormal powers. Mr. Keely possesses powers which are called abnormal, just because they happen to be as little known, in our day, as was the circulation of the blood before Harvey's time. Blood existed, and it behaved as it does at present in the first man born from woman; and so exists and has existed in man that *principle* which can control and guide etheric vibratory Force. At any rate, it exists in all those mortals whose *Inner Selves* are *primordially connected, by reason of their direct descent, with that group of Dhyân-Chohans* who are called "the first-born of Æther." Mankind, psychically considered, is divided into various groups, each group being connected with one of the Dhyânic Groups that first formed *psychic* man (see paragraphs 1, 2, 3, 4, 5 in the Commentary to Stanza VII.). Mr. Keely—being greatly favoured in this respect, and besides his psychic temperament, being, moreover, intellectually a genius in mechanics—may achieve most wonderful results. He has achieved some already—more than any mortal man, *not initiated into the final Mysteries*, has achieved in this age up to the present day. What he has done is—as his friends justly say of him—certainly quite sufficient "to demolish with the hammer of Science the idols of Science"—the idols of matter with the feet of clay. Nor would the writer for a moment think of contradicting Mrs. Bloomfield-Moore, when, in her paper on "Psychic Force and Etheric Force," she states that Mr. Keely, as a Philosopher:

Is great enough in soul, wise enough in mind, and sublime enough in courage to overcome all difficulties, and to stand at last before the world as the greatest discoverer and inventor in the world.

And again she writes:

Should Keely do no more than lead scientists from the dreary realms where they are groping into the open field of elemental force, where gravity and cohesion are disturbed in their haunts and diverted to use; where, from unity of origin, emanates

* We learn that these remarks are not applicable to Mr. Keely's latest discovery; time alone can show the exact limit of his achievements.

infinite energy in diversified forms, he will achieve immortal fame. Should he demonstrate, to the destruction of materialism, that the universe is animated by a mysterious principle to which matter, however perfectly organized, is absolutely subservient, he will be a greater spiritual benefactor to our race than the modern world has yet found in any man. Should he be able to substitute, in the treatment of disease, the finer forces of nature for the grossly material agencies which have sent more human beings to their graves than war, pestilence and famine combined, he will merit and receive the gratitude of mankind. All this and more will he do, if he and those who have watched his progress, day by day for years, are not too sanguine in their expectations.

The same lady, in her pamphlet, *Keely's Secrets*,* brings forward the following passage from an article, written in the *Theosophist* a few years ago, by the writer of the present volume:

The author of No. 5 of the pamphlets issued by the Theosophical Publication Society, *What is Matter and What is Force*, says therein: "The men of science have just found out 'a fourth state of matter,' whereas the Occultists have penetrated years ago beyond the sixth, and therefore do not infer, but know of, the existence of the seventh, the last." This knowledge comprises one of the secrets of Keely's so-called "compound secret." It is already known to many that his secret includes "the augmentation of energy," the insulation of the ether, and the adaptation of dynaspheric force to machinery.

It is just because Keely's discovery would lead to a knowledge of one of the most Occult secrets, a secret which can never be allowed to fall into the hands of the masses, that his failure to push his discoveries to their logical end seems certain to Occultists. But of this more presently. Even in its limitations this discovery may prove of the greatest benefit. For:

Step by step, with a patient perseverance which some day the world will honour, this man of genius has made his researches, overcoming the colossal difficulties which again and again raised up in his path what seemed to be (to all but himself) insurmountable barriers to further progress: but never has the world's index finger so pointed to an hour when all is making ready for the advent of the new form of force that mankind is waiting for. Nature, always reluctant to yield her secrets, is listening to the demands made upon her by her master, necessity. The coal mines of the world cannot long afford the increasing drain made upon them. Steam has reached its utmost limits of power, and does not fulfil the requirements of the age. It knows that its days are numbered. Electricity holds back, with bated breath, dependent upon the approach of her sister colleague. Air ships are riding at anchor, as it were, waiting for the force which is to make aërial navigation something more than a dream. As easily as men communicate with their offices from their homes by means of the telephone, so will the inhabitants of separate continents talk across the ocean. Imagination is palsied when seeking to foresee the

* *Theosophical Siftings*, No. 9.

grand results of this marvellous discovery, when once it is applied to art and mechanics. In taking the throne which it will force steam to abdicate, dynaspheric force will rule the world with a power so mighty in the interests of civilization, that no finite mind can conjecture the results. Laurence Oliphant, in his preface to *Scientific Religion*, says: "A new moral future is dawning upon the human race—one, certainly, of which it stands much in need." In no way could this new moral future be so widely, so universally, commenced as by the utilizing of dynaspheric force to beneficial purposes in life.

The Occultists are ready to admit all this with the eloquent writer. Molecular vibration is, undeniably, "Keely's legitimate field of research," and the discoveries made by him will prove wonderful—yet *only in his hands and through himself*. The world so far will get but that with which it can be safely entrusted. The truth of this assertion has, perhaps, not yet quite dawned upon the discoverer himself, since he writes that he is absolutely certain that he will accomplish all that he has promised, and that he will then give it out to the world; but it must dawn upon him, and at no very far distant date. And what he says in reference to his work is a good proof of it:

In considering the operation of my engine, the visitor, in order to have even an approximate conception of its *modus operandi*, must discard *all thought of engines that are operated upon the principle of pressure and exhaustion, by the expansion of steam or other analogous gas which impinges upon an abutment, such as the piston of a steam-engine*. My engine has neither piston nor eccentrics, nor is there one grain of pressure exerted in the engine, whatever may be the size or capacity of it. My system, in every part and detail, both in the developing of my power and in every branch of its utilization, *is based and founded on sympathetic vibration*. In no other way would it be possible to awaken or develop my force, and equally impossible would it be to operate my engine upon any other principle. . . . This, however, is the true system; and henceforth all my operations will be conducted in this manner—that is to say, my power will be generated, my engines run, my cannon operated, *through a wire*. It has been only after years of incessant labour, and the making of almost innumerable experiments, involving not only the construction of a great many most peculiar mechanical structures, and the closest investigation and study of the phenomenal properties of the substance "ether," *per se*, produced, that I have been able to dispense with complicated mechanism, and to obtain, as I claim, *mastery over the subtle and strange force with which I am dealing*.

The passages underlined by us, are those which bear directly on the Occult side of the application of the vibratory Force, that which Mr. Keely calls "sympathetic vibration." The "wire" is already a step below, or downward from the pure Etheric plane into the Terrestrial. The discoverer has produced marvels—the word "miracle" is not too

strong—when acting through the inter-etheric Force alone, the fifth and sixth principles of Âkâsha. From a generator six feet long, he has come down to one “no larger than an old-fashioned silver watch”; and this by itself is a miracle of *mechanical*, but not of spiritual, genius. As was well said by his great patroness and defender, Mrs. Bloomfield-Moore:

The two forms of force which he has been experimenting with, and the phenomena attending them, are the very antithesis of each other.

One was generated and acted upon by and through himself. No one, who should have repeated the thing done by himself, *could have produced the same results*. It was truly Keely's Ether that acted, while Smith's or Brown's Ether would have remained for ever barren of results. For Keely's difficulty has hitherto been to produce a machine which would develop and regulate the Force without the intervention of any “will power” or personal influence of the operator, whether conscious or unconscious. In this he has failed, so far as others were concerned, for *no one but himself* could operate on his “machines.” Occultly this was a far more advanced achievement than the “success” which he anticipates from his wire, but the results obtained from the fifth and sixth planes of the Etheric, or Astral, Force, *will never be permitted to serve for purposes of commerce and traffic*. That Keely's organism is directly connected with the production of his marvellous results is proven by the following statement, emanating from one who knows the great discoverer intimately.

At one time the shareholders of the “Keely Motor Co.” put a man in his workshop for the express purpose of discovering his secret. After six months of close watching, he said to J. W. Keely one day: “I know how it is done, now.” They had been setting up a machine together, and Keely was manipulating the stop-cock which turned the force on and off. “Try it, then,” was the answer. The man turned the cock, and nothing came. “Let me see you do it again,” the man said to Keely. The latter complied, and the machinery operated at once. Again the other tried, but without success. Then Keely put his hand on his shoulder and told him to try once more. He did so, with the result of an instantaneous production of the current.

This fact, if true, settles the question.

We are told that Mr. Keely defines electricity “as a certain form of atomic vibration.” In this he is quite right; but this is Electricity on the terrestrial plane, and through terrestrial correlations. He estimates—

Molecular vibrations at	100,000,000	per second.		
Inter-molecular “ “	300,000,000	“ “		
Atomic “ “	900,000,000	“ “		
Inter-atomic “ “	2,700,000,000	“ “		
Ætheric “ “	8,100,000,000	“ “		
Inter-Ætheric “ “	24,300,000,000	“ “		

This proves our point. There are no vibrations that could be counted or even estimated at an *approximate* rate beyond “the realm of the fourth Son of Fohat,” to use an Occult phrase, or that motion which corresponds to the formation of Mr. Crookes’ radiant matter, lightly called some years ago the “fourth state of matter”—*on this our plane*.

If the question is asked why Mr. Keely was not allowed to pass a certain limit, the answer is easy; it was because that, which he has unconsciously discovered, is the terrible sidereal Force, known to, and named by the Atlanteans Mash-mak, and by the Âryan Rishis in their Astra Vidyâ by a name that we do not like to give. It is the Vril of Bulwer Lytton’s *Coming Race*, and of the coming Races of our mankind. The name Vril may be a fiction; the Force itself is a fact, as little doubted in India as is the existence of the Rishis, since it is mentioned in all the secret books.

It is this vibratory Force, which, when aimed at an army from an Agni-ratha, fixed on a flying vessel, a balloon, according to the instructions found in Astra Vidyâ, would reduce to ashes 100,000 men and elephants, as easily as it would a dead rat. It is allegorized in the *Vishnu Purâna*, in the *Râmâyana* and other works, in the fable about the sage Kapila whose “glance made a mountain of ashes of King Sagara’s 60,000 sons,” and which is explained in the Esoteric Works, and referred to as the Kapilâksha—Kapila’s Eye.

And is it this Satanic Force that our generations are to be allowed to add to their stock of Anarchist’s baby-toys, known as melenite, dynamite clock-work, explosive oranges, “flower baskets,” and such other innocent names? Is it this destructive agency, which, once in the hands of some modern Attila, a bloodthirsty Anarchist, for instance, would in a few days reduce Europe to its primitive chaotic state, with no man left alive to tell the tale—is it this Force which is to become the common property of all men alike?

What Mr. Keely has already done is grand and wonderful in the extreme; there is enough work before him in the demonstration of his new system to “humble the pride of those scientists who are material-

istic, by revealing those mysteries which lie behind the world of matter," without, *volens volens*, revealing it to all. For surely Psychics and Spiritualists, of whom there are a good number in European armies, would be the first to personally experience the fruits of the revelation of such mysteries. Thousands of them would speedily find themselves in blue Ether, perhaps with the populations of whole countries to keep them company, were such a Force to be even entirely discovered, let alone made publicly known. The discovery in its completeness is by several thousand—or shall we say hundred thousand—years too premature. It will be in its appointed place and time only when the great roaring flood of starvation, misery, and underpaid labour ebbs back again—as it will when the just demands of the many are at last happily attended to; when the proletariat exists but in name, and the pitiful cry for bread, that rings unheeded throughout the world, has died away. This may be hastened by the spread of learning, and by new openings for work and emigration, with better prospects than now exist, *and on some new continent that may appear*. Then only will Keely's Motor and Force, as originally contemplated by himself and his friends, be in demand, because it will then be more needed by the poor than by the wealthy.

Meanwhile the Force he has discovered will work through wires, and, if he succeeds, this will be quite sufficient to make of him the greatest discoverer of the age in the present generation.

What Mr. Keely says of *Sound* and *Colour* is also correct from the Occult standpoint. Hear him talk as though he were the nursling of the "Gods-Revealers," and as if he had gazed all his life into the depths of Father-Mother Æther.

In comparing the tenuity of the atmosphere with that of the etheric flows, obtained by his invention for breaking up the molecules of air by vibration, Keely says:

It is as platinum to hydrogen gas. Molecular separation of air brings us to the first sub-division only; inter-molecular, to the second; atomic, to the third; inter-atomic, to the fourth; etheric, to the fifth; and inter-etheric, to the sixth sub-division, or positive association with luminiferous ether.* In my introductory argument I have contended that this is the vibratory envelope of all atoms. In my definition of atom I do not confine myself to the sixth sub-division where this luminiferous ether is developed in its crude form, as far as my researches prove.†

* This is also the division made by the Occultists, under other names.

† Quite so, since there is the *seventh* beyond, which begins the same enumeration from the first to the last, on another and higher plane.

I think this idea will be pronounced by the physicists of the present day, a wild freak of the imagination. Possibly, in time, a light may fall upon this theory that will bring its simplicity forward for scientific research. At present I can only compare it to some planet in a dark space, where the light of the sun of science has not yet reached it. . . . I assume that sound, like odour, is a real substance of unknown and wonderful tenuity, emanating from a body where it has been induced by percussion and throwing out absolute corpuscles of matter, inter-atomic particles, with velocity of 1,120 feet per second; *in vacuo* 20,000. The substance which is thus disseminated is a part and parcel of the mass agitated, and, if kept under this agitation continuously, would, in the course of a certain cycle of time, become thoroughly absorbed by the atmosphere; or, more truly, would pass through the atmosphere to an elevated point of tenuity corresponding to the condition of subdivision that governs its liberation from its parent body. . . . The sounds from vibratory forks, set so as to produce etheric chords, while disseminating their tones (compound), permeate most thoroughly all substances that come under the range of their atomic bombardment. The clapping of a bell *in vacuo* liberates these atoms with the same velocity and volume as one in the open air; and were the agitation of the bell kept up continuously for a few millions of centuries it would thoroughly return to its primitive element; and, if the chamber were hermetically sealed, and strong enough, the vacuous volume surrounding the bell would be brought to a pressure of many thousands of pounds to the square inch, by the tenuous substance evolved. In my estimation, sound truly defined is the disturbance of atomic equilibrium, rupturing actual atomic corpuscles; and the substance thus liberated must certainly be a certain order of etheric flow. Under these conditions, is it unreasonable to suppose that, if this flow were kept up, and the body thus robbed of its element, it would in time disappear entirely? All bodies are formed primitively from this highly tenuous ether, animal, vegetable, and mineral, and they are only returned to their high gaseous condition when brought under a state of differential equilibrium. . . . As regards odour, we can only get some definite idea of its extreme and wondrous tenuity by taking into consideration that a large area of atmosphere can be impregnated for a long series of years from a single grain of musk; which, if weighed after that long interval, will be found to be not appreciably diminished. The great paradox attending the flow of odorous particles is that they can be held under confinement in a glass vessel! Here is a substance of much higher tenuity than the glass that holds it, and yet it cannot escape. It is as a sieve with its meshes large enough to pass marbles, and yet holding fine sand which cannot pass through; in fact, a molecular vessel holding an atomic substance. This is a problem that would confound those who stop to recognize it. But infinitely tenuous as odour is, it holds a very crude relation to the substance of sub-division that governs a magnetic flow (a flow of sympathy, if you please to call it so). This sub-division comes next to sound, but is above sound. The action of the flow of a magnet coincides somewhat to the receiving and distributing portion of the human brain, giving off at all times a depreciating ratio of the amount received. It is a grand illustration of the control of mind over matter, which gradually depreciates the physical till dissolution takes place. The

magnet on the same ratio gradually loses its power and becomes inert. If the relations that exist between mind and matter could be equated and so held, we would live on in our physical state eternally, as there would be no physical depreciation. But this physical depreciation leads, at its terminus, to the source of a much higher development—viz., the liberation of the pure ether from the crude molecular; which, in my estimation, is to be much desired.*

It may be remarked that, save for a few small divergencies, no Adept nor Alchemist could have better explained these theories, in the light of Modern Science, however much the latter may protest against these novel views. In all its fundamental principles, if not in its details, this is Occultism pure and simple; and moreover, it is modern Natural Philosophy as well.

This new Force, or whatever Science may call it, the effects of which are undeniable—as is admitted by more than one Naturalist and Physicist who has visited Mr. Keely's laboratory and personally witnessed its tremendous effects—what is it? Is it a "mode of motion," also, *in vacuo*, since there is no Matter to generate it except Sound—another "mode of motion," no doubt, a *sensation* caused, like Colour, by vibrations? Fully as we believe in these vibrations as the proximate, the immediate, cause of such sensations, we as absolutely reject the one-sided scientific theory that there is *no factor* to be considered as external to us, other than etheric or atmospheric vibrations.

In this case the American Substantialists are not wrong, though they are too anthropomorphic and material in their views for these to be accepted by Occultists, when they argue through Mrs. M. S. Organ, M.D., that:

There must be positive entitative properties in objects which have a constitutional relation to the nerves of animal sensations, or there can be no perception. No impression of any kind can be made upon brain, nerve, or mind—no stimulus to action—unless there is an actual and direct communication of a substantial force. ["Substantial" as far as it appears, in the usual sense of the word, in this universe of Illusion and *Máyá*, of course; not in reality.] That force may be the most refined and sublimated immaterial Entity [?]. Yet it must exist; for no sense, element, or faculty of the human being can have a perception, or be stimulated into action, without some substantial force coming in contact with it. This is the fundamental law pervading the whole organic and mental world. In the true philosophical sense there is no such thing as independent action: for every force or substance is correlated to some other force or substance. We can with just as much truth and reason assert that no substance possesses any inherent gustatory property or any olfactory property—that taste and odour are simply sensations caused by vibrations; and hence mere illusions of animal perceptions.

* From Mrs. Bloomfield-Moore's paper, *The New Philosophy*.

There *is* a transcendental set of causes put in motion, so to speak, in the occurrence of these phenomena, which, *not being in relation to our narrow range of cognition*, can only be understood and traced to their source and their nature, by the spiritual faculties of the Adept. They are, as Asclepios puts it to the King, "incorporeal corporealities," such as "appear in the mirror," and "abstract forms" that we see, hear, and smell, in our dreams and visions. What have the "modes of motion," light, and ether to do with these? Yet we see, hear, smell and touch them, *ergo* they are as much *realities* to us in our dreams, as any other thing on this plane of Mâyâ.

SECTION X.

ON THE ELEMENTS AND ATOMS.

WHEN the Occultist speaks of Elements, and of human Beings who lived during those geological ages, the duration of which it is found as impossible to determine—according to the opinion of one of the best English Geologists*—as the nature of Matter, it is because he knows what he is talking about. When he says Man and Elements, he means neither man in his present physiological and anthropological form, nor the elemental Atoms, those hypothetical conceptions, existing at present in scientific minds, the entitative abstractions of Matter in its highly attenuated state; nor, again, does he mean the compound Elements of Antiquity. In Occultism the word Element in every case means *Rudiment*. When we say “Elementary Man,” we mean either the proëmial, incipient sketch of man, in its unfinished and undeveloped condition, hence in that form which now lies latent in physical man during his life-time, and takes shape only occasionally and under certain conditions; or, that form which for a time survives the material body, and which is better known as an Elementary.† With regard to Element, when the term is used metaphysically, it means, in distinction to the mortal, the incipient Divine Man; and, in its physical usage, it means inchoate Matter in its first undifferentiated condition, or in the Laya state, the eternal and normal condition of Substance, which differentiates only periodically; during that differentiation, Substance is really in an abnormal state—in other words, it is but a transitory illusion of the senses.

As to the Elemental Atoms, so-called, the Occultists refer to them by that name with a meaning analogous to that which is given by

* In answer to a friend, that eminent Geologist writes: “I can only say, in reply to your letter, that it is at present, and perhaps always will be, impossible to reduce, even approximately, geological time into years, or even into millenniums.” (Signed, William Pengelly, F.R.S.)

† Plato, in speaking of the irrational, turbulent Elements, “composed of fire, air, water, and earth,” means Elementary Demons. (See *Timæus*.)

the Hindû to Brahmâ, when he calls him Anu, the Atom. Every Elemental Atom, in search of which more than one Chemist has followed the path indicated by the Alchemists, is, in their firm belief, when not *knowledge*, a Soul; not necessarily a disembodied Soul, but a Jîva, as the Hindûs call it, a centre of Potential Vitality, with latent intelligence in it, and, in the case of compound Souls, an intelligent active Existence, from the highest to the lowest order, a form composed of more or less differentiations. It requires a Metaphysician—and an Eastern Metaphysician—to understand our meaning. All those Atom-Souls are differentiations from the One, and are in the same relation to it as is the Divine Soul, Buddhi, to its informing and inseparable Spirit, Âtmâ.

Modern Physics, in borrowing from the Ancients their Atomic Theory, forgot one point, the most important point of the doctrine; hence they have got only the husks and will never be able to get the kernel. In adopting physical Atoms, they omitted the suggestive fact that, from Anaxagoras to Epicurus, to the Roman Lucretius, and finally even to Galileo, all these Philosophers believed more or less in *animated* Atoms, not in invisible specks of so-called “brute” matter. According to them, rotatory motion was generated by larger (read, more divine and pure) Atoms forcing other Atoms downwards; the lighter ones being simultaneously thrust upward. The Esoteric meaning of this is the ever cyclic curve of differentiated Elements downward and upward through inter-cyclic phases of existence, until each again reaches its starting-point or birthplace. The idea was metaphysical as well as physical; the hidden interpretation embracing Gods or Souls, in the shape of Atoms, as the *causes* of all the *effects* produced on Earth by the *secretions* from the divine bodies.* No Ancient Philosopher, not even the Jewish Kabalists, ever dissociated Spirit from Matter, or Matter from Spirit. Everything originated in the One, and, proceeding from the One, must finally return to the One.

Light becomes heat, and consolidates into fiery particles; which, from being ignited, become cold, hard particles, round and smooth. And this is called Soul, imprisoned in its robe of matter.†

Atoms and Souls were synonymous in the language of the Initiates. The doctrine of “whirling Souls,” Gilgoolem, in which so many learned Jews have believed,‡ had no other meaning esoterically. The

* Plato in the *Timæus* uses the word “secretions” of turbulent Elements.

† Valentinus' *Esoteric Treatise on the Doctrine of Gilgul*.

‡ See Mackenzie's *Royal Masonic Cyclopædia*.

learned Jewish Initiates never meant Palestine alone by the Promised Land, but they meant the same Nirvâna as do the learned Buddhist and Brâhman—the bosom of the Eternal ONE, symbolized by that of Abraham, and by Palestine as its substitute on Earth.

Surely no educated Jew ever believed this allegory in its literal sense, that the bodies of Jews contain within them a principle of Soul which cannot rest, if the bodies are deposited in a foreign land, until, by a process called the “whirling of the Soul” the immortal particle reaches once more the sacred soil of the “Promised Land.”* The meaning of this is evident to an Occultist. The process was supposed to be accomplished by a kind of metempsychosis, the psychic spark being conveyed through bird, beast, fish, and the most minute insect.† The allegory relates to the *Atoms of the body*, each of which has to pass through every form, before all reach the final state, which is the first starting-point of the departure of every Atom—its primitive Laya state. But the primitive meaning of Gilgoolem, or the “Revolution of Souls,” was the idea of the reïncarnating Souls or Egos. “All the Souls go into the Gilgoolah,” into a cyclic or revolving process; *i.e.*, they all proceed on the cyclic path of re-births. Some Kabalists interpret this doctrine to mean only a kind of purgatory for the souls of the wicked. But this is not so.

The passage of the Soul-Atom “through the seven Planetary Chambers” had the same metaphysical and physical meaning. It had the latter when it was said to dissolve into Ether. Even Epicurus, the model Atheist and Materialist, knew so much and believed so much in the ancient Wisdom, that he taught that the Soul—entirely distinct from immortal Spirit, when the former is enshrined *latent* in it, as it is in every atomic speck—was composed of a fine, tender essence, formed from the *smoothest, roundest, and finest atoms.*‡

And this shows that the ancient Initiates, who were followed more or less closely by all profane Antiquity, meant by the term Atom, a Soul, a Genius or Angel, the first-born of the ever-concealed Cause of all causes; and in this sense their teachings become comprehensible. They asserted, as do their successors, the existence of Gods and Genii, Angels or Demons, not outside, nor independent of, the Universal Plenum, but within it. Only this Plenum, during the life-cycles, is infinite. They admitted and taught a good deal of that which modern Science now teaches—namely, the existence of a primordial World-

* See *Isis Unveiled*, II. 152.

† See Mackenzie, *ibid.*, *sub voc.*

‡ *Isis Unveiled*, I. 317.

Stuff or Cosmic Substance, eternally homogeneous, except during its periodic existence; then, universally diffused throughout infinite Space, it differentiates, and gradually forms sidereal bodies from itself. They taught the revolution of the Heavens, the Earth's rotation, the Heliocentric System, and the Atomic Vortices—Atoms being in reality Souls and Intelligences. These "Atomists" were spiritual, most transcendental, and philosophical Pantheists. It is not they who would have ever conceived or dreamed that monstrous contrasted progeny, the nightmare of our modern civilized race: inanimate material and self-guiding Atoms, on the one hand, and an extra-cosmic God on the other.

It may be useful to show what the Monad was, and what its origin, in the teachings of the old Initiates.

Modern exact Science, as soon as it began to grow out of its teens, perceived the great, and to it hitherto esoteric, axiom, that nothing, whether in the spiritual, psychic, or physical realm of Being, could come into existence out of nothing. There is no cause in the manifested Universe without its adequate effects, whether in Space or Time; nor can there be an effect without its primal cause, which itself owes its existence to a still higher one—the final and absolute Cause having to remain to man for ever an incomprehensible Causeless Cause. But even this is no solution, and must be viewed, if at all, from the highest philosophical and metaphysical standpoints, otherwise the problem had better be left unapproached. It is an abstraction, on the verge of which human reason—however trained in metaphysical subtleties—trembles, threatening to collapse. This may be demonstrated to any European, who would undertake to solve the problem of existence, by the articles of faith of the true Vedântin for instance. Let him read and study the sublime teachings of Shankarâchârya, on the subject of Soul and Spirit, and the reader will realize what is now said.*

While the Christian is taught that the human Soul is a breath of God, being created by him for sempiternal existence, having a beginning, but no end—and therefore never to be called eternal—the Occult Teaching says: Nothing is created, it is only transformed. Nothing can manifest itself in this Universe—from a globe down to a vague, rapid thought—that was not in the Universe already; everything on the subjective plane is an eternal *is*; as everything on the objective plane is an *ever-becoming*—because all is transitory.

* *Viveka Chûdâmani*, translated by Mohini M. Chatterji, as "The Crest Jewel of Wisdom." See *Theosophist*, July and August, 1886.

The Monad—a truly “indivisible thing,” as defined by Good, who did not give it the sense we now do—is here rendered as the Âtmâ, in conjunction with Buddhi and the higher Manas. This trinity is one and eternal, the latter being absorbed in the former at the termination of all conditioned and illusive life. The Monad, then, can be traced through the course of its pilgrimage and in its changes of transitory vehicles, only from the incipient stage of the manifested Universe. In Pralaya, the intermediate period between two Manvantaras, it loses its name, as it loses it when the real One Self of man merges into Brahman, in cases of high Samâdhi (the Turiya state), or final Nirvâna; in the words of Shankara:

When the disciple having attained that primeval consciousness, absolute bliss, of which the nature is truth, which is without form and action, abandons this illusive body that has been assumed by the *Âtmâ* just as an actor (abandons) the dress (put on).

For Buddhi, the Anandamaya Sheath, is but a mirror which reflects absolute bliss; and, moreover, that reflection itself is yet not free from ignorance, and is *not* the Supreme Spirit, since it is subject to conditions, is a spiritual modification of Prakriti, and is an effect; Âtmâ alone is the one real and eternal substratum of all, the Essence and Absolute Knowledge, the Kshetrajña. Now that the Revised Version of the Gospels has been published and the most glaring mistranslations of the old versions are corrected, one can understand better the words in 1 *John* v. 6: “It is the Spirit that beareth witness because the Spirit is truth.” The words that follow in the mistranslated version about the “three witnesses,” hitherto supposed to stand for “the Father, the Word, and the Holy Ghost,” show the real meaning of the writer very clearly, thus still more forcibly identifying his teaching in this respect with that of Shankarâchârya. For what can the sentence mean, “there are three that bear witness the Spirit and the Water and the Blood”—if it bears no relation to, nor connection with, the more philosophical statement of the great Vedântin teacher, who, speaking of the Sheaths—the principles in man—Jîva, Vijñânânamaya, etc., which *are*, in their physical manifestation, “Water and Blood” or Life, adds that Âtmâ, Spirit, alone is what remains after the subtraction of the Sheaths and that it is the Only Witness, or synthesized unity. The less spiritual and philosophical school, solely with an eye to a Trinity, made three witnesses out of “one,” thus connecting it more with Earth than with Heaven. It is called in Esoteric Philosophy the “One

Witness," and, while it rests in Devachan, is referred to as the "Three Witnesses to Karma."

Âtmâ, our seventh principle, being identical with the Universal Spirit, and man being one with it in his essence, what is then the Monad proper? It is that homogeneous spark which radiates in millions of rays from the primeval Seven;—of which Seven something will be said further on. It is the EMANATING SPARK FROM THE UNCREATED RAY—a mystery. In the esoteric, and even exoteric Buddhism of the North, Âdi-Buddha (Chogi Dangpoi Sangye), the One Unknown, without beginning or end, identical with Parabrahman and Ain Suph, emits a bright Ray from its Darkness.

This is the Logos, the First, or Vajradhara, the Supreme Buddha, also called Dorjechang. As the Lord of all Mysteries he cannot manifest, but sends into the world of manifestation his Heart—the "Diamond Heart," Vajrasattva or Dorjesempa. This is the Second Logos of Creation, from whom emanate the seven—in the exoteric blind the five—Dhyâni-Buddhas, called the Anupâdaka, the "Parentless." These Buddhas are the primeval Monads from the World of Incorporeal Being, the Arûpa World, wherein the Intelligences (on that plane only) have neither shape nor name, in the exoteric system, but have their distinct seven names in the Esoteric Philosophy. These Dhyâni-Buddhas emanate, or create from themselves, by virtue of Dhyâna, celestial Selves—the super-human Bodhisattvas. These, incarnating at the beginning of every human cycle on Earth as mortal men, become occasionally, owing to their personal merit, Bodhisattvas among the Sons of Humanity, after which they may reappear as Mânushi, or Human, Buddhas. The Anupâdaka, or Dhyâni-Buddhas, are thus identical with the Brâhmanical Mânasaputra, Mind-born Sons—whether of Brahmâ, or of either of the other two Trimûrtian Hypostases; they are identical also with the Rishis and Prajâpatis. Thus, a passage is found in *Anugîtâ*, which, read esoterically, shows plainly, though under another imagery, the same idea and system. It says:

Whatever entities there are in this world, moveable or immoveable, they are the very first to be dissolved [at Pralaya]; and next the developments produced from the elements [from which the visible universe is fashioned]; and (after) these developments [evolved entities], all the elements. Such is the upward gradation among entities. Gods, Men, Gandharvas, Pishâchas, Asuras, Râkshasas, all have been created by Nature [Svabhâva, or Prakriti, plastic Nature], not by actions, nor by a cause [not by any physical cause]. These Brâhmanas [the Rishi Prajâpati?], the creators of the world, are born here (on earth) again and again.

And whatever is produced from them is dissolved in due time in those very five great elements [the five, or rather seven, Dhyâni-Buddhas, also called "Elements" of Mankind], like billows in the ocean. These great elements are in every way (beyond) the elements that make up the world [the gross elements]. And he who is released, even from these five elements [the Tanmâtras],* goes to the highest goal. The Lord Prajâpati [Brahmâ] created all this by the mind only [by Dhyâna, or abstract meditation and mystic powers, like the Dhyâni-Buddhas].†

Evidently then, these Brâhmanas are identical with the terrestrial Bodhisattvas of the heavenly Dhyâni-Buddhas. Both, as primordial, intelligent "Elements," become the Creators or the Emanators of the Monads destined to become human in that cycle; after which they evolve themselves, or, so to say, expand into their own Selves as Bodhisattvas or Brâhmanas, in heaven and earth, to become at last simple men. "The creators of the world are born here, on earth again and again"—truly. In the Northern Buddhist system, or the popular exoteric religion, it is taught that every Buddha, while preaching the Good Law on Earth, manifests himself simultaneously in three Worlds: in the Formless World as a Dhyâni-Buddha, in the World of Forms as a Bodhisattva, and in the World of Desire, the lowest or our World, as a man. Esoterically the teaching differs. The divine, purely Âdi-Buddhic Monad manifests as the universal Buddhi, the Mahâ-Buddhi or Mahat, in Hindû philosophies, the spiritual, omniscient and omnipotent Root of divine Intelligence, the highest Anima Mundi or the Logos. This descends "like a flame spreading from the eternal Fire, immoveable, without increase or decrease, ever the same to the end" of the cycle of existence, and becomes Universal Life on the Mundane Plane. From this Plane of conscious Life shoot out, like seven fiery tongues, the Sons of Light, the Logoi of Life; then the Dhyâni-Buddhas of contemplation, the concrete forms of their formless Fathers, the Seven Sons of Light, *still themselves*, to whom may be applied the Brâhmanical mystic phrase: "Thou art THAT"—Brahman. It is from these Dhyâni-Buddhas that emanate their Chhâyâs or Shadows, the Bodhisattvas of the celestial realms, the prototypes of the super-terrestrial Bodhisattvas, and of the terrestrial Buddhas, and finally of men. The Seven Sons of Light are also called Stars.

* The Tanmâtras are literally the type or rudiment of an element devoid of qualities; but esoterically, they are the primeval Noumena of that which becomes in the progress of evolution, a Cosmic Element, in the sense given to the term in Antiquity, not in that of Physics. They are the Logoi, the seven emanations or rays of the Logos.

† Ch. xxxvi; Telang's translation, pp. 387-8.

The star under which a human Entity is born, says the Occult Teaching, will remain for ever its star, throughout the whole cycle of its incarnations in one Manvantara. *But this is not his astrological star.* The latter is concerned and connected with the *Personality*; the former with the *Individuality*. The Angel of that Star, or the Dhyâni-Buddha connected with it, will be either the guiding, or simply the presiding, Angel, so to say, in every new rebirth of the Monad, *which is part of his own essence*, though his vehicle, man, may remain for ever ignorant of this fact. The Adepts have each their Dhyâni-Buddha, their elder "Twin-Soul," and they know it, calling it "Father-Soul," and "Father-Fire." It is only at the last and supreme Initiation, however, when placed face to face with the bright "Image" that they learn to recognize it. How much did Bulwer Lytton know of this mystic fact, when describing, in one of his highest inspirational moods, Zanoni face to face with his Augoeides?

The Logos, or both the unmanifested and the manifested Word, is called by the Hindûs, Îshvara, the Lord, though the Occultists give it another name. Îshvara, say the Vedântins, is the highest consciousness in Nature. "This highest consciousness," answer the Occultists, "is only a synthetic unit in the World of the manifested Logos—or on the plane of illusion; for it is the sum total of Dhyân Chohanian consciousness." "O wise man, remove the conception that *Not-Spirit is Spirit*"—says Shankarâchârya. Âtmâ is Not-Spirit in its final Parâbrahmic state; Îshvara, or Logos, is Spirit; or, as Occultism explains, it is a compound unity of manifested living Spirits, the parent-source and nursery of all the mundane and terrestrial Monads, *plus* their divine Reflection, which emanate from, and return into, the Logos, each in the culmination of its time. There are seven chief Groups of such Dhyân Chohans, which groups will be found and recognized in every religion, for they are the primeval Seven Rays. Humanity, Occultism teaches us, is divided into seven distinct Groups, with their sub-divisions, mental, spiritual, and physical. Hence there are seven chief planets, the spheres of the indwelling seven Spirits, under each of which is born one of the human Groups which is guided and influenced thereby. There are only seven planets *pecially* connected with Earth, and twelve houses, but the possible combinations of their aspects are countless. As each planet can stand to each of the others in twelve different aspects, their combinations must be almost infinite; as infinite, in fact, as the spiritual, psychic, mental, and physical

capacities in the numberless varieties of the *genus homo*, each of which varieties is born under one of the seven planets and one of the said countless planetary combinations.*

The Monad, then, viewed as One, is above the seventh principle in Kosmos and man; and as a Triad, it is the direct radiant progeny of the said compound Unit, not the Breath of "God," as that Unit is called, nor creating out of *nihil*; for such an idea is quite unphilosophical, and degrades Deity, dragging It down to a finite, attributive condition. As well expressed by the translator of the *Crest-jewel of Wisdom*—though Īshvara is "God"

Unchanged in the profoundest depths of Pralayas and in the intensest activity of Manvantaras, [still] beyond [him] is ĀTMĀ, round whose pavilion is the darkness of eternal MĀYĀ.†

The "Triads" born under the same Parent-Planet, or rather the Radiations of one and the same Planetary Spirit or Dhyāni-Buddha are, in all their after lives and rebirths, sister, or "twin" souls, on this Earth. The idea is the same as that of the Christian Trinity, the "Three in One," only it is still more metaphysical: the Universal "Over-Spirit," manifesting on the two higher planes, those of Buddhi and Mahat. These are the three Hypostases, metaphysical, but never personal.

This was known to every high Initiate in every age and in every country: "I and my Father are one," said Jesus.‡ When he is made to say, elsewhere: "I ascend to *my* Father and *your* Father,"§ it meant that which has just been stated. The identity, and at the same time the illusive differentiation of the *Angel-Monad* and the *Human-Monad* is shown in the sentences: "My Father is *greater* than I";|| "Glorify *your* Father *which is in Heaven*";¶ "Then shall the righteous shine forth as the sun in the kingdom of *their* Father" (not *our* Father).** So

* See *Throsophist*, August, 1886.

† The now universal error of attributing to the Ancients the knowledge of only seven planets, simply because they mentioned no others, is based on the same general ignorance of their Occult doctrines. The question is not whether they were, or were not, aware of the existence of the later discovered planets; but whether the reverence paid by them to the four exoteric and three secret Great Gods—the Star-Angels, had not some special reason. The writer ventures to say there was such a reason, and it is this. Had they known of as many planets as we do now—and this question can hardly be decided at present, either way—they would still have only connected the seven with their religious worship, because these seven are directly and specially connected with our Earth, or, using esoteric phraseology, with our septenary Ring of Spheres.

‡ *John*, x. 30.

† *Ibid.*, xx. 17.

§ *Ibid.*, xiv. 28.

¶ *Matt.*, v. 16.

** *Ibid.*, xiii. 43.

again Paul asks: "Know ye not ye are the *temple* of God, and that the *Spirit of God dwelleth* in you?"* All this was simply meant to show that the group of disciples and followers, attracted to him belonged to the same Dhyâni-Buddha, Star, or Father, and that this again belonged to the same planetary realm and division as he did. It is the *knowledge* of this Occult Doctrine that found expression in the review of *The Idyll of the White Lotus*, when T. Subba Row wrote:

Every Buddha meets at his last Initiation all the great Adepts who reached Buddhahood during the preceding ages . . . every class of Adepts has its own bond of spiritual communion which knits them together. . . . The only possible and effectual way of entering into such brotherhood . . . is by bringing oneself within the influence of the Spiritual light which radiates from one's own Logos. I may further point out here . . . that such communion is only possible between persons whose souls derive their life and sustenance from the same divine Ray, and that, as seven distinct Rays radiate from the "Central Spiritual Sun," all Adepts and Dhyân Chohans are divisible into seven classes, each of which is guided, controlled, and overshadowed by one of the seven forms or manifestations of the divine Wisdom.†

It is then the Seven Sons of Light,—called after their planets and often identified with them by the rabble, namely, Saturn, Jupiter, Mercury, Mars, Venus, and *presumably* the Sun and Moon, for the modern critic, who goes no deeper than the surface of old religions‡—which are, according to the Occult Teachings, our heavenly Parents, or synthetically our "Father." Hence, as already remarked, Polytheism is really more philosophical and correct, as to fact and Nature, than is anthropomorphic Monotheism. Saturn, Jupiter, Mercury, and Venus, the four exoteric planets, and the three others, which must remain unnamed, were the heavenly bodies in direct astral and psychic communication, morally and physically, with the Earth, its Guides, and Watchers; the visible orbs furnishing our Humanity with its outward and inward characteristics, and their Regents or Rectors with our

* 1 Cor., iii. 16.

† *Theosophist*, Aug., 1886.

‡ These are planets accepted for purposes of Judicial Astrology only. The astro-theogonical division differed from the above. The Sun, being a central *star* and not a planet, stands, with its seven planets, in more occult and mysterious relations to *our* Globe than is generally known. The Sun was, therefore, considered the great Father of all the Seven "Fathers," and this accounts for the variations found between the Seven and Eight Great Gods of Chaldean and other countries. Neither the Earth, nor the Moon, its satellite, nor yet the stars, for another reason, were anything more than *substitutes used for Esoteric purposes*. Yet, even with the exclusion of the Sun and the Moon from the calculation, the Ancients seem to have known of *seven* planets. How many more are known to us, so far, if we throw out the Earth and Moon? *Seven*, and no more: *Seven* primary or principal planets, the rest *planetoids* rather than planets.

Monads and spiritual faculties. In order to avoid creating new misconceptions, let it be stated that among the three Secret Orbs, or Star-Angels, neither Uranus nor Neptune were included; not only because they were unknown under these names to the ancient Sages, but because they, like all other planets, however many there may be, are the Gods and Guardians of other septenary Chains of Globes within our System.

Nor do the two great planets last discovered depend entirely on the Sun, as do the rest of the planets. Otherwise, how can we explain the fact that Uranus receives $\frac{1}{360}$ th part of the light received by our Earth, while Neptune receives only $\frac{1}{720}$ th part; and that their satellites show a peculiarity of inverse rotation found in no other planets of the Solar System? At any rate, what we say applies to Uranus, though the fact has again been disputed recently.

This subject will, of course, be considered as a mere vagary, by all those who confuse the universal order of Being with their own systems of classification. Here, however, simple facts from Occult Teachings are stated, to be either accepted or rejected, as the case may be. There are details which, on account of their great metaphysical abstraction, *cannot* be entered upon. Hence, we merely state that only seven of our planets are as intimately related to our Globe, as the Sun is to all the bodies subject to him in his System. Of these bodies the poor little number of *primary* and *secondary* planets known to Astronomy, looks wretched enough, in truth.* Therefore, it stands to reason that there are a great number of planets, small and large, that have not been discovered yet, but of the existence of which ancient Astronomers—all of them initiated Adepts—must certainly have been aware. But, as the relation of these to the Gods was sacred, it had to remain arcane, as did also the names of various other planets and stars.

Besides this, even the Roman Catholic Theology speaks of “*seventy* planets that preside over the destinies of the nations of this globe;” and, save the erroneous application, there is more truth in this tradition than in exact modern Astronomy. The seventy planets are connected

* When one remembers that under the powerful telescope of Sir William Herschell, that eminent Astronomer—gauging merely that portion of heaven in the equatorial plane, the approximate centre of which is occupied by our Earth—saw in one quarter of an hour, 16,000 stars pass; and applying this calculation to the totality of the “Milky Way” he found in it no less than eighteen millions of Suns, one wonders no longer that Laplace, in conversation with Napoleon I, should have called God a *hypothesis*—perfectly useless to speculate upon for *exact* Physical Science, at any rate. Occult Metaphysics and transcendental Philosophy will alone be able to lift the smallest corner of the impenetrable veil in this direction.

in him. When he speaketh a lie he speaketh of his own: for he is a liar and the father of it.*

This "Father" of the Pharisees was Jehovah, for he was identical with Cain, Saturn, Vulcan, etc.—the planet under which they were born, and the God whom they worshipped. Evidently there must be an Occult meaning sought in these words and admonitions, however mistranslated, since they are pronounced by one who threatened with hell-fire anyone who says to his brother simply Raca, fool.† And evidently, again, the planets are not merely spheres, twinkling in Space, and made to shine for no purpose, but they are the domains of various Beings with whom the uninitiated are so far unacquainted, but who have, nevertheless, a mysterious, unbroken, and powerful connection with men and globes. Every heavenly body is the temple of a God, and these Gods themselves are the temples of GOD, the Unknown "Not Spirit." There is nothing profane in the Universe. All Nature is a consecrated place, as Young says:

Each of these Stars is a religious house.

Thus can all exoteric religions be shown to be the falsified copies of the Esoteric Teaching. It is the priesthood which has to be held responsible for the reaction of our day in favour of Materialism. It is by worshipping and enforcing on the masses the worship of the shells of pagan ideals—personified for purposes of allegory—that the latest exoteric religion has made of Western lands a Pandemonium, in which the higher classes worship the golden calf, and the lower and ignorant masses are made to worship an idol with feet of clay.

* *John*, viii. 37, 38, 41, 44.

† *Matthew*, v. 22.

SECTION XI.

ANCIENT THOUGHT IN MODERN DRESS.

MODERN Science is *Ancient Thought distorted*, and no more. We have seen, however, what intuitional Scientists think, and are busy about; and now the reader shall be given a few more proofs of the fact that more than one F.R.S. is unconsciously approaching the derided Secret Sciences.

With regard to Cosmogony and primeval matter, modern speculations are undeniably ancient thought, "improved" by contradictory theories of recent origin. The whole foundation belongs to Grecian and Indian Archaic Astronomy and Physics, in those days called always Philosophy. In all the Âryan and Greek speculations, we meet with the conception of an all-pervading, unorganized, and homogeneous Matter, or Chaos, re-named by modern Scientists "nebular condition of the world-stuff." What Anaxagoras called Chaos in his *Homoiomeria* is now called "primitive fluid" by Sir William Thomson. The Hindû and Greek Atomists—Kanâda, Leucippus, Democritus, Epicurus, Lucretius, etc.—are now reflected, as in a clear mirror, in the supporters of the Atomic Theory of our modern days, beginning with Leibnitz's Monads, and ending with the Vortical Atoms of Sir William Thomson.* True, the corpuscular theory of old is rejected, and the undulatory theory has taken its place. But the question is, whether the latter is so firmly established as not to be liable to be dethroned like its predecessor? Light, from its metaphysical aspect, has been fully treated in *Isis Unveiled*:

Light is the first begotten, and the first emanation of the Supreme, and Light is Life, says the Evangelist [and the Kabalist]. Both are electricity—the life principle, the Anima Mundi—pervading the Universe, the electric vivifier of all things.

* The Elemental Vortices inaugurated by the "Mind" have not been improved by their modern transformation.

Light is the great Protean magician, and under the divine Will of the Architect* [or rather the *Architects*, the "Builders," called *One* collectively], its multifarious, omnipotent waves gave birth to every form as well as to every living being. From its swelling electric bosom, spring *Matter* and *Spirit*. Within its beams lie the beginnings of all physical and chemical action, and of all cosmic and spiritual phenomena; it vitalizes and disorganizes; it gives life and produces death, and from its Primordial Point gradually emerged into existence the myriads of worlds, visible and invisible celestial bodies. It was at the ray of this First Mother, one in three, that "God," according to Plato, "lighted a Fire which we now call the Sun," † and which is *not* the cause of either light or heat, but merely the focus, or, as we might say, the lens, by which the Rays of the Primordial Light become materialized, are concentrated upon our Solar System, and produce all the correlations of forces.‡

This is the Ether, as just explained in the views of Metcalfe, repeated by Dr. Richardson, save for the submission of the former to some details of the modern undulatory theory. We do not say that we deny the theory; we assert only that it needs completion and re-arrangement. But the Occultists are by no means the only heretics in this respect; for Mr. Robert Hunt, F.R.S. finds that:

The undulatory theory does not account for the results of his experiments.§ Sir David Brewster, in his *Treatise on Optics*, showing "that the colours of vegetable life arise . . . from a specific attraction which the particles of these bodies exercise over the differently-coloured rays of light," and that "it is by the light of the sun that the coloured juices of plants are elaborated, that the colours of bodies are changed, etc.," remarks that it is not easy to allow "that such effects can be produced by the mere vibration of an ethereal medium." And he is *forced*, he says, "by this class of facts, to reason as if light was *material*" [?]. Professor Josiah P. Cooke, of Harvard University, says that he "cannot agree . . . with those who regard the wave-theory of light as an established principle of science."¶ Herschell's doctrine, that the intensity of light, in effect of each undulation, "is inversely as the square of the distance from the luminous body," if correct, damages a good deal, if it does not kill, the undulatory theory. That he is right, was proved repeatedly by experiments with photometers; and though it begins to be much doubted, the undulatory theory is still alive.¶

To this remark of Sir David Brewster—"forced to reason as if light was material"—there is a good deal to reply. Light, in one sense, is

* I have often been taken to task for using expressions in *Isis* denoting belief in a *personal* and anthropomorphic God. This is *not* my idea. Kabalistically speaking, the "Architect" is the generic name for the Sephiroth, the Builders of the Universe, as the "Universal Mind" represents the collectivity of the Dhyān Chohanīc Minds.

† *Timæus*.

‡ I. 258.

§ *Researches on Light in its Chemical Relations*.

¶ *Modern Chemistry*.

¶ *Isis Unveiled*, I. 157.

certainly as material as is electricity itself. And if electricity is not material, if it is only a "mode of motion," how is it that it can be *stored up* in Faure's accumulators? Helmholtz says that electricity must be as atomic as matter; and Mr. W. Crookes, F.R.S., supported the view in his address at Birmingham, in 1886, to the Chemical Section of the British Association, of which he was President. This is what Helmholtz says:

If we accept the hypothesis that the elementary substances are composed of atoms, we cannot avoid concluding that electricity also, positive as well as negative, is divided into definite elementary portions, which behave like atoms of electricity.*

Here we have to repeat that which was already said in Section VIII, that there is but one science that can henceforth direct modern research into the one path which will lead to the discovery of the whole, hitherto Occult, truth, and it is the youngest of all—Chemistry, as it now stands reformed. There is no other, not excluding Astronomy, that can so unerringly guide scientific intuition, as can Chemistry. Two proofs of this are to be found in the world of Science—two great Chemists, each among the greatest in his own country, namely, Mr. Crookes and the late Professor Butlerof: the one is a thorough believer in abnormal phenomena; the other was as fervid a Spiritualist, as he was great in the natural sciences. It becomes evident that, while pondering over the ultimate divisibility of Matter, and in the hitherto fruitless chase after the element of negative atomic weight, the scientifically trained mind of the Chemist must feel irresistibly drawn towards those ever-shrouded worlds, to that mysterious Beyond, whose measureless depths seem to close against the approach of the too materialistic hand that would fain draw aside its veil. "It is the unknown and the ever-unknowable," warns the Monist-Agnostic. "Not so," answers the persevering Chemist. "We are on the track and we are not daunted, and fain would we enter the mysterious region which ignorance tickets unknown."

In his Presidential Address at Birmingham Mr. Crookes said:

There is but one unknown—the ultimate substratum of Spirit [Space]. That which is not the Absolute and the One is, in virtue of that very differentiation, however far removed from the physical senses, always accessible to the spiritual human mind, which is a coruscation of the undifferentiable Integral.

Two or three sentences, at the very close of his lecture on the *Genesis of the Elements*, showed the eminent Scientist to be on the royal road

* *Faraday Lectures*, 1881.

to the greatest discoveries. He has been for some time overshadowing "the original protyle," and he has come to the conclusion that "he who grasps the Key will be permitted to unlock some of the deepest mysteries of creation." Protyle, as the great Chemist explains:

. . . is a word analogous to protoplasm, to express the idea of the original primal matter existing before the evolution of the chemical elements. The word I have ventured to use for this purpose is compounded of $\pi\rho\acute{o}$ (earlier than) and $\upsilon\lambda\eta$ (the stuff of which things are made). The word is scarcely a new coinage, for 600 years ago Roger Bacon wrote in his *Arte Chymiae*, "The elements are made out of $\upsilon\lambda\eta$ and every element is converted into the nature of another element."

The *knowledge* of Roger Bacon did not come to this wonderful old magician* by inspiration, but because he studied ancient works on Magic and Alchemy, and had a key to the real meaning of their language. But see what Mr. Crookes says of Protyle, next neighbour to the unconscious Mûlaprakriti of the Occultists:

Let us start at the moment when the first element came into existence. Before this time, matter, as we know it, was not. It is equally impossible to conceive of matter without energy, as of energy without matter; from one point of view both are convertible terms. Before the birth of atoms, all those forms of energy, which become evident when matter acts upon matter, could not have existed†—they were locked up in the protyle as latent potentialities only. Coincident with the creation of atoms, all those attributes and properties, which form the means of discriminating one chemical element from another, start into existence fully endowed with energy.‡

With every respect due to the great knowledge of the lecturer, the Occultist would put it otherwise. He would say that no Atom is ever "created," for the Atoms are eternal within the bosom of the One Atom—"the Atom of Atoms"—viewed during Manvantara as the Jagad-Yoni, the material causative womb of the World. Pradhâna, unmodified Matter—that which is the first form of Prakriti, or material, visible.

* Thus, what the writer of the present work said ten years ago in *Isis Unveiled* was, it seems, prophetic. These are the words: "Many of these mystics, by following what they were taught by some treatises, secretly preserved from one generation to another, achieved discoveries which would not be despised even in our modern days of exact sciences. Roger Bacon, the friar, was laughed at as a quack and is now generally numbered among 'pretenders' to magic art; but his discoveries were nevertheless accepted, and are now used by those who ridicule him the most. Roger Bacon belonged by right, if not by fact, to that Brotherhood which includes all those who study the Occult Sciences. Living in the thirteenth century, almost a contemporary, therefore, of Albertus Magnus and Thomas Aquinas, his discoveries—such as gunpowder and optical glasses, and his mechanical achievements—were considered by everyone as so many miracles. He was accused of having made a compact with the Evil One." (Vol. I, pp. 64, 65.)

† Just so; "those forms of energy . . . which become evident . . ." in the laboratory of the Chemist and Physicist; but there are other forms of energy wedded to other forms of matter, which are supersensuous, yet are known to the Adepts.

‡ Presidential Address, p. 16.

as well as invisible Nature—and Purusha, Spirit, are eternally one; and they are Nirupâdhi, without adventitious qualities or attributes, only during Pralaya, and when beyond any of the planes of consciousness of existence. The Atom, as known to modern science, is inseparable from Purusha, which is Spirit, but is now called “energy” in Science. The Protyle Atom has not been comminuted or subtilized: it has simply passed into that plane, which is no plane, but the eternal state of everything beyond the planes of illusion. Both Purusha and Pradhâna are immutable and unconsumable, or Aparinâmin and Avyaya, in eternity; and both may be referred to during the Mâyâvic periods as Vyaya and Parinâmin, or that which can expand, pass away and disappear, and which is “modifiable.” In this sense Purusha, must, of course, be held distinct in our conceptions from Parabrahman. Nevertheless that, which is called “energy” or “force” in Science, and which has been explained as a dual force by Metcalfe, is never, in fact, and cannot be, energy alone; for it is the Substance of the World, its Soul, the All-permeant, Sarvaga, in conjunction with Kâla, Time. The three are the trinity in one, during Manvantara, the all-potential Unity, which acts as three distinct things on Mâyâ, the plane of illusion. In the Orphic philosophy of ancient Greece they were called Phanes, Chaos, and Chronos—the triad of the Occult Philosophers of that period.

But see how closely Mr. Crookes brushes the “Unknowable,” and what potentialities there are for the acceptance of Occult truths in his discoveries. He continues, speaking of the evolution of Atoms:

Let us pause at the end of the first complete vibration and examine the result. We have already found the elements of water, ammonia, carbonic acid, the atmosphere, plant and animal life, phosphorus for the brain, salt for the seas, clay for the solid earth . . . phosphates and silicates sufficient for a world and inhabitants not so very different from what we enjoy at the present day. True the human inhabitants would have to live in a state of more than Arcadian simplicity, and the absence of calcic phosphate would be awkward as far as the bone is concerned.* . . . At the lower end of our curve . . . we see a great hiatus. . . . This oasis, and the blanks which precede and follow it, may be referred with much probability to the particular way in which our earth developed into a member of our solar system. If this be so, it may be that on our earth only these blanks occur, and not generally throughout the universe.

This justifies several assertions in the Occult works.

* It is just the existence of such worlds on other planes of consciousness that is asserted by the Occultist. The Secret Science teaches that the primitive race was boneless, and that there are worlds invisible to us, peopled as our own, besides the *populations* of Dhyan Chohans.

Firstly, that neither the stars nor the Sun can be said to be constituted of those terrestrial elements with which the Chemist is familiar, though they are all present in the Sun's outward robes—as well as a host more of elements so far unknown to Science.

Secondly, that our globe has its own special laboratory on the far-away outskirts of its atmosphere, crossing which, every Atom and molecule changes and differentiates from its primordial nature.

And thirdly, that though no element present on our Earth could ever possibly be found wanting in the Sun, there are many others there which have either not reached, or not as yet been discovered on, our globe.

Some may be missing in certain stars and heavenly bodies in the process of formation; or, though present in them, these elements, on account of their present state, may not respond as yet to the usual scientific tests.*

Mr. Crookes speaks of helium, an element of still lower atomic weight than hydrogen, an *element purely hypothetical* as far as our earth is concerned, though existing in abundance in the chromosphere of the Sun. Occult Science adds that not one of the elements regarded as such by Chemistry really deserves the name.

Again we find Mr. Crookes speaking with approbation of

Dr. Carnelly's weighty argument in favour of the compound nature of the so-called elements, from their analogy to the compound radicles.

Hitherto, Alchemy alone, within the historical period, and in the so-called civilized countries, has succeeded in obtaining a real *element*, or a particle of homogeneous Matter, the *Mysterium Magnum* of Paracelsus. But then that was before Lord Bacon's day.†

. . . Let us now turn to the upper portion of the scheme. With hydrogen of atomic weight = 1, there is little room for other elements, save, perhaps, for hypothetical *Helium*. But what if we get "through the looking-glass," and cross the zero line in search of new principles—what shall we find on the other side of zero? Dr. Carnelly asks for an element of negative atomic weight; here is ample room and verge enough for a shadow series of such unsubstantialities. Helmholtz says that electricity is probably as atomic as matter; is electricity one of the

* *Five Years of Theosophy*, p. 258 *et seq.*

† Says Mr. Crookes in the same address: "The first riddle which we encounter in chemistry is: 'What are the elements?' Of the attempts hitherto made to define or explain an element, none satisfy the demands of the human intellect. The text books tell us that an element is 'a body which has not been decomposed;' that it is 'a something to which we can add, but from which we can take nothing,' or 'a body which increases in weight with every chemical change.' Such definitions are doubly unsatisfactory: they are provisional, and may cease to-morrow to be applicable in any given case. They take their stand, not on any attribute of the things to be defined, but on the limitations of human power: they are confessions of intellectual impotence."

negative elements, and the luminiferous ether another? Matter, as we now know it, does not here exist; the forms of energy which are apparent in the motions of matter are as yet only latent possibilities. *A substance of negative weight is not inconceivable.** But can we form a clear conception of a body which combines with other bodies in proportions expressible by negative qualities?†

A genesis of the elements such as is here sketched out would not be confined to our little solar system, but would probably follow the same general sequence of events in every centre of energy now visible as a star.

Before the birth of atoms to gravitate towards one another, no pressure could be exercised; but at the outskirts of the fire-mist sphere, within which all is protyle—at the shell on which the tremendous forces involved in the birth of a chemical element exert full sway—the fierce heat would be accompanied by gravitation sufficient to keep the newly-born elements from flying off into space. As temperature increases, expansion and molecular motion increase, molecules tend to fly asunder, and their chemical affinities become deadened; but the enormous pressure of the gravitation of the mass of atomic matter, outside what I may for brevity call the birth-shell, would counteract the action of heat.

Beyond the birth-shell would be a space in which no chemical action could take place, owing to the temperature there being above what is called the dissociation-point for compounds. In this space the lion and the lamb would lie down together; phosphorus and oxygen would mix without union; hydrogen and chlorine would show no tendency to closer bonds; and even fluorine, that energetic gas which chemists have only isolated within the last month or two, would float about free and uncombined.

Outside this space of free atomic matter would be another shell, in which the formed chemical elements would have cooled down to the combination point, and the sequence of events so graphically described by Mr. Mattieu Williams in *The Fuel of the Sun* would now take place, culminating in the solid earth and the commencement of geological time (p. 19).

This is, in strictly scientific, but beautiful language, the description of the evolution of the differentiated Universe in the Secret Teachings. The learned gentleman closes his address in words, every sentence of which is like a flash of light from beyond the dark veil of materiality, hitherto thrown upon the exact sciences, and is a step forward towards the *Sanctum Sanctorum* of the Occult. Thus he says:

We have glanced at the difficulty of defining an element; we have noticed, too, the revolt of many leading physicists and chemists against the ordinary acceptation of the term element; we have weighed the improbability of their eternal existence,‡ or *their origination by chance*. As a remaining alternative, we have suggested their origin

* And the lecturer quotes Sir George Airy, who says (in *Faraday's Life and Letters*, Vol. II, p. 354): "I can easily conceive that there are plenty of bodies about us not subject to this intermutual action, and therefore not subject to the law of gravitation."

† The Vedāntic philosophy conceives of such; but then it is not physics, but metaphysics, called by Mr. Tyndall "poetry" and "fiction."

‡ In the form they are now, we conceive?

by a process of evolution like that of the heavenly bodies according to Laplace, and the plants and animals of our globe according to Lamarck, Darwin, and Wallace.* In the general array of the elements, as known to us, we have seen a striking approximation to that of the organic world.† In lack of direct evidence of the decomposition of any element, we have sought and found indirect evidence. . . . We have next glanced at the view of the genesis of the elements; and lastly we have reviewed a scheme of their origin suggested by Professor Reynolds' method of illustrating the periodic classification ‡ . . . Summing up all the above considerations we cannot, indeed, venture to assert positively *that our so-called elements have been evolved from one primordial matter; but we may contend that the balance of evidence, I think, fairly weighs in favour of this speculation.*

* And to Kapila and Manu—especially and originally.

† Here is a scientific corroboration of the eternal law of correspondences and analogy.

‡ This method of illustrating the periodic law in the classification of elements is, in the words of Mr. Crookes, proposed by Professor Emerson Reynolds, of Dublin University, who "points out that in each period, the general properties of the elements vary from one to another, with approximate regularity until we reach the *seventh member*, which is in more or less striking contrast with the first element of the same period, as well as with the first of the next. Thus chlorine, the seventh member of Mendeleef's third period, contrasts sharply with both sodium, the first member of the same series, and with potassium, the first member of the next series; whilst on the other hand, sodium and potassium are closely analogous. The six elements, whose atomic weights intervene between sodium and potassium, vary in properties, step by step, until chlorine, the contrast to sodium, is reached. But from chlorine to potassium, the analogue of sodium, there is a change in properties *per saltum*. . . . If we thus recognize a contrast in properties—more or less decided—between the first and the last members of each series, we can scarcely help admitting the existence of a point of mean variation within each system. In general the *fourth* element of each series possesses the property we might expect a transition-element to exhibit. . . . Thus for the purpose of graphic translation, Professor Reynolds considers that the fourth member of a period—silicon, for example—may be placed at the apex of a symmetrical curve, which shall represent for that particular period, the direction in which the properties of the series of elements vary with rising atomic weights."

Now, the writer humbly confesses complete ignorance of modern Chemistry and its mysteries. But she is pretty well acquainted with the Occult Doctrine with regard to *correspondences of types and antetypes* in nature, and to perfect analogy as a fundamental law in Occultism. Hence she ventures on a remark which will strike every Occultist, however it may be derided by orthodox Science. This method of illustrating the periodic law in the behaviour of elements, whether or not still a hypothesis in Chemistry, is a law in Occult Sciences. Every well-read Occultist knows that the *seventh* and *fourth* members—whether in a septenary chain of worlds, the septenary hierarchy of angels, or in the constitution of man, animal, plant, or mineral atom—that the *seventh* and *fourth* members, we say, in the geometrically and mathematically uniform workings of the immutable laws of Nature, always play a distinct and specific part in the septenary system. From the stars twinkling high in heaven, to the sparks flying asunder from the rude fire built by the savage in his forest; from the hierarchies and the essential constitution of the Dhyán Chohans—organized for diviner apprehensions and a loftier range of perception than the greatest Western Psychologist ever dreamed of, down to Nature's classification of species among the humblest insects; finally from Worlds to Atoms, everything in the Universe, from great to small, proceeds in its spiritual and physical evolution, cyclically and septennially, showing its seventh and fourth number (the latter the turning point) behaving in the same way as is shown in that periodic law of Atoms. Nature never proceeds *per saltum*. Therefore, when Mr. Crookes remarks on this that he does not "wish to infer that the gaps in Mendeleef's table, and in this graphic representation of it [the diagram showing the evolution of Atoms] necessarily mean that there are elements actually existing to fill up the gaps; these gaps may only mean that at the birth of the elements there was an easy potentiality of the formation of an element which would fit into the place"—an Occultist would respectfully remark to him that the latter hypothesis can only hold good, if the septenary arrangement of Atoms is not interfered with. This is *the one law*, and an infallible method that must always lead one who follows it to success.

Thus inductive Science, in its branches of Astronomy, Physics, and Chemistry, while advancing timidly towards the conquest of Nature's secrets in her final effects on our terrestrial plane, recedes to the days of Anaxagoras and the Chaldees in its discoveries of (*a*) the origin of our phenomenal world, and (*b*) the modes of formation of the bodies that compose the Universe. And having, for their cosmogonical hypotheses to turn back to the beliefs of the earliest philosophers, and the systems of the latter—systems that were all based on the teachings of a universal Secret Doctrine with regard to primeval Matter, with its properties, functions, and laws—have we not the right to hope that the day is not far off when Science will show a better appreciation of the Wisdom of the Ancients than it has hitherto done?

No doubt Occult Philosophy could learn a good deal from exact Modern Science; but the latter, on the other hand, might profit by ancient learning in more than one way, and chiefly in Cosmogony. It might learn, for instance, the mystical signification, alchemical and transcendental, of the many *imponderable* substances that fill interplanetary space, and which, interpenetrating each, are the direct cause, at the lower end, of the production of natural phenomena manifesting through so-called vibration. The knowledge of the *real*, not the hypothetical, nature of Ether, or rather of the *Ākâsha*, and other mysteries, in short, can alone lead to the knowledge of Forces. It is that Substance against which the Materialistic school of the Physicists rebels with such fury, especially in France,* and which exact Science has to advocate notwithstanding. They cannot make away with it without incurring the risk of pulling down the pillars of the Temple of Science, like a modern Samson, and of getting buried under its roof.

The theories built upon the rejection of Force, outside and independent of Matter pure and simple, have all been shown to be fallacious. They do not, and cannot, cover the ground, and many of the scientific data are thus proved to be unscientific. "Ether produced Sound" is said in the *Purānas*, and the statement is laughed at. Sound is the result of the vibrations of the *air*, we are corrected. And what is air? Could it exist if there were no etheric medium in Space to buoy up its molecules? The case stands simply thus. Materialism cannot admit

* A group of electricians has just protested against the new theory of Clausius, the famous professor of the University of Bonn. The character of the protest is shown in the signature, which has "Jules Bourdin, in the name of the group of Electricians, which had the honour of being introduced to Professor Clausius in 1881, and whose war-cry (*cri de ralliement*) is *À bas l'Ether*"—down with Ether, even; they want Universal Void, you see!

the existence of anything outside Matter, because with the acceptance of an imponderable Force—the source and head of all the physical Forces—other *intelligent* Forces would have to be virtually admitted, and that would lead Science very far. For it would have to accept as a sequel the presence in Man of a still more spiritual power—entirely independent, for once, of any kind of Matter about which Physicists know anything. Hence, apart from a hypothetical Ether of Space and gross physical bodies, the whole sidereal and unseen Space is, in the sight of Materialists, one boundless *void* in Nature—blind, unintelligent, useless.

And now the next question is: What is that Cosmic Substance, and how far can one go in suspecting its nature or in wrenching from it its secrets, thus feeling justified in giving it a name? How far, especially, has Modern Science gone in the direction of those secrets, and what is it doing to solve them? The latest hobby of Science, the Nebular Theory, may afford us some answer to this question. Let us then examine the credentials of this Nebular Theory.

SECTION XII.

SCIENTIFIC AND ESOTERIC EVIDENCE FOR, AND OBJECTIONS TO, THE MODERN NEBULAR THEORY.

OF late, Esoteric Cosmogony has been frequently opposed by the phantom of this theory and its ensuing hypotheses. "Can this most scientific teaching be denied by your Adepts?" it is asked. "Not entirely," is the reply, "but the admissions of the men of Science themselves *kill* it; and there remains nothing for the Adepts to deny."

To make of Science an integral *whole* necessitates, indeed, the study of spiritual and psychic, as well as of physical, Nature. Otherwise it will ever be like the anatomy of man, discussed of old by the profane from the point of view of his shell-side, and in ignorance of the interior work. Even Plato, the greatest Philosopher of his country, was guilty, before his Initiation, of such statements as that liquids pass into the stomach through the lungs. Without metaphysics, as Mr. H. J. Slack says, *real* Science is inadmissible.

The nebulae exist; yet the Nebular Theory is wrong. A nebula exists in a state of entire elemental dissociation. It is gaseous and—something else besides, which can hardly be connected with gases as these are known to Physical Science; and it is self-luminous. But that is all. The sixty-two "coincidences" enumerated by Professor Stephen Alexander,* confirming the Nebular Theory, may all be explained by Esoteric Science; though, as this is not an astronomical work, the refutations are not attempted at present. Laplace and Faye come nearer to the correct theory than any; but of the speculations of

* *Smithsonian Contributions*, xxi., Art. 1. pp. 79-97.

Laplace there remains little in the present theory beyond its general features.

Nevertheless, says John Stuart Mill:

There is in Laplace's theory nothing hypothetical; it is an example of legitimate reasoning from present effect to its past cause; it assumes nothing more than that objects which really exist obey the laws which are known to be obeyed by all terrestrial objects resembling them.*

From such an eminent logician as was Mill, this would be valuable, if it could only be proved that "terrestrial objects resembling" celestial objects at such a distance as are the nebulae, *resemble those objects in reality, and not only in appearance.*

Another of the fallacies, from the Occult standpoint, embodied in the modern theory as it now stands, is the hypothesis that the Planets were all detached from the Sun; that they are bone of his bone, and flesh of his flesh; whereas the Sun and the Planets are only co-uterine brothers, having the same nebular origin, but in a different mode from that postulated by modern Astronomy.

The many objections raised by some opponents of the modern Nebular Theory against the homogeneity of original diffuse Matter, on the ground of the uniformity in the composition of the fixed Stars, do not affect the question of that homogeneity at all, but only the theory itself. Our solar nebula may not be completely homogeneous, or, rather, it may fail to reveal itself as such to the Astronomers, and yet be *de facto* homogeneous. The Stars do differ in their constituent materials, and even exhibit elements quite unknown on Earth; nevertheless, this does not affect the point that Primeval Matter—Matter as it appeared even in its first differentiation from its laya-condition†—is yet to this day homogeneous, at immense distances, in the depths of infinitude, and likewise at points not far removed from the outskirts of our Solar System.

Finally, there does not exist one single fact brought forward by the learned objectors against the Nebular Theory (false as it is, and hence, illogically enough, fatal to the hypothesis of the homogeneity of Matter), that can withstand criticism. One error leads to another. A false premiss will naturally lead to a false conclusion, although an inadmissible inference does not necessarily affect the validity of the major proposition of the syllogism. Thus, one may leave every side-issue and inference from the evidence of spectra and lines, as simply

* *System of Logic*, p. 229.

† Beyond the zero-line of action.

provisional for the present, and abandon all matters of detail to Physical Science. The duty of the Occultist lies with the *Soul* and *Spirit* of Cosmic Space, not merely with its illusive appearance and behaviour. That of official Physical Science is to analyze and study its *shell*—the Ultima Thule of the Universe and Man, in the opinion of Materialism.

With the latter, Occultism has nought to do. It is only with the theories of such men of learning as Kepler, Kant, Oersted, and Sir William Herschell, who believed in a Spiritual World, that Occult Cosmogony might treat, and attempt a satisfactory compromise. But the views of those Physicists differed vastly from the latest modern speculations. Kant and Herschell had in their mind's eye speculations upon the origin and the final destiny, as well as upon the present aspect, of the Universe, from a far more philosophical and psychic standpoint; whereas modern Cosmology and Astronomy now repudiate anything like research into the mysteries of Being. The result is what might be expected: complete failure and inextricable contradictions in the thousand and one varieties of so-called Scientific Theories, and in this Theory as in all others.

The nebular hypothesis, involving the theory of the existence of a Primeval Matter, diffused in a nebulous condition, is of no modern date in Astronomy, as everyone knows. Anaximenes, of the Ionian school, had already taught that the sidereal bodies were formed through the progressive condensation of a primordial *pregenetic* Matter, which had almost a negative weight, and was spread out through Space in an extremely sublimated condition.

Tycho Brahé, who viewed the Milky Way as an ethereal substance, thought the new star that appeared in Cassiopeia, in 1572, had been formed out of that Matter.* Kepler believed that the star of 1606 had likewise been formed out of the ethereal substance that fills the universe.† He attributed to that same Ether the apparition of a luminous ring round the Moon, during the total eclipse of the Sun observed at Naples in 1605.‡ Still later, in 1714 the existence of a self-luminous Matter was recognized by Halley in the *Philosophical Transactions*. Finally, the journal of this name published in 1811 the famous hypothesis of the eminent Astronomer, Sir William Herschell,

* *Progymnasmata*, p. 795.

† *De Stellâ Novâ in Pede Serpentarii*, p. 115.

‡ *Hypothèses Cosmogoniques*, p. 2, C. Wolf, 1886.

on the transformation of the nebulæ into Stars,* and after this the Nebular Theory was accepted by the Royal Academies.

In *Five Years of Theosophy*, on p. 245, may be read an article headed, "Do the Adepts deny the Nebular Theory?" The answer there given is:

No; they do not deny its general propositions, nor the approximative truth of the scientific hypotheses. They only deny the completeness of the present, as well as the entire error of the many so-called "exploded" old theories, which, during the last century, have followed each other in such rapid succession.

This was asserted at the time to be "an evasive answer." Such disrespect to official Science, it was argued, must be justified by the replacement of the *orthodox* speculation by another theory more complete, and having a firmer ground to stand upon. To this there is but one reply: It is useless to give out isolated theories with regard to things embodied in a complete and consecutive system, for, when separated from the main body of the teaching, they would necessarily lose their vital coherence and would thus do no good when studied independently. To be able to appreciate and accept the Occult views on the Nebular Theory, we must study the whole Esoteric cosmogonical system. And the time has hardly arrived for the Astronomers to be asked to accept Fohat and the Divine Builders. Even the undeniably correct surmises of Sir William Herschell, which had nothing "supernatural" in them, as to the Sun's being called a "globe of fire," perhaps metaphorically, and his early speculations about the nature of that which is now called the Nasmyth Willow-leaf Theory, only caused that most eminent of all Astronomers to be smiled at by other, far less eminent, colleagues, who saw and now see in his ideas purely "imaginative and fanciful theories." Before the whole Esoteric System could be given out and appreciated by the Astronomers, the latter would have to return to some of those "antiquated ideas," not only to those of Herschell, but also to the dreams of the oldest Hindû Astronomers, and thus abandon their own theories, which are none the less "fanciful" because they have appeared nearly eighty years later than the one, and many thousands of years later than the others. Foremost of all they would have to repudiate their ideas of the Sun's solidity and incandescence; the Sun "glowing" most undeniably, but not "burning." Then the Occultists state, with regard to the "willow-

* See *Philosophical Transactions*, p. 269, et seq.

leaves," that those "objects," as Sir William Herschell called them, are the immediate sources of the solar light and heat. And though the Esoteric Teaching does not regard these as he did—namely, as "organisms" partaking of the nature of life, for the Solar "Beings" will hardly place themselves within telescopic focus—yet it asserts that the whole Universe is full of such "organisms," conscious and active according to the proximity or distance of their planes to, or from, our plane of consciousness; and finally that the great Astronomer was right while speculating on those supposed "organisms," in saying that "we do not know that vital action is incompetent to develop at once heat, light, and electricity." For, at the risk of being laughed at by the whole world of Physicists, the Occultists maintain that all the "Forces" of the Scientists have their origin in the Vital Principle, the One Life collectively of our Solar System—that "Life" being a portion, or rather one of the *aspects*, of the One Universal LIFE.

We may, therefore—as in the article under consideration, wherein, on the authority of the Adepts, it was maintained that it is "sufficient to make a *résumé* of what the solar Physicists do not know"—we may, we maintain, define our position with regard to the modern Nebular Theory and its evident incorrectness, by simply pointing out facts diametrically opposed to it in its present form. And to begin with, what does it teach?

Summarizing the aforesaid hypotheses, it becomes plain that Laplace's theory—now made quite unrecognizable, moreover—was an unfortunate one. He postulates in the first place Cosmic Matter, existing in a state of diffuse nebulosity "so fine that its presence could hardly have been suspected." No attempt is made by him to penetrate into the Arcana of Being, except as regards the immediate evolution of our small Solar System.

Consequently, whether one accepts or rejects his theory in its bearing upon the immediate cosmological problems presented for solution, he can only be said to have thrown back the mystery a little further. To the eternal query: "Whence Matter itself: whence the evolutionary impetus determining its cyclic aggregations and dissolutions; whence the exquisite symmetry and order into which the primeval Atoms arrange and group themselves?" no answer is attempted by Laplace. All we are confronted with, is a sketch of the *probable* broad principles on which the actual process is assumed to be based. Well, and what is this now celebrated note on the said process?

What has he given so wonderfully new and original, that its groundwork, at any rate, should have served as a basis for the modern Nebular Theory? The following is what one gathers from various astronomical works.

Laplace thought that, in consequence of the condensation of the atoms of the primeval nebula, according to the "law" of gravity, the now gaseous, or perhaps, partially liquid mass, acquired a rotatory motion. As the velocity of this rotation increased, it assumed the form of a thin disc; finally, the centrifugal force overpowering that of cohesion, huge rings were detached from the edge of the whirling incandescent masses, and these rings contracted necessarily by gravitation (as accepted) into spheroidal bodies, which would necessarily still continue to preserve the orbit previously occupied by the outer zone from which they were separated.* The velocity of the outer edge of each nascent planet, he said, exceeding that of the inner, there results a rotation on its axis. The more dense bodies would be thrown off last; and finally, during the preliminary state of their formation, the newly-segregated orbs in their turn throw off one or more satellites. In formulating the history of the rupture and planetation of rings Laplace says:

Almost always each ring of vapours must have broken up into numerous masses, which, moving with a nearly uniform velocity, must have continued to circulate at the same distance around the sun. These masses must have taken a spheroidal form with a motion of rotation in the same direction as their revolution, since the inner molecules (those nearest the sun) would have less actual velocity than the exterior ones. They must then have formed as many planets in a state of vapour. But, if one of them was sufficiently powerful to unite successively, by its attraction, all the others around its centre, the ring of vapours must have been thus transformed into a single spheroidal mass of vapours circulating around the sun with a rotation in the same direction as its revolution. The latter case has been the more common, but the solar system presents us the first case, in the four small planets which move between Jupiter and Mars.

While few will be found to deny the "magnificent audacity of this hypothesis," it is impossible not to recognize the insurmountable difficulties with which it is attended. Why, for instance, do we find that the satellites of Neptune and Uranus display a retrograde motion?

* Laplace conceived that the external and internal zones of the ring would rotate with the same angular velocity, which would be the case with a solid ring; but the principle of equal areas requires the inner zones to rotate more rapidly than the outer. (*World-Life*, p. 121.) Prof. Winchell points out a good many mistakes of Laplace; but as a geologist he is not infallible himself in his "astronomical speculations."

Why, in spite of its closer proximity to the Sun, is Venus less dense than the Earth? Why, again, is the more distant Uranus denser than Saturn? How is it that there are so many variations in the inclination of their axes and orbits in the supposed progeny of the central orb; that such startling variations in the size of the Planets are noticeable; that the satellites of Jupiter are more dense by .288 than their primary; that the phenomena of meteoric and cometary systems still remain unaccounted for? To quote the words of a Master:

They [the Adepts] find that the centrifugal theory of Western birth is unable to cover all the ground. That, unaided, it can neither account for every oblate spheroid, nor explain away such evident difficulties as are presented by the relative density of some planets. How, indeed, can any calculation of centrifugal force explain to us, for instance, why Mercury, whose rotation is, we are told, only "about one-third that of the Earth, and its density only about one-fourth greater than the Earth," should have a polar compression more than ten times greater than the latter? And again, why Jupiter, whose equatorial rotation is said to be "twenty-seven times greater, and its density only about one-fifth that of the Earth" should have its polar compression seventeen times greater than that of the Earth? Or why Saturn, with an equatorial velocity fifty-five times greater than Mercury for centripetal force to contend with, should have its polar compression only three times greater than Mercury's? To crown the above contradictions, we are asked to believe in the Central Forces, as taught by Modern Science, even when told that the equatorial matter of the Sun, with more than four times the centrifugal velocity of the Earth's equatorial surface, and only about one-fourth part of the gravitation of the equatorial matter, has not manifested any tendency to bulge at the solar equator, nor shown the least flattening at the poles of the solar axis. In other and clearer words, the Sun, with only one-fourth of our Earth's density for the centrifugal force to work upon, has no polar compression at all! We find this objection made by more than one astronomer, yet never explained away satisfactorily, so far as the "Adepts" are aware.

Therefore, do they [the Adepts] say, that the great men of Science of the West, knowing . . . next to nothing either about cometary matter, centrifugal and centripetal forces, the nature of the nebulae, or the physical constitution of the Sun, the Stars, or even the Moon, are imprudent to speak so confidently as they do about the "central mass of the Sun," whirling out into space planets, comets, and what not. . . We maintain that it [the Sun] evolves out only the life-principle, the Soul of these

*bodies, giving and receiving it back, in our little Solar System, as the "Universal Life-Giver" . . . in the Infinitude and Eternity; that the Solar System is as much the Microcosm of the One Macrocosm as man is the former when compared with his own little Solar Cosmos.**

The essential power of all the cosmic and terrestrial Elements to generate within themselves a regular and harmonious series of results, a concatenation of causes and effects, is an irrefutable proof that they are either animated by an *Intelligence, ab extrâ or ab intrâ*, or conceal such within or behind the "manifested veil." Occultism does not deny the certainty of the mechanical origin of the Universe; it only claims the absolute necessity of mechanicians of some sort behind or within those Elements—a dogma with us. It is not the fortuitous assistance of the Atoms of Lucretius, as he himself knew well, that built the Kosmos and all in it. Nature herself contradicts such a theory. Celestial Space, containing Matter so attenuated as Ether, cannot be called on, with or without attraction, to explain the common motion of the sidereal hosts. Although the perfect accord of their inter-revolution indicates clearly the presence of a mechanical cause in Nature, Newton, who of all men had most right to trust to his deductions, was nevertheless forced to abandon the idea of ever explaining the original impulse given to the millions of orbs, by merely the laws of *known* Nature and its material Forces. He recognized fully the limits that separate the action of natural Forces from that of the *Intelligences* that set the immutable laws in order and action. And if a Newton had to renounce such hope, which of the modern materialistic pigmies has the right of saying: "I know better"?

A cosmogonical theory, to become complete and comprehensible, has to start with a Primordial Substance diffused throughout boundless Space, *of an intellectual and divine nature*. That Substance must be the Soul and Spirit, the Synthesis and Seventh Principle of the manifested Kosmos, and, to serve as a spiritual Upâdhi to this, there must be the sixth, its vehicle—Primordial Physical Matter, so to speak, though its nature must escape for ever our limited *normal* senses. It is easy for an Astronomer, if endowed with an imaginative faculty, to build a theory of the emergence of the Universe out of Chaos, by simply applying to it the principles of mechanics. But such a Universe will always prove a Frankenstein's monster with respect to its scientific human creator; it will lead him into endless perplexities.

* *Five Years of Theosophy*, pp. 249-251, Art. "Do the Adepts deny the Nebular Theory?"

The application of mechanical laws only can never carry the speculator beyond the objective world; nor will it unveil to men the origin and final destiny of Kosmos. This is whither the Nebular Theory has led Science. In sober fact and truth this Theory is twin sister to that of Ether, and both are the offspring of necessity; one is as indispensable to account for the transmission of light, as is the other to explain the problem of the origin of the Solar Systems. The question with Science is, how the same homogeneous Matter* could, obeying the laws of Newton, give birth to bodies—Sun, Planets, and their satellites—subject to conditions of identity of motion, and formed of such heterogeneous elements.

Has the Nebular Theory helped to solve the problem, even if applied solely to bodies considered as inanimate and material? We say: most decidedly not. What progress has it made since 1811, when first Sir William Herschell's paper, with its facts based on observation and showing the existence of nebular matter, made the sons of the Royal Society "shout for joy"? Since then a still greater discovery, through spectrum analysis, has permitted the verification and corroboration of Sir William Herschell's conjecture. Laplace demanded some kind of primitive "world-stuff" to prove the idea of progressive world-evolution and growth. Here it is, as offered two millenniums ago.

The "world-stuff," now called *nebulæ*, was known from the highest antiquity. Anaxagoras taught that, upon differentiation, the resulting commixture of heterogeneous substances remained motionless and unorganized, until finally the "Mind"—the collective body of Dhyân Chohans, we say—began to work upon, and communicated to, them motion and order.† This theory is now taken up, so far as concerns its first portion; the last, that of any "Mind" interfering, being rejected. Spectrum analysis reveals the existence of *nebulæ* formed entirely of gases and luminous vapours. Is this the primitive nebular Matter? The spectra reveal, it is said, the physical conditions of the Matter which emits cosmic light. The spectra of the resolvable and the irresolvable *nebulæ* are shown to be entirely different, the spectra of the

* Had Astronomers, in their present state of knowledge, merely held to the hypothesis of Laplace, which was simply the formation of the Planetary System, it might in time have resulted in something like an approximate truth. But the two parts of the general problem—that of the formation of the Universe, or the formation of the Suns and Stars from the Primitive Matter, and then the development of the Planets round their Sun—rest on quite different facts in Nature and are even so viewed by Science itself. They are at the opposite poles of Being.

† Aristotle's *Physica*, viii. 1.

latter showing their physical state to be that of glowing gas or vapour. The bright lines of one nebula reveal the existence of hydrogen, and of other material substances known and unknown. The same as to the atmospheres of the Sun and Stars. This leads to the direct inference that a Star is formed by the condensation of a nebula; hence that even the metals themselves are formed on earth by the condensation of hydrogen or of some other primitive matter, some ancestral cousin to helium, perhaps, or some yet unknown stuff. *This does not clash with the Occult Teachings.* And this is the problem that Chemistry is trying to solve; and it must succeed sooner or later in the task, accepting *nolens volens*, when it does, the Esoteric Teaching. But when this does happen, it will kill the Nebular Theory as it now stands.

Meanwhile Astronomy cannot accept in any way, if it is to be regarded as an *exact* Science, the present theory of the filiation of Stars—even if Occultism does so in its own way, seeing that it explains this filiation differently—because Astronomy has *not one single physical datum* to show for it. Astronomy could anticipate Chemistry in proving the existence of the fact, if it could show a planetary nebula exhibiting a spectrum of three or four bright lines, gradually condensing and transforming into a Star, with a spectrum all covered with a number of dark lines. But

The question of the variability of the nebulae, even as to their form, is yet one of the mysteries of Astronomy. The data of observation possessed so far are of too recent an origin, too uncertain, to permit us to affirm anything.*

Since its discovery, the magic power of the spectroscope has revealed to its adepts only one single transformation of a Star of this kind; and even that showed directly the reverse of what is needed as proof in favour of the Nebular Theory; for it revealed *a Star transforming itself into a planetary nebula.* As related in *The Observatory*,† the temporary Star, discovered by J. F. J. Schmidt in the constellation Cygnus, in November, 1876, exhibited a spectrum broken by very brilliant lines. Gradually, the continuous spectrum and most of the lines disappeared, leaving finally one single brilliant line, which appeared to coincide with the green line of the nebula.

Though this metamorphosis is not irreconcilable with the hypothesis of the nebular origin of the Stars, nevertheless this single solitary case rests on no observation whatever, least of all on direct observation.

* *Hypothèses Cosmogoniques*, p. 3, Wolf.

† Vol. I., p. 185, quoted by Wolf, p. 3. Wolf's argument is here summarized.

The occurrence may have been due to several other causes. Since Astronomers are inclined to think our Planets are tending toward precipitation into the Sun, why should not that Star have blazed up owing to a collision of such precipitated Planets, or, as many suggest, the appulse of a Comet? Be that as it may, the only known instance of star-transformation since 1811 is not favourable to the Nebular Theory. Moreover, on the question of this Theory, as on all others, Astronomers disagree.

In our own age, and before Laplace ever thought of it, Buffon, being very much struck by the identity of motion in the Planets, was the first to propose the hypothesis that the Planets and their satellites originated in the bosom of the Sun. Forthwith and for this purpose, he invented a special Comet, supposed to have torn out, by a powerful oblique blow, the quantity of matter necessary for their formation. Laplace gave its dues to the "Comet" in his *Exposition du Système du Monde*.* But the idea was seized and even improved upon by a conception of the alternate evolution, from the Sun's central mass, of Planets *apparently* without weight or influence on the motion of the visible Planets—and as evidently without any more existence than the likeness of Moses in the Moon.

But the modern theory is also a variation on the systems elaborated by Kant and Laplace. The idea of both was that, at the origin of things, all that Matter which now enters into the composition of the planetary bodies was spread over all the space comprized in the Solar System—and even beyond. It was a nebula of extremely small density, and its condensation gradually gave birth, by a mechanism that has hitherto never been explained, to the various bodies of our System. This is the original Nebular Theory, an *incomplete* yet faithful repetition—a short chapter out of the large volume of universal Esoteric Cosmogony—of the teachings of the Secret Doctrine. And both systems, Kant's and Laplace's, differ greatly from the modern Theory, redundant with conflicting *sub*-theories and fanciful hypotheses, Say the Teachers:

The essence of cometary matter [and of that which composes the Stars] is totally different from any of the chemical or physical characteristics with which the greatest Chemists and Physicists of the earth are familiar. . . . While the spectroscope has shown the probable similarity [owing to the chemical action of terrestrial light upon the inter-

* Note vii. Summarized from Wolf, p. 6.

cepted rays] of terrestrial and sidereal substance, the chemical actions peculiar to the variously progressed orbs of space, have not been detected, nor proven to be identical with those observed on our own planet.*

Mr. Crookes says almost the same in the fragment quoted from his lecture, *Elements and Meta-Elements*. C. Wolf, Member of the Institute, Astronomer of the Observatory, Paris, observes:

At the utmost the nebular hypothesis can only show in its favour, with W. Herschell, the existence of planetary nebulæ in various degrees of condensation, and of spiral nebulæ, with nuclei of condensation on the branches and centre.† But, in fact, the knowledge of the bond that unites the nebulæ to the stars is yet denied to us; and lacking as we do direct observation, we are even debarred from establishing it on the analogy of chemical composition.‡

Even if the men of Science—leaving aside the difficulty arising out of such undeniable variety and heterogeneity of matter in the constitution of nebulæ—did admit, with the Ancients, that the origin of all the visible and invisible heavenly bodies must be sought for in one primordial homogeneous world-stuff, in a kind of *Pre-Protyle*,§ it is evident that this would not put an end to their perplexities. Unless they admit also that our actual visible Universe is merely the *Sthûla Sharîra*, the gross body, of the sevenfold Kosmos, they will have to face another problem; especially if they venture to maintain that its now visible bodies are the result of the condensation of that one and single Primordial Matter. For mere observation shows them that the operations which produced the actual Universe are far more complex than could ever be embraced in that theory.

First of all, there are two distinct classes of “irresolvable” nebulæ, as Science itself teaches.

The telescope is unable to distinguish between these two classes, but the spectroscope can do so, and notices an essential difference between their physical constitutions.

The question of the resolvability of the nebulæ has been often presented in too affirmative a manner and quite contrary to the ideas expressed by the illustrious

* *Five Years of Theosophy*, pp. 241, 242, and 239.

† But the spectra of these nebulæ have never yet been ascertained. When they are found with bright lines, then only may they be cited.

‡ *Hypothèses Cosmogoniques*, p. 3.

§ Mr. Crookes' Protyle must not be regarded as the primary stuff, out of which the Dhyân Chohans, in accordance with the immutable laws of Nature, wove our Solar System. This Protyle cannot even be the *Prima Materia* of Kant, which that great mind saw used up in the formation of the worlds, and thus existing no longer in a diffused state. Protyle is a *mediate* phase in the progressive differentiation of Cosmic Substance from its normal undifferentiated state. It is, then, the aspect assumed by Matter in its middle passage into full objectivity.

experimenter with the spectra of these constellations—Mr. Huggins. Every nebula whose spectrum contains only bright lines is gaseous, it is said, and hence is irresolvable; every nebula with a continuous spectrum must end by resolving into stars with an instrument of sufficient power. This assumption is contrary at once to the results obtained, and to spectroscopic theory. The “Lyra” nebula, the “Dumb-bell” nebula, the central region of the nebula of Orion, appear resolvable, and show a spectrum of bright lines; the nebula of Canes Venatici is not resolvable, and gives a continuous spectrum. Because, indeed, the spectroscope informs us of the physical state of the constituent matter of the stars, but affords us no notions of their modes of aggregation. A nebula formed of gaseous globes (or even of nuclei, faintly luminous, surrounded by a powerful atmosphere) would give a spectrum of lines and be still resolvable; such seems to be the state of Huggins’ region in the Orion nebula. A nebula formed of solid or fluidic particles in a state of incandescence, a true cloud, will give a continuous spectrum and will be irresolvable.

Some of these nebulae, Wolf tells us,

Have a spectrum of three or four bright lines, others a continuous spectrum. The first are gaseous, the others formed of a pulverulent matter. The former must constitute a veritable atmosphere: it is among these that the solar nebula of Laplace has to be placed. The latter form an *ensemble* of particles that may be considered as independent, and the rotation of which obeys the laws of internal weight: such are the nebulae adopted by Kant and Faye. Observation allows us to place the one as the other at the very origin of the planetary world. But when we try to go beyond and ascend to the primitive chaos which has produced the totality of the heavenly bodies, we have first to account for the actual existence of these two classes of nebulae. If the primitive chaos were a cold luminous gas,* one could understand how the contraction resulting from attraction could have heated it and made it luminous. We have to explain the condensation of this gas to the state of incandescent particles, the presence of which is revealed to us in certain nebulae by the spectroscope. If the original chaos was composed of such particles, how did certain of their portions pass into the gaseous state, while others have preserved their primitive condition?

Such is the synopsis of the objections and difficulties in the way of the acceptance of the Nebular Theory, brought forward by the French *savant*, who concludes this interesting argument by declaring that:

The first part of the cosmogonical problem—what is the primitive matter of chaos; and how did that matter give birth to the sun and stars?—thus remains to this day in the domain of romance and of mere imagination.†

* See Stanza III, Commentary 9, (p. 109) about “Light,” or “Cold Flame,” where it is explained that the “Mother”—Chaos—is a cold Fire, a cool Radiance, colourless, formless, devoid of every quality. “*Motion as the One Eternal is, and contains the potentialities of every quality in the Manvantaric Worlds,*” it is said.

† *Hypothèses Cosmogoniques*, pp. 4, 5.

If this is the last word of Science upon the subject, whither then should we turn in order to learn what the Nebular Theory is supposed to teach? What, in fact, is this theory? What it *is*, no one seems to know for certain. What it is not—we learn from the erudite author of *World-Life*. He tells us that it:

i. Is not a theory of the evolution of the Universe. It is primarily a genetic explanation of the phenomena of the solar system, and accessorially a co-ordination in a common conception of the principal phenomena in the stellar and nebular firmament, as far as human vision has been able to penetrate.

ii. It does not regard the comets as involved in that particular evolution which has produced the Solar System. [The Esoteric Doctrine does, because it, too, “recognizes the comets as forms of cosmic existence co-ordinated with earlier stages of nebular evolution”; and it actually assigns to *them chiefly* the formation of all worlds.]

iii. *It does not deny an antecedent history of the luminous fire mist*—[the secondary stage of evolution in the Secret Doctrine] [and] . . . makes no claim to having reached an absolute beginning. [And even it allows that this] fire mist may have previously existed in a cold, non-luminous and invisible condition.

iv. [And that finally] *it does not profess to discover the ORIGIN of things, but only a stadium in material history* [leaving] the philosopher and the theologian as free as they ever were to seek the origin of the modes of being.*

But this is not all. Even the greatest philosopher of England—Mr. Herbert Spencer—arrayed himself against this fantastic theory by saying that (a) “The problem of existence is not resolved” by it; (b) the nebular hypothesis “throws no light upon the origin of diffused matter”; and (c) that “the nebular hypothesis (as it now stands) implies a First Cause.”†

The latter, we are afraid, is more than our modern Physicists have bargained for. Thus, it seems that the poor “hypothesis” can hardly expect to find help or corroboration even in the world of the Metaphysicians.

Considering all this, the Occultists believe they have a right to present *their* Philosophy, however misunderstood and ostracized it may be at present. And they maintain that this failure of the Scientists to discover the truth is entirely due to their Materialism and their contempt for transcendental Sciences. Yet although the scientific minds in our century are as far from the true and correct doctrine of Evolution as ever, there may be still some hope left for the future, for even now we find another Scientist giving us a faint glimmer of it.

* *World-Life*, p. 196.

† *Westminster Review*, XX., July 27, 1868.

In an article in the *Popular Science Review* on "Recent Researches in Minute Life," we find Mr. H. J. Slack, F.C.S., Sec. R.M.S., saying:

There is an evident convergence of all sciences, from physics to chemistry and physiology, toward some doctrine of evolution and development, of which the facts of Darwinism will form part, but what ultimate aspect this doctrine will take, there is little, if any, evidence to show, and perhaps it will not be shaped by the human mind until metaphysical as well as physical inquiries are much more advanced.*

This is a happy forecast indeed. The day *may* come, then, when "Natural Selection," as taught by Mr. Darwin and Mr. Herbert Spencer, will, in its ultimate modification, form only *a part* of our Eastern doctrine of Evolution, which will be Manu and Kapila *Esoterically explained*.

* Vol. XIV. p. 252.

SECTION XIII.

FORCES—MODES OF MOTION OR INTELLIGENCES?

THIS is, then, the last word of Physical Science up to the present year, 1888. Mechanical laws will never be able to prove the homogeneity of Primeval Matter, except inferentially and as a desperate necessity, when there will remain no other issue—as in the case of Ether. Modern Science is secure only in its own domain and region; within the physical boundaries of our Solar System, beyond which everything, every particle of Matter, is different from the Matter it knows, and where Matter exists in states of which Science can form no idea. *This* Matter, which is truly homogeneous, is beyond human perception, if perception is tied down merely to the five senses. We feel its effects through those INTELLIGENCES which are the results of its primeval differentiation, whom we name Dhyân Chohans, called in the Hermetic works the “Seven Governors”; those to whom Pymander, the “Thought Divine,” refers as the “Building Powers,” and whom Asklepios calls the “Supernal Gods.” This Matter—the real Primordial Substance, the Noumenon of all the “matter” we know of—some of our Astronomers even have been led to believe in, for they despair of the possibility of ever accounting for rotation, gravitation, and the origin of any mechanical physical laws, unless these INTELLIGENCES be admitted by Science. In the above-quoted work upon Astronomy by Wolf,* the author endorses fully the theory of Kant, and the latter theory, if not in its general aspect, at any rate in some of its features, reminds one strongly of certain Esoteric Teachings. Here we have the world’s system “reborn from its ashes,” through a nebula—the emanation from the bodies, dead and dissolved in Space, resultant of the *incandescence* of the Solar Centre—reanimated by the combustible matter of the Planets. In this theory, generated and developed in the

* *Hypothèses Cosmogoniques.*

brain of a young man hardly twenty-five years of age, who had never left his native place, Königsberg, a small town of Northern Prussia, one can hardly fail to recognize either the presence of an inspiring external power, or an evidence of the *reincarnation* which the Occultists see in it. It fills a gap which Newton, with all his genius, failed to bridge. And surely it is our Primeval Matter, Âkâsha, that Kant had in view, when he postulated a universally pervading primordial Substance, in order to solve Newton's difficulty, and his failure to explain, by natural forces alone, the primitive impulse imparted to the Planets. For, as he remarks in Chapter viii, if it is once admitted that the perfect harmony of the Stars and Planets and the coincidence of their orbital planes prove the existence of a natural Cause, which would thus be the Primal Cause, "that Cause cannot really be the matter which fills to-day the heavenly spaces." It must be that which filled Space—was Space—originally, whose motion in differentiated Matter was the origin of the actual movements of the sidereal bodies; and which, "in condensing itself in those very bodies, thus abandoned the space that is to-day found void." In other words, it is of that same Matter that are now composed the Planets, Comets, and the Sun himself, and that Matter, having originally formed itself into those bodies, has preserved its inherent quality of motion; which quality, now centred in their nuclei, directs all motion. A very slight alteration of words in this is needed, and a few additions, to make of it our Esoteric Doctrine.

The latter teaches that it is this original, primordial Prima Materia, divine and intelligent, the direct emanation of the Universal Mind, the Daiviprakriti—the Divine Light* emanating from the Logos—which formed the nuclei of all the "self-moving" orbs in Kosmos. It is the informing, ever-present moving-power and life-principle, the Vital Soul of the Suns, Moons, Planets, and even of our Earth; the former latent, the latter active—the invisible Ruler and Guide of the gross body attached to, and connected with, its Soul, which is the spiritual emanation, after all, of these respective Planetary Spirits.

Another quite Occult Doctrine is the theory of Kant, that the Matter of which the inhabitants and the animals of other Planets are formed is of *a lighter and more subtle nature and of a more perfect conformation, in proportion to their distance from the Sun.* The latter is too full of Vital Electricity, of the physical, life-giving principle. Therefore, the men

* Which "Light" we call Fohat.

on Mars are more ethereal than we are, while those on Venus are more gross, though far more intelligent, if less spiritual.

The last doctrine is not quite ours—yet these Kantian theories are as metaphysical, and as transcendental as any Occult Doctrines; and more than one man of Science would, if he but *dared* speak his mind, accept them as Wolf does. From this Kantian Mind and Soul of the Suns and Stars to the Mahat (Mind) and Prakriti of the *Purânas* there is but a step. After all, the admission of this by Science would be only the admission of a natural cause, whether it would or would not stretch its belief to such metaphysical heights. But then Mahat, the Mind, is a “God,” and Physiology admits “mind” only as a temporary function of the material brain, and no more.

The Satan of Materialism now laughs at all alike, and denies the visible as well as the invisible. Seeing in light, heat, electricity, and even in the phenomenon of *life*, only properties inherent in Matter, it laughs whenever life is called the *Vital Principle*, and derides the idea of its being independent of and distinct from the organism.

But here again scientific opinions differ as in everything else, and there are several men of Science who accept views very similar to ours. Consider, for instance, what Dr. Richardson, F.R.S. (elsewhere quoted at length) says of that “Vital Principle,” which he calls “Nervous Ether”:

I speak only of a veritable *material agent*, refined, it may be, to the world at large, but *actual and substantial*: an agent having quality of weight and of volume, an agent susceptible of chemical combination, and thereby of change of physical state and condition, an agent passive in its action, moved always, that is to say, by influences apart from itself,* obeying other influences, an agent possessing no initiative power, no *vis* or *energeia naturæ*,† but still playing a most important if not a primary part in the production of the phenomena resulting from the action of the *energeia* upon visible matter.‡

As Biology and Physiology now deny, *in toto*, the existence of a Vital Principle, this extract, together with De Quatrefages’ admission, is a clear confirmation that there are men of Science who take the same views about “things Occult” as do Theosophists and Occultists. These recognize a distinct Vital Principle independent of the organism—

* This is a mistake, which implies a material agent, distinct from the influences which move it, i.e., blind matter and perhaps “God” again, whereas this One Life is the very God and God “Itself.”

† The same error.

‡ *Popular Science Review*, Vol. X.

material, of course, as *physical Force cannot be divorced from Matter*, but of a Substance existing in a state unknown to Science. *Life for them is something more than the mere interaction of molecules and atoms.* There is a Vital Principle without which no molecular combinations could ever have resulted in a living organism, least of all in the so-called "inorganic" Matter of our plane of consciousness.

By "molecular combinations" are meant, of course, those of the Matter of our present illusive perceptions, which Matter energizes only on this, our plane. And this is the chief point at issue.*

Thus the Occultists are not alone in their beliefs. Nor are they so foolish, after all, in rejecting even the "gravity" of Modern Science along with other *physical* laws, and in accepting instead *attraction* and *repulsion*. They see, moreover, in these two opposite Forces only the two *aspects* of the Universal Unit, called *Manifesting Mind*; in which aspects, Occultism, through its great Seers, perceives an innumerable Host of operative Beings: cosmic Dhyân Chohans, Entities, whose essence, in its *dual* nature, is the Cause of all terrestrial phenomena. For that essence is con-substantial with the universal Electric Ocean, which is LIFE; and being dual, as said—positive and negative—it is the emanations of that duality that act now on Earth under the name of "modes of motion"; even Force having now become objectionable as a word, for fear it should lead someone, even in thought, to separate it from Matter! It is, as Occultism says, the dual *effects* of that dual essence, which have now been called centripetal and centrifugal forces, now negative and positive poles, or polarity, heat and cold, light and darkness, etc.

And it is further maintained that even the Greek and Roman Catholic Christians are wiser in believing, as they do—even if blindly connecting and tracing them all to an anthropomorphic God—in Angels, Archangels, Archons, Seraphs, and Morning Stars, in all those theological *deliciæ humani generis*, in short, that rule the Cosmic Elements, than Science is, in disbelieving in them altogether, and in

* "Is the Jiva a myth, as Science says, or is it not?" ask some Theosophists, wavering between materialistic and idealistic Science. The difficulty of really grasping Esoteric problems concerning the "ultimate state of Matter" is again the old crux of the *objective* and the *subjective*. What is Matter? Is the Matter of our present objective consciousness anything but our *sensations*? True, the sensations we receive come *from without*, but can we really—except in terms of phenomena—speak of the "gross matter" of this plane as an entity apart from and independent of us? To all such arguments Occultism answers: True, in *reality* Matter is not independent of, or existent outside, our perceptions. Man is an *illusion*: granted. But the existence and actuality of other, still more illusive, but not less *actual*, entities than we are, is not a claim which is lessened, but rather strengthened, by this doctrine of Vedântic and even Kantian Idealism.

advocating its mechanical Forces. For these act very often with more than human intelligence and pertinency. Nevertheless, that intelligence is denied and attributed to blind chance. But, as De Maistre was right in calling the law of gravitation merely a *word* which replaced "the thing unknown," so are we right in applying the same remark to all the other Forces of Science. And if it is objected that the Count was an ardent Roman Catholic, then we may cite Le Couturier, as ardent a Materialist, who said the same thing, as did also Herschell and many others.*

From Gods to men, from Worlds to atoms, from a Star to a rush-light, from the Sun to the vital heat of the meanest organic being—the world of Form and Existence is an immense chain, the links of which are all connected. The Law of Analogy is the first key to the world-problem, and these links have to be studied coördinately in their Occult relations to each other.

When, therefore, the Secret Doctrine—postulating that conditioned or limited space (location) has no real being except in this world of illusion, or, in other words, in our perceptive faculties—teaches that every one of the higher, as of the lower worlds, is interblended with our own objective world; that millions of things and beings are, in point of localization, around and *in* us, as we are around, with, and in them; this is no mere metaphysical figure of speech, but a sober fact in Nature, however incomprehensible to our senses.

But one has to understand the phraseology of Occultism before criticizing what it asserts. For example, the Doctrine refuses—as Science does, in one sense—to use the words "above" and "below," "higher" and "lower," in reference to *invisible* spheres, since here they are without meaning. Even the terms "East" and "West" are merely conventional, necessary only to aid our human perceptions. For though the Earth has its two fixed points in the poles, North and South, yet both East and West are variable relatively to our own position on the Earth's surface, and in consequence of its rotation from West to East. Hence, when "other worlds" are mentioned—whether better or worse, more spiritual or still more material, though both invisible—the Occultist does not locate these spheres either outside or inside our Earth, as the theologians and the poets do; for their location is nowhere in the space known to, or conceived by, the profane. They are, as it were, blended with our world—interpen-

* See *Musée des Sciences*, August, 1856.

trating it and interpenetrated by it. There are millions and millions of worlds and firmaments visible to us; there are still greater numbers beyond those visible to the telescope, and many of the latter kind do not belong to our *objective* sphere of existence. Although as invisible as if they were millions of miles beyond our Solar System, they are yet with us, near us, *within* our own world, as objective and material to their respective inhabitants as ours is to us. But, again, the relation of these worlds to ours is not that of a series of egg-shaped boxes enclosed one within the other, like the toys called Chinese nests; each is entirely under its own special laws and conditions, having no direct relation to our sphere. The inhabitants of these, as already said, may be, for all we know, or feel, passing *through* and *around* us as if through empty space, their very habitations and countries being interblended with ours, though not disturbing our vision, because we have not yet the faculties necessary for discerning them. Yet by their spiritual sight the Adepts, and even some seers and sensitives, are always able to discern, whether in a greater or smaller degree, the presence and close proximity to us of Beings pertaining to other spheres of life. Those of the spiritually higher worlds communicate only with those terrestrial mortals who ascend to them, through individual efforts, on to the higher plane they are occupying.

*The sons of Bhūmi [Earth] regard the Sons of Deva-lokas [Angelspheres] as their Gods; and the Sons of lower kingdoms look up to the men of Bhūmi as to their Devas [Gods]; men remaining unaware of it in their blindness. . . . They [men] tremble before them while using them [for magical purposes]. . . . The First Race of Men were the "Mind-born Sons" of the former. They [the Pitris and Devas] are our progenitors.**

"Educated people," so-called, deride the idea of Sylphs, Salamanders, Undines, and Gnomes; the men of Science regard any mention of such superstitions as an insult; and with a contempt of logic and common good sense, that is often the prerogative of "accepted authority," they allow those, whom it is their duty to instruct, to labour under the absurd impression that in the whole Kosmos, or at any rate in our own atmosphere, there are no other conscious, intelligent beings, save ourselves.† Any other humanity (composed of distinct *human* beings) save a mankind with two legs, two arms, and a head with

* Book II. of the *Commentary on the Book of Dzyan*.

† Even the question of the plurality of worlds inhabited by sentient creatures is rejected, or is approached with the greatest caution! And yet see what the great astronomer, Camille Flammarion, says in his *Pluralité des Mondes*.

man's features on it, would not be called human; though the etymology of the word would seem to have little to do with the general appearance of a creature. Thus, while Science sternly rejects even the possibility of there being such (to us, generally) invisible creatures, Society, while believing in it all *secretly*, is made to deride the idea openly. It hails with mirth such works as the *Comte de Gabalis*, and fails to understand that *open satire is the securest mask*.

Nevertheless, such invisible worlds do exist. Inhabited as thickly as is our own, they are scattered throughout apparent Space in immense numbers; some far more material than our own world, others gradually etherealizing until they become formless and are as "breaths." The fact that our physical eye does not see them, is no reason for disbelieving in them. Physicists cannot see their Ether, Atoms, "modes of motion," or Forces. Yet they accept and teach them.

If we find, even in the natural world with which we are acquainted, Matter affording a partial analogy to the difficult conception of such invisible worlds, there seems little difficulty in recognizing the possibility of such a presence. The tail of a Comet, which, though attracting our attention by virtue of its luminosity, yet does not disturb or impede our vision of objects, which we perceive through and beyond it, affords the first stepping-stone toward a proof of the same. The tail of a Comet passes rapidly across our horizon, and we should neither feel it, nor be cognizant of its passage, but for the brilliant coruscation, often perceived only by a few interested in the phenomenon, while everyone else remains ignorant of its presence and of its passage *through*, or across, a portion of our globe. This tail may, or may not, be an integral portion of the being of the Comet, but its tenuity subserves our purpose as an illustration. Indeed, it is no question of superstition, but simply a result of transcendental Science, and of logic still more, to admit the existence of worlds formed of even far more attenuated Matter than the tail of a Comet. By denying such a possibility, Science has for the last century played into the hands of neither Philosophy nor true Religion, but simply into those of Theology. To be able to dispute the better the plurality of even material worlds, a belief thought by many churchmen incompatible with the teachings and doctrines of the *Bible*,* Maxwell had to calumniate the

* Nevertheless, it may be shown on the testimony of the *Bible* itself, and of such good Christian theologians as Cardinal Wiseman, that this plurality is taught in both the *Old* and the *New Testaments*.

memory of Newton, and to try and convince his public that the principles contained in the Newtonian philosophy are those "which lie at the foundation of all atheistical systems."*

"Dr. Whewell disputed the plurality of worlds by appeal to scientific evidence," writes Professor Winchell.† And if even the habitability of physical worlds, of Planets, and distant Stars which shine in myriads over our heads is so disputed, how little chance is there for the acceptance of invisible worlds within the apparently transparent space of our own!

But, if we can conceive of a world composed of Matter still more attenuated to *our* senses than the tail of a Comet, hence of inhabitants in it who are as ethereal, in proportion to *their* Globe, as we are in comparison with *our* rocky, hard-cruled Earth, no wonder if we do not perceive them, nor sense their presence or even existence. Only, in what is the idea contrary to Science? Cannot men and animals, plants and rocks, be supposed to be endowed with quite a different set of senses from those we possess? Cannot their organisms be born, develop, and exist, under other laws of being than those that rule our little world? Is it absolutely necessary that every corporeal being should be clothed in "coats of skin" like those that Adam and Eve were provided with in the legend of Genesis? Corporeality, we are told, however, by more than one man of Science, "may exist under very divergent conditions." Professor A. Winchell—arguing upon the plurality of worlds—makes the following remarks:

It is not at all improbable that substances of a refractory nature might be so mixed with other substances, known or unknown to us, as to be capable of enduring vastly greater vicissitudes of heat and cold than is possible with terrestrial organisms. The tissues of terrestrial animals are simply suited to terrestrial conditions. Yet even here we find different types and species of animals adapted to the trials of extremely dissimilar situations. . . . That an animal should be a quadruped or a biped is something not depending on the necessities of organization, or instinct, or intelligence. That an animal should possess just five senses is not a necessity of percipient existence. There may be animals on the earth with neither smell nor taste. There may be beings on other worlds, and even on this, who possess more numerous senses than we. The possibility of this is apparent when we consider the high probability that other properties and other modes of existence lie among the resources of the Cosmos, and even of terrestrial matter. There are animals which subsist where rational man would perish—in the soil, in

* See *Plurality of Worlds*, Vol. II.

† See on this *La Pluralité des Mondes Habités*, par C. Flammarion, wherein is given a list of the many men of Science who have written to prove the theory.

the river, and the sea . . . [and why not *human* beings of different organizations, in such case?] . . . Nor is incorporated rational existence conditioned on warm blood, nor on any temperature which does not change the forms of matter of which the organism may be composed. There may be intelligences corporealized after some concept not involving the processes of injection, assimilation, and reproduction. Such bodies would not require daily food and warmth. They might be lost in the abysses of the ocean, or laid up on a stormy cliff through the tempests of an Arctic winter, or plunged in a volcano for a hundred years, and yet retain consciousness and thought. It is conceivable. Why might not psychic natures be enshrined in indestructible flint and platinum? These substances are no further from the nature of intelligence than carbon, hydrogen, oxygen, and lime. But, not to carry the thought to such an extreme [?], might not high intelligence be embodied in frames as indifferent to external conditions as the sage of the western plains, or the lichens of Labrador, the rotifers which remain dried for years, or the bacteria which pass living through boiling water. . . . These suggestions are made simply to remind the reader how little can be argued respecting the necessary conditions of intelligent, organized existence, from the standard of corporeal existence found upon the earth. Intelligence is, from its nature, as universal and as uniform as the laws of the universe. Bodies are merely the local fitting of intelligence to particular modifications of universal matter or force.*

Do not we know through the discoveries of that same all-denying Science that we are surrounded by myriads of invisible lives? If these microbes, bacteria and the *tutti quanti* of the infinitesimally small, are invisible to us by virtue of their minuteness, cannot there be, at the other pole, beings as invisible owing to the quality of their texture or matter—to its tenuity, in fact? Conversely, as to the effects of cometary matter, have we not another example of a half visible form of Life and Matter? The ray of sunlight entering our apartment reveals in its passage myriads of tiny beings living their little life and ceasing to be, independent and heedless of whether they are or are not perceived by our grosser materiality. And so again, of the microbes and bacteria and such-like unseen beings in other elements. We passed them by, during those long centuries of dreary ignorance, after the lamp of knowledge in the heathen and highly philosophical systems had ceased to throw its bright light on the ages of intolerance and bigotry of early Christianity; and we would fain pass them by again now.

And yet these lives surrounded us *then* as they do now. They have worked on, obedient to their own laws, and it is only as they have been gradually revealed by Science that we have begun to take cognizance of them and of the effects produced by them.

* *World-Life*, pp. 496-498, et seq.

How long has it taken the world to become what it now is? If it can be said that even up to the present day cosmic dust, "which has never belonged to the earth before,"* reaches our Globe, how much more logical is it to believe—as the Occultists do—that through the countless millions of years that have rolled away since that dust aggregated and formed the Globe we live in round its nucleus of *intelligent* Primeval Substance, many humanities—differing from our present mankind as greatly as the humanity which will evolve millions of years hence will differ from our races—appeared but to disappear from the face of the Earth, as will our own. These primitive and far-distant humanities are denied, because, as Geologists think, they have left no tangible relics of themselves. All trace of them is swept away, and therefore they have never existed. Yet their relics—though very few of them, truly—are to be found, and they must be discovered by geological research. But, even if they were never to be met with, there would be no reason to say that no men could have ever lived in the geological periods to which their presence on earth is assigned. For their organisms needed no warm blood, no atmosphere, no feeding; the author of *World-Life* is right, and there is no extravagance in believing as we do, that as, on scientific hypotheses, there may be to this day "psychic natures enshrined in indestructible flint and platinum," so there were psychic natures enshrined in forms of equally indestructible Primeval Matter—the real forefathers of our Fifth Race.

When, therefore, as in Volume II, we speak of men who inhabited this Globe 18,000,000 years ago, we have in mind neither the men of our present races, nor the present atmospheric laws, thermal conditions, etc. The Earth and Mankind, like the Sun, Moon, and Planets, all have their growth, changes, development, and gradual evolution in their life-periods; they are born, become infants, then children, adolescent, grown-up, they grow old, and finally die. Why should not Mankind be also under this universal law? Says Uriel to Enoch:

Behold, I have showed thee all things, O Enoch. . . . Thou seest the sun, the moon, and those which conduct the stars of heaven, which cause all their operations, seasons, and arrivals to return. In the days of sinners the years shall be shortened . . . everything done on earth shall be subverted . . . the moon shall change its laws.†

* *World-Life*. † *The Book of Enoch*. Trans. by Archbishop Laurence, Ch. LXXIX.

The "days of sinners" meant the days when Matter would be in its full sway on Earth, and man would have reached the apex of physical development in stature and animality. That came to pass during the period of the Atlanteans, about the middle point of their Race, the Fourth, which was drowned, as prophesied by Uriel. Since then man has been decreasing in physical stature, strength, and years, as will be shown in Volume II. But as we are at the mid-point of our sub-race of the Fifth Root-Race—the acme of materiality in each—the animal propensities, though more refined, are none the less developed; and this is most marked in civilized countries.

SECTION XIV.

GODS, MONADS AND ATOMS.

SOME years ago we remarked that:

The Esoteric Doctrine may well be called . . . the "Thread Doctrine," since, like Sûtrâtmâ [in the Vedânta Philosophy*], it passes through and strings together all the ancient philosophical religious systems, and . . . reconciles and explains them.†

We now say it does more. It not only reconciles the various and apparently conflicting systems, but it checks the discoveries of modern exact Science, showing some of them to be necessarily correct, since they are found corroborated in the Ancient Records. All this will, no doubt, be regarded as terribly impertinent and disrespectful, a veritable crime of *lèse-science*; nevertheless, it is a fact.

Science is, undeniably, ultra-materialistic in our days; but it finds, in one sense, its justification. Nature behaving ever esoterically *in actu*, and being, as the Kabalists say, *in abscondito*, can only be judged by the profane through her appearance, and that appearance is always deceitful on the physical plane. On the other hand, the Naturalists refuse to blend Physics with Metaphysics, the Body with its informing Soul and Spirit. They prefer to ignore the latter. This is a matter of choice with some, while the minority very sensibly strive to enlarge the domain of Physical Science by trespassing on the forbidden grounds of Metaphysics, so distasteful to some Materialists. These Scientists are wise in their generation. For all their wonderful discoveries will go for nothing, and remain for ever *headless* bodies, unless they lift the veil of Matter and strain their eyes to see *beyond*. Now that they have studied Nature in the length, breadth, and thickness of her physical frame, it is time to remove the skeleton to the second

* The Âtmâ, or Spirit, the Spiritual SELF, passing like a thread through the five Subtle Bodies, or Principles, Koshas, is called "Thread-soul," or Sûtrâtmâ in Vedântic Philosophy.

† "The Septenary Principle," *Five Years of Theosophy*, p. 197.

plane, and search within the unknown depths for the living and real entity, for its *sub*-stance—the noumenon of evanescent Matter.

It is only by acting along such lines that some truths, now called “exploded superstitions,” will be discovered to be facts, and the relics of ancient knowledge and wisdom.

One of such “degrading” beliefs—degrading in the opinion of the all-denying Sceptic—is found in the idea that Kosmos, besides its objective planetary inhabitants, its humanities in other inhabited worlds, is full of invisible, intelligent *Existences*. The so-called Arch-Angels, Angels and Spirits, of the West, copies of their prototypes, the Dhyân Chohans, the Devas and Pitris, of the East, are not real Beings, but fictions. On this point materialistic Science is inexorable. To support its position, it upsets its own axiomatic law of uniformity and of continuity in the laws of Nature, and all the logical sequence of analogies in the evolution of Being. The masses of the profane are asked, and are made, to believe that the accumulated testimony of History—which shows even the “Atheists” of old, such men as Epicurus and Democritus, as believers in *Gods*—is false; and that Philosophers like Socrates and Plato, asserting such existences, were mistaken enthusiasts and fools. If we hold our opinions merely on historical grounds, on the authority of legions of the most eminent Sages, Neo-Platonists, and Mystics in all ages, from Pythagoras down to the eminent Scientists and Professors of the present century, who, if they reject “Gods,” believe in “Spirits,” are we to consider such authorities to be as weak-minded and foolish as any Roman Catholic peasant, who believes in and prays to his once human Saint, or the Archangel St. Michael? But is there no difference between the belief of the peasant and that of the Western heirs of the Rosicrucians and Alchemists of the Middle Ages? Is it the Van Helmonts, the Khunraths, the Paracelsuses and Agrippas, from Roger Bacon down to St. Germain, who were all blind enthusiasts, hysteriacs or cheats, or is it the handful of modern Sceptics—the “leaders of thought”—who are struck with the cecity of negation? The latter is the case, we opine. It would indeed be a *miracle*, quite an abnormal fact in the realm of probabilities and logic, were that handful of negators to be the sole custodians of *truth*, while the million-strong hosts of believers in Gods, Angels, and Spirits—in Europe and America alone—namely, Greek and Latin Christians, Theosophists, Spiritualists, Mystics, etc., should be no better than deluded fanatics and hallucinated mediums, and

often no higher than the victims of deceivers and impostors! However varying in their external presentations and dogmas, beliefs in the Hosts of invisible Intelligences of various grades have all the same foundation. Truth and error are mixed in all. The exact extent, depth, breadth, and length of the mysteries of Nature are to be found only in Eastern Esoteric Science. So vast and so profound are these that scarcely even a few, a very few of the highest Initiates—those *whose very existence is known but to a small number of Adepts*—are capable of assimilating the knowledge. Yet it is all there, and one by one facts and processes in Nature's workshops are permitted to find their way into exact Science, while mysterious help is given to rare individuals in unravelling its arcana. It is at the close of great Cycles, in connection with racial development, that such events generally take place. We are at the very close of the cycle of 5,000 years of the present Âryan Kali Yuga; and between this time and 1897 there will be a large rent made in the Veil of Nature, and materialistic Science will receive a death-blow.

Without throwing any discredit upon time-honoured beliefs, in any direction, we are forced to draw a marked line between blind faith, evolved by theologies, and knowledge due to the independent researches of long generations of Adepts; between, in short, faith and Philosophy. There have been, in all ages, undeniably learned and good men who, having been reared in sectarian beliefs, died in their crystallized convictions. For Protestants, the garden of Eden is the primeval point of departure in the drama of Humanity, and the solemn tragedy on the summit of Calvary is the prelude to the hoped-for Millennium. For Roman Catholics, Satan is at the foundation of Kosmos, Christ in its centre, and Antichrist at its apex. For both, the Hierarchy of Being begins and ends within the narrow frames of their respective theologies: one self-created *personal* God, and an empyrean ringing with the Hallelujas of *created* Angels; the rest, *false* Gods, Satan and fiends.

Theo-Philosophy proceeds on broader lines. From the very beginning of æons—in time and space in our Round and Globe—the mysteries of Nature (at any rate, those which it is lawful for our Races to know) were recorded by the pupils of those same, now invisible, "Heavenly Men," in geometrical figures and symbols. The keys thereto passed from one generation of "Wise Men" to another. Some of the symbols thus passed from the East to the West, brought from the Orient by Pythagoras, who was not the inventor of his famous

"Triangle." The latter figure, along with the square and circle, are more eloquent and scientific descriptions of the order of the evolution of the Universe, spiritual and psychic, as well as physical, than volumes of descriptive Cosmogonies and revealed "Geneses." The ten Points inscribed within that "Pythagorean Triangle" are worth all the theogonies and angelologies ever emanated from the theological brain. For he who interprets these seventeen points (the seven Mathematical Points hidden)—on their very face, and in the order given—will find in them the uninterrupted series of the genealogies from the first Heavenly to Terrestrial Man. And, as they give the order of Beings, so they reveal the order in which were evolved the Kosmos, our Earth, and the primordial Elements by which the latter was generated. Begotten in the invisible "Depths," and in the Womb of the same "Mother" as its fellow-globes—he who masters the mysteries of our own Earth will have mastered those of all others.

Whatever ignorance, pride or fanaticism may suggest to the contrary, Esoteric Cosmology can be shown to be inseparably connected with both Philosophy and Modern Science. The Gods and Monads of the Ancients—from Pythagoras down to Leibnitz—and the Atoms of the present materialistic schools (as borrowed by them from the theories of the old Greek Atomists) are only a compound unit, or a graduated unity like the human frame, which begins with body and ends with Spirit. In the Occult Sciences they can be studied separately, but they can never be mastered unless they are viewed in their mutual correlations during their life-cycle, and as a Universal Unity during Pralayas.

La Pluche shows sincerity, but gives a poor idea of his philosophical capacities, when declaring his personal views on the Monad or the Mathematical Point. He says:

A point is enough to put all the schools in the world in a combustion. But what need has man to know that point, since the creation of such a small being is beyond his power? *À fortiori*, philosophy acts against probability when, from that point which absorbs and disconcerts all her meditations, she presumes to pass on to the generation of the world.

Philosophy, however, could never have formed its conception of a logical, universal, and absolute Deity, if it had had no Mathematical Point within the Circle upon which to base its speculations. It is only the manifested Point, lost to our senses after its pregenetic appearance in the infinitude and incognizability of the Circle, that makes a recon-

ciliation between Philosophy and Theology possible—on condition that the latter should abandon its crude materialistic dogmas. And it is because Christian theology has so unwisely rejected the Pythagorean Monad and geometrical figures, that it has evolved its self-created human and personal God, the monstrous Head whence flow in two streams the dogmas of Salvation and Damnation. This is so true, that even those clergymen who are Masons, and who would be Philosophers, have, in their arbitrary interpretations, fathered upon the Ancient Sages the queer idea that:

The Monad represented [with them] the throne of the Omnipotent Deity, placed in the centre of the empyrean to indicate T.G.A.O.T.U. [read the "Great Architect of the Universe"].*

A curious explanation this, more Masonic than strictly Pythagorean.

Nor did the "Hierogram within a Circle, or equilateral Triangle," ever mean "the exemplification of the unity of the divine Essence"; for this was exemplified by the plane of the boundless Circle. What it really meant was the triune coëqual Nature of the first differentiated Substance, or the con-substantiality of the (manifested) Spirit, Matter and the Universe—their "Son"—which proceeds from the Point, the real, Esoteric Logos, or Pythagorean Monad. For the Greek Monas signifies "Unity" in its primary sense. Those unable to seize the difference between the Monad—the Universal Unit—and the Monads or the manifested Unity, as also between the ever-hidden and the revealed Logos, or the Word, ought never to meddle with Philosophy, let alone with the Esoteric Sciences. It is needless to remind the educated reader of Kant's Thesis to demonstrate his second Antinomy.† Those who have read and understood it will see clearly the line we draw between the *absolutely ideal* Universe and the invisible though manifested Kosmos. Our Gods and Monads are not the Elements of extension itself, but only those of the invisible Reality which is the basis of the manifested Kosmos. Neither Esoteric Philosophy, nor Kant, to say nothing of Leibnitz, would ever admit that extension can be composed of simple or unextended parts. But theologian-philosophers will not grasp this. The Circle and the Point—the latter retiring into and merging with the former, after having emanated the first three Points and connected them with lines, thus forming the first *noumenal* basis of the Second Triangle in the Manifested World—have

* *Pythagorean Triangle*, by the Rev. G. Oliver, p. 36.

† See Kant's *Critique de la Raison Pure*, Barni's transl., II. 54.

ever been an insuperable obstacle to theological flights into dogmatic empyreans. On the authority of this Archaic Symbol, a male, personal God, the Creator and Father of all, becomes a third-rate emanation, the Sefhira standing fourth in descent, and on the left hand of Ain Suph, in the Kabalistic Tree of Life. Hence, the Monad is degraded into a Vehicle—a “Throne”!

The Monad—the emanation and reflection only of the Point, or Logos, in the phenomenal World—becomes, as the apex of the manifested equilateral Triangle, the “Father.” The left side or line is the Duad, the “Mother,” regarded as the evil, counteracting principle;* the right side represents the “Son,” “his Mother’s Husband” in every Cosmogony, as being one with the apex; the base line is the universal plane of productive Nature, unifying on the phenomenal plane Father-Mother-Son, as these were unified in the apex, in the supersensuous World.† By mystic transmutation they became the Quaternary—the Triangle became the Tetraktys.

This transcendental application of geometry to cosmic and divine theogony—the Alpha and the Omega of mystical conception—was dwarfed after Pythagoras by Aristotle. By omitting the Point and the Circle, and taking no account of the apex, he reduced the metaphysical value of the idea, and thus limited the doctrine of magnitude to a simple Triad—the *line*, the *surface*, and the *body*. His modern heirs, who play at Idealism, have interpreted these three geometrical figures as Space, Force, and Matter—“the potencies of an interacting Unity.” Materialistic Science, perceiving but the base line of the *manifested* Triangle—the plane of Matter—translates it practically as (Father)-*Matter*, (Mother)-*Matter*, and (Son)-*Matter*, and theoretically as Matter, Force, and Correlation.

But to the average Physicist, as remarked by a Kabalist:

Space, and Force, and Matter, are what signs in Algebra are to the Mathematician, merely conventional symbols, or Force as Force, and Matter as Matter, are as absolutely unknowable as is the assumed empty space in which they are held to interact.‡

* Plutarch, *De Placitis Philosophorum*.

† In the Greek and Latin Churches—which regard marriage as one of the sacraments—the officiating priest during the marriage ceremony represents the apex of the triangle; the bride, its left feminine side, and the bridegroom the right side, while the base line is symbolized by the row of witnesses, the bridesmaids and best men. But behind the priest there is the Holy of Holies, with its mysterious containments and symbolic meaning, inside of which no one but the consecrated priests should enter. In the early days of Christianity the marriage ceremony was a mystery and a true symbol. Now, however, even the Churches have lost the true meaning of this symbolism.

‡ *New Aspects of Life and Religion*, by Henry Pratt, M.D., p. 7. Ed. 1886.

Symbols represent abstractions, and on these

The physicist bases reasoned hypotheses of the origin of things he sees three needs in what he terms creation: A place wherein to create. A medium by which to create. A material from which to create. And in giving a logical expression to this hypothesis through the terms space, force, matter, he believes he has proved the existence of that which each of these represents as he conceives it to be.*

The Physicist who regards Space merely as a representation of our mind, or extension unrelated to things in it, which Locke defined as capable of neither resistance nor motion; the paradoxical Materialist, who would have a *void* there, where he can see no Matter, would reject with the utmost contempt the proposition that Space is

A substantial though [apparently an absolutely] unknowable living Entity.†

Such is, nevertheless, the Kabalistic teaching, and it is that of Archaic Philosophy. Space is the *real* World, while our world is an artificial one. It is the One Unity throughout its infinitude: in its bottomless depths as on its illusive surface; a surface studded with countless phenomenal Universes, Systems and mirage-like Worlds. Nevertheless, to the Eastern Occultist, who is an objective Idealist at bottom, in the *real* World, which is a Unity of Forces, there is "a connection of all Matter in the Plenum," as Leibnitz would say. This is symbolized in the Pythagorean Triangle.

It consists of Ten Points inscribed pyramid-like (from one to four) within its three sides, and it symbolizes the Universe in the famous Pythagorean Decad. The upper single point is a Monad, and represents a Unit-Point, which is *the* Unity whence all proceeds. All is of the same essence with it. While the ten points within the equilateral Triangle represent the phenomenal world, the three sides enclosing the pyramid of points are the barriers of *noumenal* Matter, or Substance, that separate it from the world of Thought.

Pythagoras considered a *point* to correspond in proportion to unity; a *line* to 2; a *superfice* to 3; a *solid* to 4; and he defined a point as a monad having position, and the beginning of all things; a line was thought to correspond with duality, because it was produced by the first motion from indivisible nature, and formed the junction of two points. A superfice was compared to the number three because it is the first of all causes that are found in figures; for a circle, which is the principal of all round figures, comprises a triad, in centre—space—circumference. But a triangle, which is the first of all rectilineal figures, is included in a ternary, and receives its form according to that number; and was considered by

* *Ibid.*, pp. 7, 8.

† *Ibid.*, p. 9.

the Pythagoreans to be the author of all sublunary things. The four points at the base of the Pythagorean triangle correspond with a solid or cube, which combines the principles of length, breadth, and thickness, for no solid can have less than four extreme boundary points.*

It is argued that "the human mind cannot conceive an indivisible unit short of the annihilation of the idea with its subject." This is an error, as the Pythagoreans have proved, and a number of Seers before them, although there is a special training needed for the conception, and although the profane mind can hardly grasp it. But there are such things as "*Meta-mathematics*" and "*Meta-geometry*." Even Mathematics pure and simple proceed from the universal to the particular, from the mathematical indivisible point to solid figures. The teaching originated in India, and was taught in Europe by Pythagoras, who, throwing a veil over the Circle and the Point—which no living man can define except as incomprehensible abstractions—laid the origin of the differentiated cosmic Matter in the base of the Triangle. Thus the latter became the earliest of geometrical figures. The author of *New Aspects of Life*, dealing with the Kabalistic Mysteries, objects to the objectivization, so to speak, of the Pythagorean conception and the use of the equilateral triangle, and calls it a "misnomer." His argument that a solid equilateral body—

One whose base, as well as each of its sides, form equal triangles—must have four co-equal sides or surfaces, while a triangular plane will as necessarily possess five,†

—demonstrates on the contrary the grandeur of the conception in all its Esoteric application to the idea of the *pregenesis*, and the genesis of Kosmos. Granted, that an ideal Triangle, depicted by mathematical, imaginary lines,

Can have no sides at all, being simply a phantom of the mind to which, if sides be imputed, these must be the sides of the object it constructively represents.‡

But in such case most of the scientific hypotheses are no better than "phantoms of the mind"; they are unverifiable, except on inference, and have been adopted merely to answer scientific necessities. Furthermore, the ideal Triangle—"as the abstract idea of a triangular body, and, therefore, as the type of an abstract idea"—accomplished and carried out to perfection the double symbolism intended. As an emblem applicable to the objective idea, the simple triangle became a solid. When repeated in stone, facing the four cardinal points, it

* *Pythagorean Triangle*, by the Rev. G. Oliver, pp. 18, 19.

† P. 387.

‡ P. 387.

assumed the shape of the Pyramid—the symbol of the phenomenal merging into the noumenal Universe of thought, at the apex of the four triangles; and, as an “imaginary figure constructed of three mathematical lines,” it symbolized the subjective spheres—these lines “enclosing a mathematical space—which is equal to nothing enclosing nothing.” And this because, to the senses and the untrained consciousness of the Profane and the Scientist, everything beyond the line of differentiated Matter—*i.e.*, outside of, and beyond the realm of even the most Spiritual *Substance*—has to remain for ever *equal to nothing*. It is the Ain Suph—the *No Thing*.

Yet these “phantoms of the mind” are in truth no greater abstractions than the abstract ideas in general as to evolution and physical development—*e.g.*, Gravity, Matter, Force, etc.—on which the exact Sciences are based. Our most eminent Chemists and Physicists are earnestly pursuing the not hopeless attempt of finally tracing to its hiding-place the Protyle, or the basic line of the Pythagorean Triangle. The latter is, as we have said, the grandest conception imaginable, for it symbolizes both the ideal and the visible universes.* For if

The possible unit is only a possibility as an actuality of nature, as an individual of any kind, [and as] every individual natural object is capable of division, and by division loses its unity, or ceases to be a unit,†

this is true only of the realm of exact Science in a world as deceptive as it is illusive. In the realm of Esoteric Science the Unit divided *ad infinitum*, instead of losing its unity, approaches with every division the planes of the only eternal REALITY. The eye of the Seer can follow it and behold it in all its pregenetic glory. This same idea of the reality of the subjective, and the unreality of the objective Universe, is found at the bottom of the Pythagorean and Platonic Teachings—limited to the Elect alone; for Porphyry, speaking of the Monad and the Duad, says that the former only was considered substantial and real, “that most simple Being, the cause of all unity and the measure of all things.”

But the Duad, although the origin of Evil, or Matter—hence *unreal* in Philosophy—is still Substance during Manvantara, and is often called the Third Monad, in Occultism, and the connecting line as between two Points, or Numbers, which proceeded from THAT, “which

* In the World of Form, symbolism finding expression in the Pyramids, has in them both triangle and square, four co-equal triangles or surfaces, four basic points, and the fifth—the apex.

† Pp. 385, 386.

was before all Numbers," as expressed by Rabbi Barahiel. And from this Duad proceeded all the Scintillas of the three Upper and the four Lower Worlds or Planes—which are in constant interaction and correspondence. This is a teaching which the Kabbalah has in common with Eastern Occultism. For in the Occult Philosophy there is the "ONE Cause" and the "Primal Cause," the latter thus becoming, paradoxically, the Second, as is clearly expressed by the author of the *Qabbalah from the Philosophical Writings of Ibn Gabirol*, who says:

In the treatment of the Primal Cause, two things must be considered, the Primal Cause *per se*, and the relation and connection of the Primal Cause with the visible and unseen universe.*

Thus he shows the early Hebrews, as the later Arabians, following in the steps of the Oriental Philosophy, such as the Chaldean, Persian, Hindû, etc. Their Primal Cause was designated at first,

By the triadic שׁדַּי Shaddai, the [triune] Almighty, subsequently by the Tetragrammaton, יְהוָה YHVH, symbol of the Past, Present, and Future,†

and, let us add, of the eternal IS, or the I AM. Moreover, in the Kabbalah the name YHVH (or Jehovah) expresses a He and a She, male and female, two in one, or Chokmah and Binah, and his, or rather their Shekinah or synthesizing Spirit (or Grace), which again makes of the Duad a Triad. This is demonstrated in the Jewish Liturgy for Pentecost, and the prayer:

"In the name of Unity, of the Holy and Blessed Hû [He], and His She'keenah, the Hidden and Concealed Hû, blessed be YHVH [the Quaternary] for ever." Hû is said to be masculine and YaH feminine, together they make the הוּא הִיא i.e., one YHVH. One, but of a male-female nature. The She'keenah is always considered in the Qabbalah as feminine.‡

And so it is considered in the exoteric *Purânas*, for Shekinah is no more than Shakti—the female double of any God—in such case. And so it was with the early Christians, whose Holy Spirit was feminine, as Sophia was with the Gnostics. But in the transcendental Chaldean Kabbalah, or *Book of Numbers*, Shekinah is sexless, and the purest abstraction, a state, like Nirvâna, neither subject nor object, nor anything except an absolute PRESENCE.

Thus it is only in the anthropomorphized systems—such as the Kabbalah has now for the most part become—that Shekinah-Shakti is feminine. As such she becomes the Duad of Pythagoras, the two straight lines which can form no geometrical figure and are the symbol

* *Op. cit.* By Isaac Myer. P. 174.

† P. 175.

‡ P. 175.

of Matter. Out of this Duad, when united in the basic line of the Triangle on the lower plane (the upper Triangle of the Sephirothal Tree), emerge the Elohim, or Deity in Cosmic Nature, with the true Kabalists the *lowest* designation, translated in the *Bible* "God."* Out of these (the Elohim) issue the Scintillas.

The Scintillas are the "Souls," and these Souls appear in the three-fold form of Monads (Units), Atoms and Gods—according to our Teaching. As says the *Esoteric Catechism* :

Every Atom becomes a visible complex unit [a molecule], and once attracted into the sphere of terrestrial activity, the Monadic Essence, passing through the mineral, vegetable, and animal kingdoms, becomes man.

Again:

God, Monad, and Atom are the correspondences of Spirit, Mind, and Body [Âtmâ, Manas, and Sthûla Sharîra] in man.

In their septenary aggregation they are the "Heavenly Man," in the Kabalistic sense; thus, terrestrial man is the provisional reflection of the Heavenly. Once again:

The Monads [Jivas] are the Souls of the Atoms; both are the fabric in which the Chohans [Dhyânîs, Gods] clothe themselves when a form is needed.

This relates to cosmic and sub-planetary Monads, not to the super-cosmic Monas, the Pythagorean Monad, as it is called, in its synthetic character, by the Pantheistical Peripatetics. The Monads of the present dissertation are treated, from the standpoint of their individuality, as *Atomic Souls*, before these Atoms descend into pure terrestrial form. For this descent into *concrete* Matter marks the medial point of their own individual pilgrimage. Here, losing in the mineral kingdom their individuality, they begin to ascend through the seven states of terrestrial evolution to that point where a correspondence is firmly established between the human and Deva (divine) consciousness. At present, however, we are not concerned with their terrestrial metamorphoses and tribulations, but with their life and behaviour in Space,

* "The lowest designation, or the Deity in Nature, the more general term Elohim, is translated God." (P. 175.) Such recent works as the *Qabbalah* of Mr. Isaac Myer, and of Mr. S. L. MacGregor Mathers, fully justify our attitude towards the Jehovistic Deity. It is not the transcendental, philosophical, and highly metaphysical abstraction of the original Kabalistic thought—Ain-Suph-Shekinah-Adam-Kadmon, and all that follows—that we oppose, but the crystallization of all these into the highly unphilosophical, repulsive, and anthropomorphic Jehovah, the androgynous and *finite* deity, for which eternity, omnipotence, and omniscience are claimed. We do not war against the *Ideal Reality*, but the hideous theological *Shadow*.

on planes wherein the eye of the most intuitional Chemist and Physicist cannot reach them—unless, indeed, he develops in himself highly clairvoyant faculties.

It is well known that Leibnitz came very near the truth several times, but he defined Monadic Evolution incorrectly, a thing not to be wondered at, since he was not an Initiate, nor even a Mystic, but only a very intuitional Philosopher. Yet no Psycho-physicist ever came nearer than has he to the Esoteric general outline of evolution. This evolution—viewed from its several standpoints, *i.e.*, as the *Universal* and the *Individualized* Monad, and the chief aspects of the Evolving Energy after differentiation, the purely Spiritual, the Intellectual, the Psychic and the Physical—may be thus formulated as an invariable law: a descent of Spirit into Matter, equivalent to an ascent in physical evolution; a reäscend from the depths of materiality towards its *status quo ante*, with a corresponding dissipation of concrete form and substance up to the Laya-state, or what Science calls the “zero-point,” and beyond.

These states—once the spirit of Esoteric Philosophy is grasped—become absolutely necessary from simple logical and analogical considerations. Physical Science having now ascertained, through its department of Chemistry, the invariable law of this evolution of Atoms—from their “protylean” state down to that of a physical and then a chemical particle, or molecule—cannot well reject these states as a general law. And once it is forced by its enemies—Metaphysics and Psychology*—out of its alleged impregnable strongholds, it will find it more difficult than it now appears to refuse room in the Spaces of SPACE to Planetary Spirits (Gods), Elementals, and even the Elementary Spooks or Ghosts, and others. Already Figuier and Paul D’Assier, two Positivists and Materialists, have succumbed before this logical necessity. Other and still greater Scientists will follow in that intellectual “Fall.” They will be driven out of their position not by spiritual, theosophical, or any other physical or even mental phenomena, but simply by the enormous *gaps* and *chasms* that open daily and will still be opening before them, as one discovery follows the other, until they are finally knocked off their feet by the ninth wave of simple common sense.

* Let not the word “Psychology” cause the reader, by association of ideas, to carry his thought to modern “Psychologists,” so-called, whose *Idealism* is another name for uncompromising *Materialism*, and whose pretended Monism is no better than a mask to conceal the void of final *annihilation—even* of consciousness. Here *spiritual* Psychology is meant.

We may take as an example, Mr. W. Crookes' latest discovery of what he has named Protyle. In the *Notes on the Bhagavad Gītā*, by one of the best metaphysicians and Vedântic scholars in India, the lecturer, referring cautiously to "things Occult" in that great Indian Esoteric work, makes a remark as suggestive as it is strictly correct. He says:

Into the details of the evolution of the solar system itself, it is not necessary for me to enter. You may gather some idea *as to the way* in which the various elements start into existence from these three principles into which Mûlaprakriti [the Pythagorean Triangle] is differentiated, by examining the lecture delivered by Professor Crookes a short time ago upon the so-called elements of modern chemistry. This lecture will give you some idea of the way in which these so-called elements spring from Vishvânara,* the most objective of these three principles, which seems to stand in the place of the *protyle* mentioned in that lecture. Except in a few particulars, this lecture seems to give the outlines of the theory of physical evolution on the plane of Vishvânara, and is, so far as I know, the nearest approach made by modern investigators to the real occult theory on the subject.†

These words will be reëchoed and approved by every Eastern Occultist. Much from the lectures by Mr. Crookes has already been quoted in Section XI. A second lecture has been delivered by him, as remarkable as the first, on the "Genesis of the Elements,"‡ and also a third one. Here we have almost a corroboration of the teachings of Esoteric Philosophy concerning the mode of primeval evolution. It is, indeed, as near an approach, made by a great scholar and specialist in Chemistry,§ to the Secret Doctrine, as could be made apart from the application of the Monads and Atoms to the dogmas of pure transcendental Metaphysics, and their connection and correlation with "Gods and intelligent conscious Monads." But Chemistry is now on its ascending plane, thanks to one of its highest European representatives. It is impossible for it to go back to that day when Materialism regarded its *sub*-elements as absolutely simple and homogeneous bodies, which it had raised, in its blindness, to the rank of Elements.

* "Vishvânara is not merely the manifested objective world, but the one physical basis [the horizontal line of the triangle] from which the whole objective world starts into existence." And this is the Cosmic Duad, the Androgynous Substance. Only beyond this is the true Protyle.

† T. Subba Row. See *Theosophist*, Feb. 1887.

‡ By W. Crookes, F.R.S., V.P.C.S., delivered at the Royal Institution, London, on Friday, February 18th, 1887.

§ How true it is will be fully demonstrated only on that day when Mr. Crookes' discovery of radiant matter will have resulted in a further elucidation with regard to the true source of light, and will have revolutionized all the present speculations. Further familiarity with the northern streamers of the *aurora borealis* may help the recognition of this truth.

The mask has been snatched off by too clever a hand for there to be any fear of a new disguise. And after years of pseudology, of bastard molecules parading under the name of Elements, behind and beyond which there could be nought but void, a great professor of Chemistry asks once more:

What are these elements, whence do they come, what is their signification? . . . These elements perplex us in our researches, baffle us in our speculations, and haunt us in our very dreams. They stretch like an unknown sea before us—mocking, mystifying, and murmuring strange revelations and possibilities.*

Those who are heirs to primeval revelations have taught these "possibilities" in every century, but have never found a fair hearing. The truths inspired into Kepler, Leibnitz, Gassendi, Swedenborg, etc., were ever alloyed with their own speculations in one or another pre-determined direction—hence were distorted. But now one of the great truths has dawned upon an eminent professor of exact Modern Science, and he fearlessly proclaims as a fundamental axiom that Science has not made itself acquainted, so far, with real simple Elements. For Mr. Crookes tells his audience:

If I venture to say that our commonly received elements are not simple and primordial, that they have *not* arisen by chance or have *not* been created in a desultory and mechanical manner, but have been evolved from simpler matters—or perhaps, indeed, from one sole kind of matter—I do but give formal utterance to an idea which has been, so to speak, for some time "in the air" of science. Chemists, physicists, philosophers of the highest merit, declare explicitly their belief that the seventy (or thereabouts) elements of our text-books are not the pillars of Hercules which we must never hope to pass. . . . Philosophers in the present as in the past—men who certainly have not worked in the laboratory—have reached the same view from another side. Thus Mr. Herbert Spencer records his conviction that "the chemical atoms are produced from the true or physical atoms by processes of evolution under conditions which chemistry has not yet been able to produce." And the poet has forestalled the philosopher. Milton (*Paradise Lost*, Book V.) makes the Archangel Raphael say to Adam instinct with the evolutionary idea, that the Almighty had created

. . . "One first matter, all
Indued with various forms, various degrees
Of substance."

Nevertheless, the idea would have remained crystallized "in the air of Science," and would not have descended into the thick atmosphere of Materialism and profane mortals for years to come, perhaps, had not Mr. Crookes bravely and fearlessly reduced it to its simple con-

* *Genesis of the Elements*, p. 1.

stituents, and thus publicly forced it on scientific notice. Says Plutarch:

An idea is a Being incorporeal, which has no subsistence by itself, but gives figure and form unto shapeless matter, and becomes the cause of the manifestation.*

The revolution produced in old Chemistry by Avogadro was the first page in the volume of "New Chemistry." Mr. Crookes has now turned the second page, and is boldly pointing to *what may be the last*. For Protyle once accepted and recognized—as invisible Ether was, both being logical and scientific necessities—Chemistry will have virtually ceased to live: it will reappear in its reincarnation as "New Alchemy," or "Meta-chemistry." The discoverer of radiant matter will have vindicated in time the Archaic Âryan works on Occultism, and even the *Vedas* and *Purânas*. For what are the manifested "Mother," the "Father-Son-Husband" (Aditi and Daksha, a form of Brahmâ, as Creators), and the "Son"—the three "First-born"—but simply Hydrogen, Oxygen, and that which in its terrestrial manifestation is called Nitrogen. Even the exoteric descriptions of the "First-born" Triad give all the characteristics of these three "gases." Priestley, the "discoverer" of Oxygen, or of that which was known in the highest antiquity!

Yet all the ancient, mediæval, and modern Poets and Philosophers have been anticipated even in the exoteric Hindû books as to the Elemental Vortices inaugurated by the Universal Mind—Descartes' "Plenum" of Matter differentiated into particles; Leibnitz's "ethereal fluid"; and Kant's "primitive fluid" dissolved into its elements; Kepler's solar vortex and systemic vortices; in short, through Anaxagoras, down to Galileo, Torricelli, and Swedenborg, and after them to the latest speculations by European Mystics—all this is found in the Hindû Hymns, or Mantras, to the "Gods, Monads and Atoms," in their Fulness, for they are inseparable. In Esoteric Teachings, the most transcendental conceptions of the Universe and its mysteries, as also the most seemingly materialistic speculations, are found reconciled, because these Sciences embrace the whole scope of evolution from Spirit to Matter. As declared by an American Theosophist:

The Monads [of Leibnitz] may from one point of view be called *force*, from another *matter*. To Occult Science, *force* and *matter* are only two sides of the same substance.†

Let the reader remember these "Monads" of Leibnitz, every one of

* *De Placit. Philos.*

† *The Path*, I. 10, p. 297.

which is a living mirror of the Universe, every Monad reflecting every other, and compare this view and definition with certain Sanskrit Shlokas translated by Sir William Jones, in which it is said that the creative source of the Divine Mind,

Hidden in a veil of thick darkness, formed mirrors of the atoms of the world,
and cast reflection from its own face on every atom.

When, therefore, Mr. Crookes declares that :

If we can show how the so-called chemical elements might have been generated we shall be able to fill up a formidable gap in our knowledge of the universe, the answer is ready. The theoretical knowledge is contained in the Esoteric meaning of every Hindû cosmogony in the *Purânas*; the practical demonstration thereof—is in the hands of those who will not be recognized in *this* century, save by the very few. The scientific possibilities of various discoveries, that must inexorably lead exact Science into the acceptance of Eastern Occult views, which contain all the requisite material for the filling of those “gaps,” are, so far, at the mercy of Modern Materialism. It is only by working in the direction taken by Mr. William Crookes that there is any hope for the recognition of a few, hitherto Occult, truths.

Meanwhile, any one thirsting to have a glimpse at a practical diagram of the evolution of primordial Matter—which, separating and differentiating under the impulse of cyclic law, divides itself on a general view into a septenary gradation of *Substance*—can do no better than examine the plates attached to Mr. Crookes' lecture, *Genesis of the Elements*, and ponder well over some passages of the text. In one place he says :

Our notions of a chemical element have expanded. Hitherto the molecule has been regarded as an aggregate of two or more atoms, and no account has been taken of the architectural design on which these atoms have been joined. We may consider that the structure of a chemical element is more complicated than has hitherto been supposed. Between the molecules we are accustomed to deal with in chemical reactions and ultimate atoms as first created, come smaller molecules or aggregates of physical atoms; these sub-molecules differ one from the other, according to the position they occupy in the yttrium edifice.

Perhaps this hypothesis can be simplified if we imagine yttrium to be represented by a five-shilling piece. By chemical fractionation I have divided it into five separate shillings, and find that these shillings are not counterparts, but like the carbon atoms in the benzol ring, have the impress of their position, 1, 2, 3, 4, 5, stamped on them. . . . If I throw my shillings into the melting-pot or dissolve them chemically, the mint stamp disappears and they all turn out to be silver.*

This will be the case with all the Atoms and molecules when they

* P. 11.

have separated from their compound forms and bodies—when Pralaya sets in. Reverse the case, and imagine the dawn of a new Manvantara. The pure “silver” of the absorbed material will once more separate into SUBSTANCE, which will generate “Divine Essences” whose “Principles”* are the Primary Elements, the Sub-elements, the Physical Energies, and subjective and objective Matter; or, as these are epitomized—GODS, MONADS, and ATOMS. If leaving for one moment the metaphysical or transcendental side of the question—dropping out of the present consideration the supersensuous and intelligent Beings and Entities believed in by the Kabalists and Christians—we turn to the theory of atomic evolution, the Occult Teachings are still found corroborated by exact Science and its confessions, so far, at least, as regards the supposed “simple” Elements, now suddenly degraded into poor and distant relatives, not even second cousins to the latter. For we are told by Mr. Crookes that:

Hitherto, it has been considered that if the atomic weight of a metal, determined by different observers, setting out from different compounds, was always found to be constant . . . then such metal must rightly take rank among the simple or elementary bodies. We learn . . . that this is no longer the case. Again, we have here wheels within wheels. Gadolinium is not an element but a compound. . . . We have shown that yttrium is a complex of five or more new constituents. And who shall venture to gainsay that each of these constituents, if attacked in some different manner, and if the result were submitted to a test more delicate and searching than the radiant-matter test, might not be still further divisible? Where, then, is the actual ultimate element? As we advance it recedes like the tantalizing mirage lakes and groves seen by the tired and thirsty traveller in the desert. Are we in our quest for truth to be thus deluded and balked? The very idea of an element, as something absolutely primary and ultimate, seems to be growing less and less distinct.†

In *Isis Unveiled*, we said:

This mystery of first creation, which was ever the despair of Science, is unfathomable unless we accept the doctrine of Hermes. Could he [Darwin] remove his quest from the visible universe into the invisible, he might find himself on the right path. But then, he would be following in the footsteps of the Hermetists.‡

Our prophecy begins to assert itself.

But between Hermes and Huxley there is a middle course and point. Let the men of Science only throw a bridge half-way, and think seriously over the theories of Leibnitz. We have shown *our*

* Corresponding on the cosmic scale with the Spirit, Soul, Mind, Life, and the three Vehicles—the Astral, the Mâyâvic and the Physical Bodies (of mankind), whatever division is made.

† *Ibid.*, p. 16.

‡ Vol. I, p. 429.

theories with regard to the evolution of Atoms—their last formation into compound chemical molecules being produced within our terrestrial workshops in the Earth's atmosphere and not elsewhere—as strangely agreeing with the evolution of Atoms shown on Mr. Crookes' plates. Several times already it has been stated in this volume that Mârttânda, the Sun, had evolved and aggregated, together with his seven smaller Brothers, from his Mother Aditi's bosom, that bosom being *Prima Mater-ia*—the lecturer's primordial Protyle. Esoteric Doctrines teach the existence of

An antecedent form of energy having periodic cycles of ebb and swell, rest and activity.*

And behold a great scholar in Science now asking the world to accept this as one of his postulates! We have shown the "Mother," fiery and hot, becoming gradually cool and radiant, and this same Scientist claims as his second postulate—a *scientific necessity*, it would seem—

An internal action, akin to cooling, operating slowly in the protyle.

Occult Science teaches that the "Mother" lies stretched in Infinity, during Pralaya, as the great Deep, the "*dry Waters of Space*," according to the quaint expression in the *Catechism*, and becomes *wet* only after the separation and the moving over its face of Nârâyana, the

Spirit which is invisible Flame, which never burns, but sets on fire all that it touches, and gives it life and generation.†

And now Science tells us that "the first-born element . . . most nearly allied to protyle" would be "*hydrogen . . . which for some time would be the only existing form of matter*" in the Universe. What says *Old Science*? It answers: Just so; but we would call Hydrogen (and Oxygen), which—in the pre-geological and even pre-genetic ages—instils the fire of life into the "Mother" by incubation, the *spirit*, the *noumenon*, of that which becomes in its grossest form Oxygen and Hydrogen and Nitrogen on Earth—Nitrogen being of no divine origin, but merely an earth-born cement for uniting other gases and fluids, and serving as a sponge to carry in itself the Breath of Life, pure air.‡ Before these gases and fluids become what they are in *our* atmosphere, they are interstellar Ether; still earlier and on a *deeper* plane—something else, and so on *in infinitum*. The eminent and learned gentleman must pardon an Occultist for quoting him at such

* *Ibid.*, p. 21.

† "The Lord is a consuming fire." "In him was life, and the life was the light of men."

‡ Which if separated *alchemically* would yield the Spirit of Life, and its Elixir.

length; but such is the penalty of a Fellow of the Royal Society who approaches so near the precincts of the Sacred Adytum of Occult Mysteries as virtually to overstep the forbidden boundaries.

But it is time to leave Modern Physical Science and turn to the psychological and metaphysical side of the question. We would only remark that to the "two very reasonable postulates" required by the eminent lecturer, "to get a glimpse of some few of the secrets so darkly hidden" behind "the door of the Unknown," a third should be added*—lest no battering at it should avail; the postulate that Leibnitz stood on a firm groundwork of fact and truth in his speculations. The admirable and thoughtful synopsis of these speculations—as given by John Theodore Mertz in his "Leibnitz"—shows how nearly he has brushed the hidden secrets of Esoteric Theogony in his *Monadologie*. And yet this philosopher has hardly risen in his speculations above the first planes, the lower principles of the Cosmic Great Body. His theory soars to no loftier heights than those of the *manifested* life, self-consciousness and intelligence, leaving the regions of the earlier post-genetic mysteries untouched, as his ethereal fluid is post-planetary.

But this third postulate will hardly be accepted by the modern men of Science; and, like Descartes, they will prefer keeping to the properties of external things, which, like extension, are incapable of explaining the phenomenon of motion, rather than accept the latter as an independent Force. They will never become anti-Cartesian in this generation; nor will they admit that:

This property of inertia is not a purely geometrical property; that it points to the existence of something in external bodies which is not extension merely.

This is Leibnitz's idea as analyzed by Mertz, who adds that he called this "something" Force, and maintained that external things were endowed with Force, and that in order to be the bearers of this Force they must have a Substance, for they are not lifeless and inert masses, but the centres and bearers of Form—a purely Esoteric claim, since Force was with Leibnitz an *active* principle—the division between Mind and Matter disappearing by this conclusion.

The mathematical and dynamical enquiries of Leibnitz would not have led to the same result in the mind of a purely scientific enquirer. But Leibnitz was not a scientific man in the modern sense of the word. Had he been so, he might have worked out the conception of energy, defined mathematically the ideas of force and

* Foremost of all, the postulate that there is no such thing in Nature as *inorganic* substances or bodies. Stones, minerals, rocks, and even chemical "atoms" are simply organic units in profound lethargy. Their coma has an end and their inertia becomes activity.

mechanical work, and arrived at the conclusion that even for purely scientific purposes it is desirable to look upon force, not as a primary quantity, but as a quantity derived from some other value.

But, luckily for truth:

Leibnitz was a philosopher; and as such he had certain primary principles, which biassed him in favour of certain conclusions, and his discovery that external things were substances endowed with force was at once used for the purpose of applying these principles. One of these principles was the law of continuity, the conviction that all the world was connected, that there were no gaps and chasms which could not be bridged over. The contrast of extended thinking substances was unbearable to him. The definition of the extended substances had already become untenable: it was natural that a similar enquiry was made into the definition of mind, the thinking substance.

The divisions made by Leibnitz, however incomplete and faulty from the standpoint of Occultism, show a spirit of metaphysical intuition to which no man of Science, not Descartes, not even Kant, has ever reached. With him there existed ever an infinite gradation of thought. Only a small portion of the contents of our thoughts, he said, rises into the clearness of apperception, "into the light of perfect consciousness." Many remain in a confused or obscure state, in the state of "perceptions"; but they are there. Descartes denied soul to the animal, Leibnitz, as do the Occultists, endowed "the whole creation with mental life, this being, according to him, capable of infinite gradations." And this, as Mertz justly observes:

At once widened the realm of mental life, destroying the contrast of *animale* and *inanimate matter*; it did yet more—it reacted on the conception of matter, of the extended substance. For it became evident that external or material things presented the property of extension to our senses only, not to our thinking faculties. The mathematician, in order to calculate geometrical figures, had been obliged to divide them into an infinite number of infinitely small parts, and the physicist saw no limit to the divisibility of matter into atoms. The bulk through which external things seemed to fill space was a property which they acquired only through the coarseness of our senses. . . . Leibnitz followed these arguments to some extent, but he could not rest content in assuming that matter was composed of a finite number of very small parts. His mathematical mind forced him to carry out the argument *in infinitum*. And what became of the atoms then? They lost their extension and they retained only their property of resistance; they were the centres of force. They were reduced to mathematical points. . . . But if their extension in space was nothing, *so much fuller was their inner life*. Assuming that inner existence, such as that of the human mind, is a new dimension, not a geometrical but a metaphysical dimension, . . . having reduced the geometrical extension of the atoms to nothing, Leibnitz endowed them with an infinite extension in the

direction of their metaphysical dimension. After having lost sight of them in the world of space, the mind has, as it were, to dive into a metaphysical world to find and grasp the real essence of what appears in space merely as a mathematical point. . . . As a cone stands on its point, or a perpendicular straight line cuts a horizontal plane only in one mathematical point, but may extend infinitely in height and depth, so the essences of *things real* have only a punctual existence in this physical world of space; but have an infinite depth of inner life in the metaphysical world of thought.*

This is the spirit, the very root of Occult doctrine and thought. The "Spīrit-Matter" and "Matter-Spirit" extend infinitely *in depth*, and like the "essence of things" of Leibnitz, our essence of *things real* is at the *seventh depth*; while the *unreal* and gross matter of Science and the external world, is at the lowest extreme of our perceptive senses. The Occultist knows the worth or worthlessness of the latter.

The student must now be shown the fundamental distinction between the system of Leibnitz † and that of Occult Philosophy, on the question of the Monads, and this may be done with his *Monadologie* before us. It may be correctly stated that were Leibnitz' and Spinoza's systems reconciled, the essence and spirit of Esoteric Philosophy would be made to appear. From the shock of the two—as opposed to the Cartesian system—emerge the truths of the Archaic Doctrine. Both oppose the Metaphysics of Descartes. His idea of the contrast of two Substances—Extension and Thought—radically differing from each other and mutually irreducible, is too arbitrary and too unphilosophical for them. Thus Leibnitz made of the two Cartesian Substances two attributes of one universal Unity, in which he saw God. Spinoza recognized but one universal indivisible Substance, an absolute ALL, like Parabrahman. Leibnitz, on the contrary, perceived the existence of a plurality of Substances. There was but ONE for Spinoza; for Leibnitz an infinitude of Beings, *from*, and *in*, the One. Hence, though both admitted but *One Real Entity*, while Spinoza made it impersonal and indivisible, Leibnitz divided his personal Deity into a number of divine and semi-divine Beings. Spinoza was a *subjective*, Leibnitz an *objective* Pantheist, yet both were great Philosophers in their intuitive perceptions.

Now, if these two teachings were blended together and each cor-

* *Ibid.*, p. 144.

† The orthography of the name—as spelt by himself—is Leibniz. He was of Slavonian descent though born in Germany.

rected by the other—and foremost of all the One Reality weeded of its personality—there would remain as sum total a true spirit of Esoteric Philosophy in them; the impersonal, attributeless, absolute Divine Essence, which is no “being” but the root of all Being. Draw a deep line in your thought between that ever-incognizable Essence, and the as invisible, yet comprehensible Presence, *Mûlaprakriti* or *Shekinah*, *from beyond and through which* vibrates the Sound of the Verbum, and from which evolve the numberless Hierarchies of intelligent Egos, of conscious as of semi-conscious, “apperceptive” and “perceptive” Beings, whose Essence is spiritual Force, whose Substance is the Elements, and whose Bodies (when needed) are the Atoms—and our Doctrine is there. For, says Leibnitz:

The primitive element of every material body being force, which has none of the characteristics of [objective] matter—it can be conceived but can never be the object of any imaginative representation.

That which was for him the primordial and ultimate element in every body and object was thus not the material atoms, or molecules, necessarily more or less extended, as those of Epicurus and Gassendi, but, as Mertz shows, immaterial and metaphysical Atoms, “mathematical points,” or *real souls*—as explained by Henri Lachelier (Professeur Agrégé de Philosophie), his French biographer.

That which exists outside of us in an absolute manner, are Souls whose essence is force.*

Thus, *reality* in the manifested world is composed of a *unity of units*, so to say, immaterial—from our standpoint—and infinite. These Leibnitz calls Monads, Eastern Philosophy *Jīvas*, while Occultism, with the Kabalists and all the Christians, gives them a variety of names. With us, as with Leibnitz, they are “the expression of the universe,”† and every physical point is but the phenomenal expression of the noumenal, metaphysical Point. His distinction between “perception” and “apperception” is the philosophical though dim expression of the Esoteric Teachings. His “reduced universes,” of which “there are as many as there are Monads”—is the chaotic representation of our Septenary System with its divisions and sub-divisions.

As to the relation his Monads bear to our Dhyân Chohans, Cosmic Spirits, Devas, and Elementals, we may reproduce briefly the opinion

* *Monadologie*, Introd.

† “Leibnitz’s dynamism,” says Professor Lachelier, “would offer but little difficulty if, with him, the monad had remained a simple atom of *blind force*. But” One perfectly understands the perplexity of Modern Materialism!

of a learned and thoughtful Theosophist, Mr. C. H. A. Bjerregaard, on the subject. In an excellent paper, "On the Elementals, the Elementary Spirits, and the Relationship between Them and Human Beings," read by him before the Åryan Theosophical Society of New York, Mr. Bjerregaard thus distinctly formulates his opinion:

To Spinoza, substance is dead and inactive, but to Leibnitz's penetrating powers of mind everything is living activity and active energy. In holding this view, he comes infinitely nearer the Orient than any other thinker of his day, or after him. His discovery that *an active energy forms the essence of substance* is a principle that places him in direct relationship to the Seers of the East.*

And the lecturer proceeds to show that to Leibnitz Atoms and Elements are *Centres of Force*, or rather "spiritual beings whose very nature it is to act," for the

Elementary particles are vital forces, not acting mechanically, but from an internal principle. They are incorporeal spiritual units ["substantial," however, but not "immaterial" in our sense] inaccessible to all change from without . . . [and] indestructible by any external force. Leibnitz' monads differ from atoms in the following particulars, which are very important for us to remember, otherwise we shall not be able to see the difference between Elementals and mere matter. Atoms are not distinguished from each other, they are qualitatively alike; but one monad differs from every other monad qualitatively; and every one is a peculiar world to itself. Not so with the atoms; they are absolutely alike quantitatively and qualitatively, and possess no individuality of their own.† Again, the atoms [molecules, rather] of materialistic philosophy can be considered as extended and divisible, while the monads are mere "metaphysical points" and indivisible. Finally, and this is a point where these monads of Leibnitz closely resemble the Elementals of mystic philosophy, these monads are representative beings. Every monad reflects every other. Every monad is a living mirror of the Universe within its own sphere. And mark this, for upon it depends the power possessed by these monads, and upon it depends the work they can do for us; in mirroring the world, the monads are not mere passive reflective agents, but *spontaneously self-active*; they produce the images spontaneously, as the soul does a dream. In every monad, therefore, the adept may read everything, even the future. Every monad—or Elemental—is a looking-glass that can speak.

* *The Path*, I. 10, p. 297.

† Leibnitz was an *absolute* Idealist in maintaining that "material atoms are contrary to reason." (*Système Nouveau*, Erdmann, p. 126, col. 2.) For him Matter was a simple representation of the Monad, whether human or atomic. Monads, he thought (as do we), are everywhere. Thus the human soul is a Monad, and every cell in the human body has its Monad, as has every cell in animal, vegetable, and even in the so-called *inorganic* bodies. His Atoms are the molecules of modern Science, and his Monads those *simple atoms* that Materialistic Science takes on faith, though it will never succeed in *interviewing* them—except in imagination. But Leibnitz is rather contradictory in his views about Monads. He speaks of his "Metaphysical Points" and "Formal Atoms," at one time as *realities*, occupying space; at another as pure spiritual *ideas*; then he again endows them with objectivity and aggregates and positions in their co-relations.

It is at this point that Leibnitz's philosophy breaks down. There is no provision made, nor any distinction established, between the "Elemental" Monad and that of a high Planetary Spirit, or even the Human Monad or Soul. He even goes so far as to sometimes doubt whether

God has ever made anything but monads or substances without extension.*

He draws a distinction between Monads and Atoms,† because, as he repeatedly states:

Bodies with all their qualities are only phenomenal, like the rainbow. *Corpora omnia cum omnibus qualitatibus suis non sunt aliud quam phenomena bene fundata, ut Iris.*‡

But soon after he finds a provision for this in a substantial correspondence, a certain metaphysical bond between the Monads—*vinculum substantiale*. Esoteric Philosophy, teaching an *objective* Idealism—though it regards the objective Universe and all in it as Mâyâ, Temporary Illusion—draws a practical distinction between Collective Illusion, Mahâmâyâ, from the purely metaphysical standpoint, and the objective relations in it between various conscious Egos so long as this Illusion lasts. The Adept, therefore, *may* read the future in an Elemental Monad, but he has to draw together for this object a great number of them, as each Monad represents only a portion of the Kingdom it belongs to.

It is not in the object, but in the modification of the cognition of the object that the monads are limited. They all tend (confusedly) to the infinite, to the whole, but they are limited and distinguished by the degrees of distinctness in their perception.§

And as Leibnitz explains:

All the portions of the universe are distinctly represented in the monads, but some are reflected in one monad, some in another.

A number of Monads could represent simultaneously the thoughts of the two million inhabitants of Paris.

But what say the Occult Sciences to this, and what do they add?

They say that what is called collectively Monads by Leibnitz—roughly viewed, and leaving every subdivision out of calculation, for

* *Examen des Principes du P. Malebranche.*

† The Atoms of Leibnitz have, in truth, nothing but the name in common with the atoms of the Greek Materialists, or even the molecules of Modern Science. He calls them "Formal Atoms," and compares them to the "Substantial Forms" of Aristotle. (See *Système Nouveau*, † 3.)

‡ Letter to Father Desbosses, *Correspondence*, xviii.

§ *Monadologie*, † 60. Leibnitz, like Aristotle, calls the "created" or *emanated* Monads (the Elements issued from Cosmic Spirits or Gods)—Entelechies, Ἐντελέχειαι, and "incorporeal automata." (*Monadologie*, † 18.)

the present—may be separated into three distinct Hosts,* which, counted from the highest planes, are, firstly, “Gods,” or conscious, spiritual Egos; the intelligent Architects, who work after the plan in the Divine Mind. Then come the Elementals, or “Monads,” who form collectively and unconsciously the grand Universal Mirrors of everything connected with their respective realms. Lastly, the “Atoms,” or material molecules, which are informed in their turn by their “perceptive” Monads, just as every cell in a human body is so informed. There are shoals of such *informed* Atoms which, in their turn, inform the molecules; an infinitude of Monads, or Elementals proper, and countless spiritual Forces—Monadless, for they are pure incorporealities,† except under certain laws, when they assume a form—not necessarily human. Whence the substance that clothes them—the apparent organism they evolve around their centres? The Formless (Arûpa) Radiations, existing in the harmony of Universal Will, and being what we term the collective or the aggregate of Cosmic Will on the plane of the subjective Universe, unite together an infinitude of Monads—each the mirror of its own Universe—and thus individualize for the time being an independent Mind, omniscient and universal; and by the same process of magnetic aggregation they create for themselves objective, visible bodies, out of the interstellar Atoms. For Atoms and Monads, associated or dissociated, simple or complex, are, from the moment of the first differentiation, but the “principles,” corporeal, psychic and spiritual, of the “Gods”—themselves the Radiations of Primordial Nature. Thus, to the eye of the Seer, the higher Planetary Powers appear under two aspects: the subjective—as *influences*, and the objective—as mystic *forms*, which, under Karmic law, become a *Presence*, Spirit and Matter being One, as repeatedly stated. Spirit is Matter *on the seventh plane*; Matter is Spirit at the lowest point of its cyclic activity; and both are—Mâyâ.

* These three “rough divisions” correspond to Spirit, Mind (or Soul), and Body, in the human constitution.

† Brother C. H. A. Bjerregaard, in the lecture already mentioned, warns his audience not to regard the Sephiroth too much as *individualities*, but to avoid at the same time seeing in them *abstractions*. “We shall never arrive at the truth,” he says, “much less the power of associating with these celestials, until we return to the simplicity and fearlessness of the primitive ages, when men mixed freely with the gods, and the gods descended among men and guided them in truth and holiness.” (P. 296.) “There are several designations for ‘angels’ in the Bible, which clearly show that beings like the elementals of the Kabbala and the monads of Leibnitz, must be understood by that term rather than that which is commonly understood. They are called ‘morning stars,’ ‘flaming fires,’ ‘the mighty ones,’ and St. Paul sees them in his cosmogonic vision as ‘Principalities and Powers.’ Such names as these preclude the idea of personality, and we find ourselves compelled to think of them as impersonal existences . . . as an *influence*, a spiritual substance, or *conscious force*.” (Pp. 321, 322.)

Atoms are called Vibrations in Occultism; also Sound—collectively. This does not interfere with Mr. Tyndall's scientific discovery. He traced, on the lower rung of the ladder of monadic being, the whole course of the *atmospheric* Vibrations—and this constitutes the *objective* part of the process in Nature. He has traced and recorded the rapidity of their motion and transmission; the force of their impact; their setting up vibrations in the tympanum and their transmission of these to the otoliths, etc., till the vibration of the auditory nerve commences—and a new phenomenon now takes place: the *subjective* side of the process or the *sensation* of sound. Does he perceive or see it? No; for his specialty is to discover the behaviour of Matter. But why should not a Psychic see it, a spiritual Seer, whose inner Eye is opened, one who can see through the veil of Matter? The waves and undulations of Science are all produced by Atoms propelling their molecules into activity *from within*. Atoms fill the immensity of Space, and by their continuous vibration *are* that MOTION which keeps the wheels of Life perpetually going. It is that inner work that produces the natural phenomenon called the correlation of Forces. Only, at the origin of every such "Force," there stands the *conscious* guiding Noumenon thereof—Angel or God, Spirit or Demon, ruling powers, yet the same.

As described by Seers—those who can see the motion of the interstellar shoals, and follow them clairvoyantly in their evolution—they are dazzling, like specks of virgin snow in radiant sunlight. Their velocity is swifter than thought, quicker than any mortal physical eye can follow, and, as well as can be judged from the tremendous rapidity of their course, the motion is circular. Standing on an open plain, on a mountain summit especially, and gazing into the vast vault above and the spatial infinitudes around, the whole atmosphere seems ablaze with them, the air soaked through with these dazzling coruscations. At times, the intensity of their motion produces flashes like the Northern Lights in the Aurora Borealis. The sight is so marvellous, that, as the Seer gazes into this inner world, and feels the scintillating points shoot past him, he is filled with awe at the thought of other, still greater mysteries, that lie beyond, and within, this radiant ocean.

However imperfect and incomplete this explanation on "Gods, Monads and Atoms," it is hoped that some students and Theosophists, at least, will feel that there may indeed be a close relation between Materialistic Science and Occultism, which is the complement and missing soul of the former.

SECTION XV.

CYCLIC EVOLUTION AND KARMA.

It is the spiritual evolution of the *inner*, immortal Man that forms the fundamental tenet of the Occult Sciences. To realize even distantly such a process, the student has to believe (*a*) in the One Universal Life, independent of Matter (or what Science regards as Matter); and (*b*) in the individual Intelligences that animate the various manifestations of this Principle. Mr. Huxley does not believe in Vital Force; others Scientists do. Dr. J. H. Hutchinson Stirling's work *As regards Protoplasm* has made no small havoc of this dogmatic negation. Professor Beale's decision also is in favour of a Vital Principle; and Dr. B. W. Richardson's lectures on Nervous Ether have been sufficiently quoted. Thus, opinions are divided.

The One Life is closely related to the One Law which governs the World of Being—KARMA. Exoterically, this is simply and literally "action," or rather an "effect-producing cause." Esoterically, it is quite a different thing in its far-reaching moral effects. It is the unerring LAW OF RETRIBUTION. To say to those ignorant of the real significance, characteristics, and awful importance of this eternal immutable Law, that no theological definition of a Personal Deity can give an idea of this impersonal, yet ever present and active Principle, is to speak in vain. Nor can it be called Providence. For Providence, with the Theists—the Protestant Christians, at any rate—rejoices in a personal male gender, while with the Roman Catholics it is a female potency. "Divine Providence tempers His blessings to secure their better effects," Wogan tells us. Indeed "He" tempers them, which Karma—a sexless principle—does not.

Throughout the first two Parts, it has been shown that, at the first flutter of reascent life, Svabhâvat, "*the Mutable Radiance of the Immutable Darkness unconscious in Eternity*," passes, at every new rebirth of Kosmos, from an inactive state into one of intense activity; that it

differentiates, and then begins its work through that differentiation. This work is KARMA.

The Cycles are also subservient to the effects produced by this activity.

The one Cosmic Atom becomes seven Atoms on the plane of Matter, and each is transformed into a centre of energy; that same Atom becomes seven Rays on the plane of Spirit; and the seven creative Forces of Nature, radiating from the Root-Essence. . . . follow, one the right, the other the left path, separate till the end of the Kalpa, and yet in close embrace. What unites them? Karma.

The Atoms emanated from the Central Point emanate in their turn new centres of energy, which, under the potential breath of Fohat, begin their work from within without, and multiply other minor centres. These, in the course of evolution and involution, form in their turn the roots or developing causes of new effects, from worlds and "man-bearing" globes, down to the genera, species, and classes of all the *seven* kingdoms, of which we know only *four*. For as says the *Book of the Aphorisms of Tsou-ka-pa* :

The blessed workers have received the Thyan-kam, in the eternity.

Thyan-kam is the power or knowledge of guiding the impulses of Cosmic Energy in the right direction.

The true Buddhist, recognizing no "personal God," nor any "Father" and "Creator of Heaven and Earth," still believes in an *Absolute Consciousness*, Adi-Buddhi; and the Buddhist Philosopher *knows* that there are Planetary Spirits, the Dhyân Chohans. But though he admits of "Spiritual Lives," yet, as they are temporary in eternity, even they, according to his Philosophy, are "the Mâyâ of the Day," the Illusion of a "Day of Brahmâ," a short Manvantara of 4,320,000,000 years. The Yin-Sin is not for the speculations of men, for the Lord Buddha has strongly prohibited all such enquiry. If the Dhyân Chohans and all the Invisible Beings—the Seven Centres and their direct Emanations, the minor centres of Energy—are the direct reflex of the One Light, yet men are far removed from these, since the whole of the visible Kosmos consists of "*self-produced* beings, the creatures of Karma." Thus regarding a personal God "as only a gigantic shadow thrown upon the void of space by the imagination of ignorant men,"* they teach that only "two things are [objectively]

* *Buddhist Catechism*, by H. S. Olcott, President of the Theosophical Society, p. 51.

eternal, namely Âkâsha and Nirvâna"; and that these are *one* in reality, and but a Mâyâ when divided.

Everything has come out of Âkâsha [or Svabhâvat on our earth] in obedience to a law of motion inherent in it, and after a certain existence passes away. No thing ever came out of nothing. We do not believe in miracles; hence we deny creation and cannot conceive of a creator.*

If a Vedântic Brâhman of the Advaita Sect, were asked whether he believed in the existence of God, he would probably answer, as Jaccoliot was answered—"I am myself 'God';" while a Buddhist (a Sinhalese especially) would simply laugh, and say in reply, "There is no God; no Creation." Yet the root Philosophy of both Advaita and Buddhist scholars is *identical*, and both have the same respect for animal life, for both believe that every creature on Earth, however small and humble, "is an immortal portion of the immortal Matter"—Matter having with them quite another significance from that which it has with either Christian or Materialist—and that every creature is subject to Karma.

The answer of the Brâhman would have suggested itself to every ancient Philosopher, Kabalist, and Gnostic of the early days. It contains the very spirit of the Delphic and Kabalistic commandments, for Esoteric Philosophy solved, ages ago, the problem of what man *was*, *is*, and *will be*; his origin, life-cycle—interminable in its duration of successive incarnations or rebirths—and his final absorption into the Source from which he started.

But it is not Physical Science that we can ever ask to read man for us, as the riddle of the Past, or of the Future; since no Philosopher can tell us even what man is, as known to both Physiology and Psychology. In doubt whether man was a God or a beast, Science has now connected him with the latter and derives him from an animal. Certainly the task of analyzing and classifying the human being as a *terrestrial animal* may be left to Science, which Occultists, of all men, regard with veneration and respect. They recognize its ground and the wonderful work it has done, the progress achieved in Physiology, and even—to a degree—in Biology. But man's *inner*, spiritual, psychic, or even moral, nature cannot be left to the tender mercies of an ingrained Materialism; for not even the higher psychological Philosophy of the West is able, in its present incompleteness and tendency towards a decided Agnosticism, to do justice to the inner man; especially to his higher capacities and perceptions, and to those states of consciousness,

* *Ibid.*, 51, 52.

across the road to which such authorities as Mill draw a strong line, saying "So far, and no farther shalt thou go."

No Occultist would deny that man—together with the elephant and the microbe, the crocodile and the lizard, the blade of grass and the crystal—is, in his physical formation, the simple product of the evolutionary forces of Nature through a numberless series of transformations; but he puts the case differently.

It is not against zoölogical and anthropological discoveries, based on the fossils of man and animal, that every Mystic and believer in a Divine Soul inwardly revolts, but only against the uncalled-for conclusions built on preconceived theories and made to fit in with certain prejudices. The premisses of Scientists may or may not be always true; and as some of these theories live but a short life, the deductions therefrom must ever be one-sided with materialistic Evolutionists. Yet it is on the strength of such very ephemeral authority, that most of the men of Science frequently receive honours where they deserve them the least.*

To make the working of Karma—in the periodical renovations of the Universe—more evident and intelligible to the student when he arrives at the origin and evolution of man, he has now to examine with us the Esoteric bearing of the Karmic Cycles upon Universal Ethics. The question is, do those mysterious divisions of time, called Yugas and Kalpas by the Hindûs, and so very graphically, κύκλοι, cycles, rings

* We refer those who would regard the statement as an impertinence or irreverence levelled at accepted Science, to Dr. James Hutchinson Stirling's work *As regards Protoplasm*, which is a defence of a Vital Principle *versus* the Molecularists—Huxley, Tyndall, Vogt, and Co.—and request them to examine whether it is true or not to say that, though the scientific premisses may not be always correct, they are, nevertheless, accepted, to fill up a gap or a hole in some beloved materialistic hobby. Speaking of protoplasm and the organs of man, as "viewed by Mr. Huxley," the author says: "Probably then, in regard to any continuity in protoplasm of power, of form, or of substance, we have seen *lacunæ* enow. Nay, Mr. Huxley himself can be adduced in evidence on the same side. Not rarely do we find in his essay admissions of *probability*, where it is *certainly* that is alone in place. He says, for example: 'It is more than probable that *when* the vegetable world is thoroughly explored we *shall* find all plants in possession of the same powers.' When a conclusion is decidedly announced, it is rather disappointing to be told, as here, that the premisses are still to collect (!!) Again, here is a passage in which he is seen to cut his own '*basis*' from beneath his own feet. After telling us that all forms of protoplasm consist of carbon, hydrogen, oxygen and nitrogen 'in very complex union,' he continues: 'To this complex combination, *the nature of which has never been determined with exactness* (!!), the name of *protein* has been applied.' This, plainly, is an identification, on Mr. Huxley's own part, of protoplasm and protein; and what is said of one, being necessarily true of the other, it follows that he admits the nature of protoplasm never to have been determined with exactness, and that even in his eyes the *lis* is still *sub judice*. This admission is strengthened by the words, too, 'If we use this term (protein) with such *caution* as may properly arise out of our *comparative ignorance* of the things for which it stands'" . . . etc. (pp. 33 and 34. ed. 1872, in reply to Mr. Huxley in *Yeast*).

This is the eminent Huxley, the king of physiology and biology, who is proven playing at blind man's buff with *premisses* and *facts*! What may not the "smaller fry" of Science do after this!

or circles, by the Greeks, have any bearing upon, or any direct connection with, human life? Even exoteric Philosophy explains that these perpetual circles of time are ever returning on themselves, periodically and intelligently, in Space and Eternity. There are "Cycles of Matter,"* and there are "Cycles of Spiritual Evolution," and racial, national, and individual Cycles. May not Esoteric speculation allow us a still deeper insight into their workings?

This idea is beautifully expressed in a very clever scientific work.

The possibility of rising to a comprehension of a system of coördination so far outreaching in time and space all range of human observations, is a circumstance which signalizes the power of man to transcend the limitations of changing and inconsistent matter, and assert his superiority over all insentient and perishable forms of being. There is a method in the succession of events, and in the relation of coëxistent things, which the mind of man seizes hold of; and by means of this as a clue, he runs back or forward over æons of material history of which human experience can never testify. Events germinate and unfold. They have a past which is connected with their present, and we feel a well-justified confidence that a future is appointed which will be similarly connected with the present and the past. This continuity and unity of history repeat themselves before our eyes in all conceivable stages of progress. The phenomena furnish us the grounds for the generalization of two laws which are truly *principles of scientific divination*, by which alone the human mind penetrates the sealed records of the past and the unopened pages of the future. The first of these is the law of evolution, or, to phrase it for our purpose, *the law of correlated successiveness or organized history in the individual*, illustrated in the changing phases of every single maturing system of results. . . . These thoughts summon into our immediate presence the measureless past and the measureless future of material history. They seem almost to open vistas through infinity, and to endow the human intellect with an existence and a vision exempt from the limitations of time and space and finite causation, and lift it up towards a sublime apprehension of the Supreme Intelligence whose dwelling place is eternity.†

According to the teachings, Mâyâ—the illusive appearance of the marshalling of events and actions on this Earth—changes, varying with nations and places. But the chief features of one's life are always in accordance with the "Constellation" under which one is born, or, we should say, with the characteristics of its animating principle or the Deity that presides over it, whether we call it a Dhyân Chohan, as in Asia, or an Archangel, as with the Greek and Latin Churches. In ancient Symbolism it was always the Sun—though the Spiritual, not the visible, Sun was meant—that was supposed to send forth the chief

* "The Cycles of Matter," a name given by Professor Winchell to an Essay written in 1860.

† *World-Life*, pp. 535, 548.

Saviours and Avatâras. Hence the connecting link between the Buddhas, the Avatâras, and so many other incarnations of the highest Seven. The closer the approach to one's Prototype, in "Heaven," the better for the mortal whose Personality was chosen, by his own *personal* Deity (the Seventh Principle), as its terrestrial abode. For, with every effort of will toward purification and unity with that "Self-God," one of the lower Rays breaks, and the spiritual entity of man is drawn higher and ever higher to the Ray that supersedes the first, until, from Ray to Ray, the Inner Man is drawn into the one and highest Beam of the Parent-Sun. Thus, "the events of humanity *do* run coördinately with the number forms," since the single units of that humanity proceed one and all from the same source—the Central Sun and its *shadow*, the visible. For the equinoxes and solstices, the periods and various phases of the solar course, astronomically and numerically expressed, are only the concrete symbols of the eternally living verity, though they do seem *abstract ideas* to uninitiated mortals. And this explains the extraordinary numerical coincidences with geometrical relations, shown by several authors.

Yes; "our destiny *is* written in the stars"! Only, the closer the union between the mortal reflection Man and his celestial Prototype, the less dangerous the external conditions and subsequent reincarnations—which neither Buddhas nor Christs can escape. This is not superstition, least of all is it *fatalism*. The latter implies a blind course of some still blinder power, but man is a free agent during his stay on earth. He cannot escape his *ruling* Destiny, but he has the choice of two paths that lead him in that direction, and he can reach the goal of misery—if such is decreed to him—either in the snowy white robes of the martyr, or in the soiled garments of a volunteer in the iniquitous course; for there are *external* and *internal conditions* which affect the determination of our will upon our actions, and it is in our power to follow either of the two. Those who believe in Karma have to believe in Destiny, which, from birth to death, every man weaves thread by thread round himself, as a spider his web; and this Destiny is guided either by the heavenly voice of the invisible Prototype outside of us, or by our more intimate *astral*, or inner man, who is but too often the evil genius of the embodied entity called man. Both these lead on the outward man, but one of them must prevail, and from the very beginning of the invisible affray the stern and implacable *Law of Compensation* steps in and takes its course, faithfully following

the fluctuations of the fight. When the last strand is woven, and man is seemingly enwrapped in the network of his own doing, then he finds himself completely under the empire of this *self-made* Destiny. It then either fixes him like the inert shell against the immovable rock, or carries him away like a feather in a whirlwind raised by his own actions, and this is—KARMA.

A Materialist, treating of the periodical creations of our globe, has expressed it in a single sentence:

The whole *past* of the earth is nothing but an unfolded *present*.

The writer was Büchner, who little suspected that he was repeating an axiom of the Occultists. It is quite true also, as Burmeister remarks, that:

The historical investigation of the development of the earth has proved that *now* and *then* rest upon the same base; that the past has been developed in the same manner as the present rolls on; and that the forces which were in action ever remained the same.*

The Forces—their Noumena rather—are the same, of course; therefore, the phenomenal Forces must be the same also. But how can any one feel so sure that the attributes of Matter have not altered under the hand of Protean Evolution? How can any Materialist assert with such confidence, as is done by Rossmassler, that:

This eternal conformity in the essence of phenomena renders it certain that fire and water possessed at all times the same powers and ever will possess them.

Who are they “that darken counsel with words without knowledge,” and where were the Huxleys and Büchners when the foundations of the Earth were laid by the Great Law? This same homogeneity of Matter and immutability of natural laws, which are so much insisted upon by Materialism, are a fundamental principle of the Occult Philosophy; but this unity rests upon the inseparability of Spirit from Matter, and, if the two were once divorced, the whole Kosmos would fall back into Chaos and Non-being. Therefore, it is absolutely *false*, and but an additional demonstration of the great conceit of our age, to assert, as men of Science do, that all the great geological changes and terrible convulsions of the past have been produced *by ordinary and known physical Forces*. For these Forces were but the tools and final means for the accomplishment of certain purposes, acting periodically, and apparently mechanically, through an inward impulse mixed up

* Quoted in Büchner's *Force and Matter*.

with, but beyond their material nature. There is a purpose in every important act of Nature, whose acts are all cyclic and periodical. But spiritual Forces having been usually confused with the purely physical, the former are denied by, and therefore, because left unexamined, have to remain unknown to Science.* Says Hegel:

The history of the World begins with its general aim, the realization of the Idea of Spirit—only in an *implicit* form (*an sich*), that is, as Nature; a hidden, most profoundly hidden unconscious instinct, and the whole process of History . . . is directed to rendering this unconscious impulse a conscious one. Thus appearing in the form of merely natural existence, natural will—that which has been called the subjective side—physical craving, instinct, passion, private interest, as also opinion and subjective conception—spontaneously present themselves at the very commencement. This vast congeries of volitions, interests and activities constitute the instruments and means of the World-Spirit for attaining its object; bringing it to consciousness and realizing it. And this aim is none other than finding itself—coming to itself—and contemplating itself in concrete actuality. But that those manifestations of vitality on the part of individuals and peoples, in which they seek and satisfy their own purposes, are at the same time the means and instruments of a higher and broader purpose of which they know nothing—which they realize unconsciously—might be made a matter of question; rather has been questioned . . . on this point I announced my view at the very outset, and asserted our hypothesis . . . and our belief that Reason governs the World and has consequently governed its history. In relation to this independently universal and substantial existence—all else is subordinate, subservient to it, and the means for its development.†

No Metaphysician or Theosophist could demur to these truths, which are all embodied in Esoteric Teachings. There *is* a predestination in the geological life of our globe, as in the history, past and future, of races and nations. This is closely connected with what we call Karma, and what Western Pantheists called Nemesis and Cycles. The law of evolution is now carrying us along the ascending arc of *our* cycle, when the effects will be once more re-merged into, and re-become the now neutralized causes, and all things affected by the former will have regained their original harmony. This will be the cycle of our special Round, a moment in the duration of the Great Cycle, or Mahâyuga.

The fine philosophical remarks of Hegel are found to have their

* Men of Science will say: We deny, because nothing of the kind has ever come within the scope of our experience. But, as argued by Charles Richet, the Physiologist: "So be it, but have you at least demonstrated the contrary? . . . Do not, at any rate, deny *à priori*. Actual Science is not sufficiently advanced to give you such right."—[*La Suggestion Mentale et le Calcul des Probabilités*.

† *Lectures on the Philosophy of History*, p. 26. Sibree's Eng. Transl.

application in the teachings of Occult Science, which shows Nature ever acting with a given purpose, whose results are always dual. This was stated in our first Occult volumes, in the following words:

As our Planet revolves once every year around the Sun, and at the same time turns once in every twenty-four hours upon its own axis, thus traversing minor circles within a larger one, so is the work of the smaller cyclic periods accomplished and recommenced within the Great Saros. The revolution of the physical world, according to the ancient doctrine, is attended by a like revolution in the world of intellect—the spiritual evolution of the world proceeding in cycles, like the physical one. Thus we see in history a regular alternation of ebb and flow in the tide of human progress. The great kingdoms and empires of the world, after reaching the culmination of their greatness, descend again, in accordance with the same law by which they ascended; till, having reached the lowest point, humanity reasserts itself and mounts up once more, the height of its attainment being, by this law of ascending progression by cycles, somewhat higher than the point from which it had before descended.*

But these cycles—wheels within wheels, so comprehensively and ingeniously symbolized by the various Manus and Rishis in India, and by the Kabiri in the West †—do not affect all mankind at one and the same time. Hence, as we see, the difficulty of comprehending, and of discriminating between them, with regard to their physical and spiritual effects, without having thoroughly mastered their relations with, and action upon, the respective positions of nations and races, in their destiny and evolution. This system cannot be comprehended if the spiritual action of these periods—*preordained*, so to say, by Karmic law—is separated from their physical course. The calculations of the best Astrologers would fail, or at any rate remain imperfect, unless this dual action is thoroughly taken into consideration and mastered upon these lines. And this mastery can be achieved only through INITIATION.

The Grand Cycle includes the progress of mankind from the appearance of primordial man of ethereal form. It runs through the inner Cycles of man's progressive evolution from the ethereal down to the semi-ethereal and purely physical; down to the redemption of man

* *Isis Unveiled*, Vol. I, p. 34.

† This symbolism does not prevent these now seemingly mythic personages from having ruled the Earth once upon a time under the human form of actual living, though truly divine and god-like Men. The opinion of Colonel Vallancey—and also of Count de Gebelin—that the “names of the Kabiri appear to be all allegorical, and to have signified no more [?] than an almanac of the vicissitudes of the seasons—calculated for the operations of agriculture” (*Collect. de Reb. Hibern.*, No. 13, Præf. Sect. 5), is as absurd as his assertion that Æon, Cronus, Saturn and Dagon are all one, namely, the “Patriarch Adam.” The Kabiri were the instructors of mankind in agriculture, because they were the Regents over the seasons and Cosmic Cycles. Hence it was they who regulated, as Planetary Spirits or Angels (Messengers), the *mysteries* of the art of agriculture.

from his "coat of skin" and matter, after which it continues running its course downward and then upward again, to meet at the culmination of a Round, when the Manvantaric Serpent "swallows its tail" and seven Minor Cycles are passed. These are the great Racial Cycles which affect equally all the nations and tribes included in that special Race; but there are minor and national, as well as tribal, Cycles within these, which run their course independently of each other. They are called in Eastern Esotericism the Karmic Cycles. In the West—since Pagan Wisdom has been repudiated as having grown from and been developed by the Dark Powers, supposed to be at constant war with and in opposition to the little tribal Jehovah—the full and awful significance of the Greek Nemesis, or Karma, has been entirely forgotten. Otherwise Christians would have better realized the profound truth that Nemesis is without attributes; that while the dreaded Goddess is absolute and immutable as a Principle, it is we ourselves—nations and individuals—who propel it to action and give the impulse to its direction. Karma-Nemesis is the creator of nations and mortals, but once created, it is they who make of her either a Fury or a rewarding Angel. Yea—

Wise are they who worship Nemesis *

—as the Chorus tells Prometheus. And as unwise they, who believe that the Goddess may be propitiated by any sacrifices and prayers, or have her wheel diverted from the path it has once taken. "The triform Fates and ever mindful Furies" are her attributes only on Earth, and begotten by ourselves. There is no return from the paths she cycles over; yet those paths are of our own making, for it is we, collectively or individually, who prepare them. Karma-Nemesis is the synonym of Providence, *minus* design, goodness, and every other *finite* attribute and qualification, so unphilosophically attributed to the latter. An Occultist or a Philosopher will not speak of the goodness or cruelty of Providence; but, identifying it with Karma-Nemesis, he will nevertheless teach that it guards the good and watches over them in this, as in future lives; and that it punishes the evil-doer—aye, even to his seventh rebirth—so long, indeed, as the effect of his having thrown into perturbation even the smallest atom in the Infinite World of Harmony has not been finally readjusted. For the only decree of Karma—an eternal and immutable decree—is absolute Harmony in the

* "Who dread Karma-Nemesis," would be better.

world of Matter as it is in the world of Spirit. It is not, therefore, Karma that rewards or punishes, but it is we who reward or punish ourselves, according as we work with, through and along with Nature, abiding by the laws on which that harmony depends, or—breaking them.

Nor would the ways of Karma be inscrutable were men to work in union and harmony, instead of disunion and strife. For our ignorance of these ways—which one portion of mankind calls the ways of Providence, dark and intricate, while another sees in them the action of blind Fatalism, and a third, simple Chance, with neither Gods nor Devils to guide them—would surely disappear, if we would but attribute all of them to their correct cause. With right knowledge, or at any rate with a confident conviction that our neighbours would no more work to hurt us than we would think of harming them, two-thirds of the world's evil would vanish into thin air. Were no man to hurt his brother, Karma-Nemesis would have neither cause to work for, nor weapons to act through. It is the constant presence in our midst of every element of strife and opposition, and the division of races, nations, tribes, societies and individuals into Cains and Abels, wolves and lambs, that is the chief cause of the "ways of Providence." We cut these numerous windings in our destinies daily with our own hands, while we imagine that we are pursuing a track on the royal high road of respectability and duty, and then we complain because these windings are so intricate and so dark. We stand bewildered before the mystery of our own making, and the riddles of life that *we will not* solve, and then accuse the great Sphinx of devouring us. But verily there is not an accident in our lives, not a misshapen day, or a misfortune, that could not be traced back to our own doings in this or in another life. If one breaks the laws of Harmony, or, as a theosophical writer expresses it, the "laws of life," one must be prepared to fall into the chaos oneself has produced. For, according to the same writer:

The only conclusion one can come to is that these laws of life are their own avengers; and consequently that every avenging angel is only a typified representation of their reaction.

Therefore, if any one is helpless before these immutable laws, it is not ourselves, the artificers of our destinies, but rather those Angels, the guardians of Harmony. Karma-Nemesis is no more than the spiritual dynamical effect of causes produced, and forces awakened into activity, by our own actions. It is a law of Occult dynamics that

“a given amount of energy expended on the spiritual or astral plane is productive of far greater results than the same amount expended on the physical objective plane of existence.”

This condition of things will last till man's spiritual intuitions are fully opened, and this will not be until we fairly cast off our thick coats of Matter; until we begin acting from *within*, instead of ever following impulses from *without*, impulses produced by our physical senses and gross selfish body. Until then the only palliatives for the evils of life are union and harmony—a Brotherhood *in actu*, and Altruism not simply in name. The suppression of one single bad *cause* will suppress not one, but many bad effects. And if a Brotherhood, or even a number of Brotherhoods, may not be able to prevent nations from occasionally cutting each other's throats, still unity in thought and action, and philosophical research into the mysteries of being, will always prevent some persons, who are trying to comprehend that which has hitherto remained to them a riddle, from creating additional causes of mischief in a world already so full of woe and evil. Knowledge of Karma gives the conviction that if

. . . . virtue in distress, and vice in triumph
Make atheists of mankind,*

it is only because mankind has ever shut its eyes to the great truth that man is himself his own saviour and his own destroyer. He need not accuse Heaven and the Gods, Fates and Providence, of the apparent injustice that reigns in the midst of humanity. But let him rather remember and repeat this fragment of Grecian wisdom, which warns man to forbear accusing *That* which

Just, though mysterious, leads us on unerring
Through ways unmark'd from guilt to punishment;

and such are now the ways on which the great European nations move onward. Every nation and tribe of the Western Âryans, like their Eastern brethren of the Fifth Race, has had its Golden and its Iron Age, its period of comparative irresponsibility, or its Satya Age of purity, and now, several of them have reached their Iron Age, the Kali Yuga, an age black with horrors.

On the other hand, it is true that the exoteric Cycles of every nation have been rightly derived from, and shown to depend on, sidereal motions. The latter are inseparably blended with the destinies of

* Dryden.

nations and men. But, in the purely physical sense, Europe knows of no Cycles other than the astronomical, and it makes its computations accordingly. Nor will it hear of any other than *imaginary* circles or circuits in the starry heavens that gird them,

With centric and eccentric scribbled o'er
Cycle and epicycle, orb in orb.

But with the Pagans—of whom Coleridge rightly says, “Time, cyclical time, was their abstraction of the Deity,” that “Deity” manifesting coördinately with, and only through, Karma, and being that Karma-Nemesis itself—the Cycles meant something more than a mere succession of events, or a periodical space of time of more or less prolonged duration. For they were generally marked with recurrences of a more varied and intellectual character than are exhibited in the periodical return of seasons or of certain constellations. Modern wisdom is satisfied with astronomical computations and prophecies, based on unerring mathematical laws. Ancient Wisdom added to the cold shell of Astronomy the vivifying elements of its soul and spirit—Astrology. And, as the sidereal motions *do* regulate and determine other events on Earth besides potatoes and the periodical diseases of that useful vegetable—a statement which, not being amenable to scientific explanation, is merely derided, while none the less accepted—these events have to submit to predetermination, by simple astronomical computations. Believers in Astrology will understand our meaning, sceptics will laugh at the belief and mock the idea. Thus they shut their eyes, ostrich-like, to their own fate.*

This because their little *historical* period, so called, allows them no margin for comparison. Sidereal heaven is before them; and though their spiritual vision is still unopened, and the atmospheric dust of terrestrial origin seals their sight and chains it within the limits of

* Not all, however, for there are men of Science awakening to truth. This is what we read: “Whatever way we turn our eyes we encounter a mystery . . . all in Nature for us is the unknown. . . . Yet they are numerous, those superficial minds for whom nothing can be produced by natural forces outside of facts observed long ago, consecrated in books and grouped more or less skilfully with the help of theories whose ephemeral duration ought, by this time, to have demonstrated their insufficiency. . . . I do not pretend to contest the possibility of invisible beings, of a nature different from ours and capable of moving matter to action. Profound philosophers have admitted this in all epochs, as a consequence of the great law of continuity which rules the universe. That intellectual life, which we see starting in some way from non-being (*néant*) and gradually reaching man, can it stop abruptly at man to reappear only in the infinite, in the sovereign regulator of the world? This is little probable.” Therefore, “I no more deny the existence of spirits than I deny soul, while I yet try to explain certain facts without this hypothesis.” *The Non-Defined Forces, Historical and Experimental Researches*, p. 3. (Paris, 1877.) The author is A. de Rochas, a well-known man of Science in France, and his work is one of the signs of the time.

physical systems, still they do not fail to perceive the movements and note the behaviour of meteors and comets. They record the periodical advents of those wanderers and "flaming messengers," and prophesy, in consequence, earthquakes, meteoric showers, the apparition of certain stars, comets, etc. Are they, then, soothsayers after all? No; they are learned Astronomers.

Why, then, should Occultists and Astrologers, as learned as these Astronomers, be disbelieved when they prophesy the return of some cyclic event on the same mathematical principles? Why should the claim that they *know* this return be ridiculed? Their forefathers and predecessors, having recorded the recurrence of such events in their time and day, throughout a period embracing hundreds of thousands of years, the conjunction of the same constellations must necessarily produce, if not quite the same, at any rate similar, effects. Are the prophecies to be derided, because of the claim made for hundreds of thousands of years of observation, and for millions of years for the human Races? In its turn, Modern Science is laughed at by those who hold to Biblical chronology, for its far more modest geological and anthropological figures. Thus Karma adjusts even human laughter, at the mutual expense of sects, learned societies, and individuals. Yet in the prognostication of *such* future events, at any rate, all foretold on the authority of cyclic recurrences, no psychic phenomenon is involved. It is neither *prevision*, nor *prophecy*; any more than is the signalling of a comet or star, several years before its appearance. It is simply knowledge, and mathematically correct computations, which enable the *Wise Men of the East* to foretell, for instance, that England is on the eve of such or another catastrophe; that France is nearing such a point of her Cycle; and that Europe in general is threatened with, or rather is on the eve of, a cataclysm, to which her own Cycle of racial Karma *has led her*. Our view of the reliability of the information depends, of course, on our acceptance or rejection of the claim for a tremendous period of historical observation. Eastern Initiates maintain that they have preserved records of racial development and of events of universal import ever since the beginning of the Fourth Race—their knowledge of events preceding that epoch being traditional. Moreover, those who believe in Seership and in Occult Powers will have no difficulty in crediting the general character, at least, of the information given, even if it be traditional, once the tradition is checked and corrected by clairvoyance and Esoteric Knowledge. But

in the present case no such metaphysical belief is claimed as our chief dependence, for proof is given—on what, to every Occultist, is quite scientific evidence—the records preserved through the Zodiac for incalculable ages.

It is now amply proved that even horoscopes and judiciary Astrology are not quite based on fiction, and that Stars and Constellations, consequently, have an occult and mysterious influence on, and connection with, individuals. And if with the latter, why not with nations, races, and mankind as a whole? This, again, is a claim made on the authority of the Zodiacal records. We shall then enquire how far the Zodiac was known to the Ancients, and how far it is forgotten by the Moderns.

SECTION XVI.

THE ZODIAC AND ITS ANTIQUITY.

“ALL men are apt to have a high conceit of their own understanding, and to be tenacious of the opinions they profess,” said Jordan, justly adding to this—“and yet almost all men are guided by the understandings of others, not by their own; and may be said more truly to adopt, than to beget, their opinions.”

This is doubly true in regard to scientific opinions upon hypotheses offered for consideration—the prejudice and preconceptions of “authorities,” so called, often deciding upon questions of the most vital importance for history. There are several such predetermined opinions held by our learned Orientalists, and few are more unjust or illogical than the general error with regard to the antiquity of the Zodiac. Thanks to the hobby of some German Orientalists, English and American Sanskritists have accepted Professor Weber’s opinion that the peoples of India had no idea or knowledge of the Zodiac prior to the Macedonian invasion, and that it is from the Greeks that the ancient Hindûs imported it into their country. We are further told, by several other “authorities,” that no Eastern nation knew of the Zodiac before the Hellenes kindly acquainted their neighbours with their invention. And *this*, in the face of the *Book of Job*, which is declared, even by themselves, to be the oldest in the Hebrew canon, and certainly prior to Moses; a book which speaks of the *making* of “Arcturus, Orion, and Pleiades [Osh, Kesil, and Kimah] and the chambers of the South”*; of Scorpio and the Mazaruth—the *twelve signs*†; words which, if they mean anything, imply knowledge of the Zodiac even among the nomadic Arabian tribes. The *Book of Job* is alleged to have preceded Homer and Hesiod by at least one thousand years—the two Greek poets having themselves flourished some eight centuries before the Christian era (!!). Though, by the bye, one who prefers to believe

* ix. 9.

† xxxviii. 31, 32.

Plato—who shows Homer flourishing far earlier—could point to a number of Zodiacal signs mentioned in the *Iliad* and *Odyssey*, in the Orphic poems, and elsewhere. But since the cock-and-bull hypothesis of some modern critics that, so far from Orpheus, not even Homer or Hesiod has ever existed, it would seem time lost to mention these archaic authors at all. The Arabian Job will suffice; unless, indeed, his volume of lamentations, along with the poems of the two Greeks, to which we may add those of Linus, should now also be declared to be the patriotic forgery of the Jew Aristobulus. But if the Zodiac was known in the days of Job, how could the civilized and philosophical Hindûs have remained ignorant of it?

Risking the arrows of modern criticism—rather blunted by misuse—the reader may make himself acquainted with Bailly's learned opinion upon the subject. Inferred speculations may be shown to be erroneous. Mathematical calculations stand on more secure grounds. Taking as a starting point several astronomical references in *Job*, Bailly devised a very ingenious means of proving that the earliest founders of the Science of the Zodiac belonged to an antediluvian, primitive people. The fact that he seems willing to see some of the Biblical patriarchs in Thoth, Seth, and in the Chinese Fohi, does not interfere with the validity of his proof as to the antiquity of the Zodiac.* Even accepting, for argument's sake, his cautious 3700 years B.C. as the correct age of the Zodiacal Science, this date proves in the most irrefutable way that it was not the Greeks who invented the Zodiac, for the simple reason that they did not exist as a nation thirty-seven centuries B.C.—at any rate not as a *historical* race admitted by the critics. Bailly then calculated the period at which the constellations manifested the atmospheric influence called by Job the “sweet influences of the Pleiades,”† in Hebrew Kimah; that of Orion, Kesil; and that of the desert rains with reference to Scorpio, the eighth constellation; and found that in presence of the eternal conformity of these divisions of the Zodiac, and of the names of the Planets applied in the same order everywhere and always, and in presence of the impossibility of attributing it all to chance and “coincidence”—“which never creates such similarities”—a very great antiquity indeed must be allowed for the Zodiac.‡

* *Astronomie Antique.*

† The Pleiades, as all know, are the seven stars beyond the Bull, which appear at the beginning of spring. They have a very Occult meaning in the Hindû Esoteric Philosophy, and are connected with *Sound* and other mystic principles in Nature.

‡ See *Astronomie Antique*, pp. 63 to 74.

Again, if the *Bible* is supposed to be an authority on any matter—and there are some who still regard it as such, whether from Christian or Kabalistical considerations—then the Zodiac is clearly mentioned in *II Kings*, xxiii. 5. Before the “book of the law” was “found” by Hilkiah, the high priest, the signs of the Zodiac were known and worshipped. These were held in the same adoration as the Sun and Moon, since the

priests, whom the kings of Judah had ordained to burn incense . . . unto Baal, to the sun, and to the moon, and to the planets, and to all the host of heaven, or to the “twelve signs or constellations,” as the marginal note in the English *Bible* explains, had followed the injunction for centuries. They were stopped in their idolatry only by King Josiah, 624 B.C.

The *Old Testament* is full of allusions to the twelve zodiacal signs, and the whole scheme is built upon it—heroes, personages, and events. Thus in the dream of Joseph, who saw eleven “Stars” bowing to the twelfth, which was his “Star,” the Zodiac is referred to. The Roman Catholics have discovered in it, moreover, a prophecy of Christ, who is that twelfth Star, they say, and the others the eleven apostles; the absence of the twelfth being also regarded as a prophetic allusion to the treachery of Judas. The twelve sons of Jacob, again, are a reference to the same, as is justly pointed out by Villapandus.* Sir James Malcolm, in his *History of Persia*,† shows the *Dabistan* echoing all such traditions about the Zodiac. He traces the invention of it to the palmy days of the Golden Age of Iran, remarking that one of the said traditions maintains that the Genii of the Planets are represented under the same shapes and figures they had assumed when *they showed themselves to several holy prophets*, and thus led to the establishment of the rites based on the Zodiac.

Pythagoras, and after him Philo Judæus, held the number 12 as very sacred.

This duodenary number is *perfect*. It is that of the signs of the Zodiac, which the sun visits in twelve months, and it is to honour that number that Moses divided his nation into twelve tribes, established the twelve cakes of the shewbread, and placed twelve precious stones upon the breast-plate of the pontiffs.‡

According to Seneca, Berosus taught prophecy of every future event and cataclysm by the Zodiac; and the times fixed by him for the con-

* *Temple de Jerusalem*, Vol. II, Part II, Chap. xxx.

† Ch. vii.

‡ Quoted by De Mirville, *Des Esprits*, iv. p. 58.

flagration of the World—Pralaya—and for a deluge, are found to answer to the times given in an ancient Egyptian papyrus. Such a catastrophe comes at every renewal of the cycle of the Sidereal Year of 25,868 years. The names of the Akkadian months were called by, and derived from, the names of the signs of the Zodiac, and the Akkadians are far earlier than the Chaldæans. Mr. Proctor shows, in his *Myths and Marvels of Astronomy*, that the ancient Astronomers had acquired a system of the most accurate Astronomy 2,400 years B.C.; the Hindûs date their Kali Yuga from a great periodical conjunction of the Planets thirty-one centuries B.C.; but, withal, it was the Greeks, belonging to the expedition of Alexander the Great, who were the instructors of the Âryan Hindûs in Astronomy!

Whether the origin of the Zodiac is Âryan or Egyptian, it is still of an immense antiquity. Simplicius, in the sixth century A.D., writes that he had always heard that the Egyptians had kept astronomical observations and records for a period of 630,000 years. This statement appears to frighten Mr. Gerald Massey, who remarks on it that:

If we read this number of years by the month which Euxodus said the Egyptians termed a year, *i.e.*, a course of time, that would still yield the length of two cycles of precession [51,736 years].*

Diogenes Laërtius carried back the astronomical calculations of the Egyptians to 48,863 years before Alexander the Great.† Martianus Capella corroborates this by telling posterity that the Egyptians had secretly studied Astronomy for over 40,000 years, before they imparted their knowledge to the world.‡

Several valuable quotations are made in *Natural Genesis* with the view of supporting the author's theories, but they justify the teaching of the Secret Doctrine far more. For instance, Plutarch is quoted from his *Life of Sulla*, saying:

One day when the sky was serene and clear, there was heard in it the sound of a trumpet, so loud, shrill, and mournful, that it affrighted and astonished the world. The Tuscan sages said that it portended a new race of men, and a renovation of the world; for they affirmed that there were eight several kinds of men, all being different in life and manners; and that Heaven had allotted each its time, which was limited by the circuit of the great year [25,868 years].§

This reminds one strongly of our Seven Races of men, and of the

* *Natural Genesis*, ii. p. 318.

† *Proœm*, 2.

‡ *Astronomy of the Ancients*, Lewis, p. 264.

§ *Natural Genesis*, ii. p. 319.

eighth—the “animal man”—descended from the later Third Race; as also of the successive submersions and destruction of the continents which finally disposed of almost all that Race. Says Iamblichus:

The Assyrians have not only preserved the memorials of seven-and-twenty myriads of years [270,000 years], as Hipparchus says they have, but likewise of the whole apocatastases and periods of the Seven Rulers of the World.*

This is as nearly as possible the calculation of the Esoteric Doctrine. For 1,000,000 years are allowed for our present Root-Race (the Fifth), and about 850,000 years have passed since the submersion of the last large island—part of the continent of Atlantis—the Ruta of the Fourth Race, the Atlanteans; while Daitya, a small island inhabited by a mixed race, was destroyed about 270,000 years ago, during the Glacial Period or thereabouts. But the Seven Rulers, or the seven great Dynasties of the Divine Kings, belong to the traditions of every great people of antiquity. Wherever twelve are mentioned, they are invariably the twelve signs of the Zodiac.

So patent is this fact, that the Roman Catholic writers—especially among the French Ultramontanes—have tacitly agreed to connect the twelve Jewish Patriarchs with the Signs of the Zodiac. This is done in a kind of prophetic-mystic way, which sounds to pious and ignorant ears like a portentous token, a tacit divine recognition of the “chosen people of God,” whose finger has purposely traced in heaven, from the beginning of creation, the numbers of these patriarchs. For instance, curiously enough, these writers, De Mirville among others, recognize all the characteristics of the twelve Signs of the Zodiac, in the words addressed by the dying Jacob to his Sons, and in his definitions of the future of each Tribe.† Moreover, the respective banners of the same tribes are said to have exhibited the same symbols and the same names as the Signs, repeated in the twelve stones of the Urim and Thummim, and on the twelve wings of the two Cherubs. Leaving to the said Mystics the proof of exactitude in the alleged correspondence, we quote it as follows: Man, or Aquarius, is in the sphere of Reuben, who is declared as “unstable as water” (the Vulgate has it, “*rushing* like water”); Gemini, in that of Simeon and Levi, because of their strong fraternal association; Leo, in that of Judah, “the strong Lion” of his tribe, “the lion’s whelp”; Pisces, in Zabulon, who “shall dwell at the haven of the sea”; Taurus, in Issachar, because he is “a strong ass couching down,” etc., and therefore associated with the stables;

* Proclus, *In Timæum*, i.

† *Genesis*, xlix.

(Virgo-) Scorpio, in Dan, who is described as "a serpent, an adder in the path that biteth," etc.; Capricornus in Naphtali, who is "a hind (a deer) let loose"; Cancer, in Benjamin, for he is "ravenous"; Libra, the Balance, in Asher, whose "bread shall be fat"; Sagittarius in Joseph, because "his bow abode in strength." To make up for the twelfth Sign, Virgo, made independent of Scorpio, we have Dinah, the only daughter of Jacob. Tradition shows the *alleged* tribes carrying the twelve signs on their banners. But indeed the *Bible*, in addition to the above, is filled with theo-cosmological and astronomical symbols and personifications.

It remains to wonder, and to query—if the actual, living Patriarchs' destiny was so indissolubly wound up with the Zodiac—how it is that, after the loss of the ten tribes, the ten signs also out of the twelve have not miraculously disappeared from the sidereal fields? But this is of no great concern. Let us rather busy ourselves with the history of the Zodiac itself.

The reader may be reminded of some opinions expressed as to the Zodiac by several of the highest authorities in Science.

Newton believed that the invention of the Zodiac could be traced as far back as the expedition of the Argonauts; and Dulaure fixed its origin at 6,500 years B.C., just 2,496 years before the creation of the world, according to the *Bible* chronology.

Creuzer thought that it was very easy to show that most of the Theogonies were intimately connected with religious calendars, and were related to the Zodiac as to their prime origin; if not to the Zodiac known to us now, then to something very analogous with it. He felt certain that the Zodiac and its mystic relations are at the bottom of all the mythologies, under one form or another, and that it had existed in the old form for ages, before it was brought out in the present defined astronomical garb, owing to some singular coördination of events.*

Whether the "genii of the planets," our Dhyân Chohans of supramundane spheres, showed themselves to "holy prophets," or not, as claimed in the *Dabistan*, it would seem that great laymen and warriors were favoured in the same way in days of old in Chaldæa, when astrological Magic and Theophania went hand in hand.

Xenophon, no ordinary man, narrates of Cyrus that at the moment of his death he thanked the Gods and heroes, for having so often instructed him themselves about the signs in heaven—*ἐν οὐρανίους σημείοις*.†

* Creuzer, iii. p. 930.

† *Cyropædia*, viii. p. 7, as quoted in *Des Esprits*, iv. p. 55.

Unless the Science of the Zodiac is admitted to be of the highest antiquity and universality, how can we account for its Signs being traced in the oldest Theogonies? Laplace is said to have felt struck with amazement at the idea of the days of Mercury (Wednesday), Venus (Friday), Jupiter (Thursday), Saturn (Saturday), and others, being related to the days of the week in the same order and with the same names in India as in Northern Europe.

Try, if you can, with the present system of autochthonous civilizations, so much in fashion in our day, to explain how nations with no ancestry, no traditions or birthplace in common, could have succeeded in inventing a kind of celestial phantasmagoria, a veritable *imbroglio* of sidereal denominations, without sequence or object, having no figurative relation with the constellations they represent, and still less, apparently, with the phases of our terrestrial life they are made to signify, —had there not been a *general* intention and a *universal* cause and belief, at the root of all this!* Most truly has Dupuis asserted the same:

Il est impossible de découvrir le moindre trait de ressemblance entre les parties du ciel et les figures que les astronomes y ont *arbitrairement* tracées; et de l'autre côté, *le hasard est impossible.*†

Most certainly chance is "*impossible.*" There is no "chance" in Nature, wherein everything is mathematically coördinate, and inter-related in its units. Says Coleridge:

Chance is but the pseudonym of God [or Nature], for those particular cases which He does not choose to subscribe openly with His sign manual.

Replace the word "God" by Karma, and it will become an Eastern axiom. Therefore, the sidereal "prophecies" of the Zodiac, as they are called by Christian Mystics, never point to any one particular event, however solemn and sacred it may be for some one portion of humanity, but to ever-recurrent, periodical laws in Nature, understood only by the Initiates of the Sidereal Gods themselves.

No Occultist, no Astrologer of Eastern birth, will ever agree with Christian Mystics, or even with Kepler's mystical Astronomy, his great science and erudition notwithstanding; and this because, if his premisses are quite correct, his deductions therefrom are one-sided and biassed by Christian preconceptions. Where Kepler finds a prophecy directly pointing to the Saviour, other nations see a symbol of an eternal law, decreed for the actual Manvantara. Why see in Pisces a direct reference to Christ—one of the several world-reformers, a Saviour for his direct followers, but only a great and glorious Initiate

* *Des Esprits*, iv. pp. 59, 60.

† *Origine de tous les Cultes*, "Zodiaque."

for all the rest—when that constellation shines as a symbol of all the past, present, and future Spiritual Saviours, who dispense light and dispel mental darkness? Christian symbologists have tried to prove that this sign belonged to Ephraim, Joseph's son, the *elect* of Jacob, and that therefore, it was at the moment of the Sun's entering into the sign of Pisces, the Fish, that the "Elect Messiah," the 'Ιχθῦς of the first Christians, had to be born. But if Jesus of Nazareth was that Messiah, was he really born at that "moment," or was his birth-hour thus fixed by the adaptation of Theologians, who sought only to make their pre-conceived ideas fit in with sidereal facts and popular belief? Everyone is aware that the real time and year of the birth of Jesus are totally unknown. And it is the Jews—whose forefathers made the word Dag signify both "Fish" and "Messiah" during the forced development of their rabbinical language—who are the first to deny this Christian claim. And what of the further facts that Brâhmans connect their "Messiah," the eternal Avatâra Vishnu, with a Fish and the Deluge, and that the Babylonians also made a Fish and a Messiah of their Dag-On, the Man-Fish and Prophet?

There are learned iconoclasts among Egyptologists, who say that:

When the Pharisees sought a "sign from heaven," Jesus said, "there shall no sign be given . . . but the sign of the prophet Jonas." (*Mat.*, xvi. 4.) . . . The sign of Jonas is that of the Oan or Fish-Man of Nineveh. . . . Assuredly there was no other sign than that of the Sun reborn in Pisces. The voice of the Secret Wisdom says those who are looking for signs can have no other than that of the returning Fish-Man Ichthys, Oannes, or Jonas—who could not be made flesh.

It would appear that Kepler maintained it as a positive fact that, at the moment of the "incarnation," all the planets were in conjunction in the sign Pisces, called by the Jewish Kabbalists the "constellation of the Messiah." Kepler averred:

It is in this constellation that the star of the Magi is to be found.

This statement, quoted from Dr. Sepp* by De Mirville, emboldened the latter to remark that:

All the Jewish traditions, while announcing that star that many nations have seen [!], † further added that it would absorb the seventy planets that preside over

* *Vie de Notre Seigneur Jésus Christ*, I. p. 9.

† Whether many nations have seen that identical star, or not, we all know that the sepulchres of the "three Magi"—who rejoice in the quite Teutonic names of Kaspar and Melchior, Balthazar being the only exception, and the two having little of the Chaldean ring in them—are shown by the priests in the famous cathedral of Cologne, where the Magian bodies are not only supposed, but firmly believed to have been buried.

the destinies of various nations on this globe.* "In virtue of those natural prophecies," says Dr. Sepp, "it was written in the stars of the firmament that the Messiah would be born in the lunar year of the world 4320, in that memorable year when the entire choir of the planets would be celebrating its jubilee."†

There was indeed a rage, at the beginning of the present century, for claiming restoration from the Hindûs for an alleged robbery from the Jews of their "Gods," patriarchs, and chronology. It was Wilford who recognized Noah in Prithî and in Satyavrata, Enos in Dhruva, and even Assur in Īshvara. After being residents for so many years in India, some Orientalists, at least, ought to have known that it was not the Brâhmans alone who had these figures, or who had divided their Great Age into four minor ages. Nevertheless writers in the *Asiatic Researches* indulged in the most extravagant speculations. S. A. Mackey, the Norwich "philosopher, astronomer, and shoemaker," argues very pertinently:

Christian theologians think it their duty to write against the long periods of Hindû chronology, and in them it may be pardonable: but when a man of learning crucifies the names and the numbers of the ancients, and wrings and twists them into a form, which means something quite foreign to the intention of the ancient authors; but which, so mutilated, fits in with the *birth* of some *maggot* preëxisting in his own brain with so much exactness that he *pretends* to be amazed at the discovery, I cannot think him quite so pardonable.‡

This is intended to apply to Captain (later Colonel) Wilford, but the words may fit more than one of our modern Orientalists. Colonel Wilford was the first to crown his unlucky speculations on Hindû chronology and the *Purânas* by connecting the 4,320,000 years with biblical chronology, by simply dwarfing the figures to 4,320 years—the supposed lunar year of the Nativity—and Dr. Sepp has simply plagiarized the idea from this gallant officer. Moreover, he persisted in seeing in them Jewish property, as well as Christian prophecy, thus accusing the Âryans of having helped themselves to Semitic revelation, whereas the reverse was the case. The Jews, moreover, need not be accused of directly despoiling the Hindûs, of whose figures Ezra probably knew nothing. They had evidently and undeniably borrowed them from the Chaldeans, along with the Chaldean Gods. They turned

* This tradition about the "seventy planets" that preside over the destinies of nations, is based on the Occult cosmogonical teaching that besides our own septenary chain of World-Planets, there are many more in the Solar System.

† *Des Esprits*, iv. p. 67.

‡ *The Mythological Astronomy of the Ancients Demonstrated; Part the Second, or The Key of Urania*: pp. 23, 24. Ed. 1823.

the 432,000 years of the Chaldean Divine Dynasties* into 4,320 lunar years from the world's creation to the Christian era; as to the Babylonian and Egyptian Gods, they quietly and modestly transformed them into Patriarchs. Every nation was more or less guilty of such refashioning and adaptation of a Pantheon—once common to all—of universal into national and tribal Gods and Heroes. It was Jewish property in its new Pentateuchal garb, and no one of the Israelites has ever forced it upon any other nation—least of all upon the European.

Without stopping to notice this very unscientific chronology more than is necessary, we may yet make a few remarks that may be found to the point. The 4,320 *lunar* years of the world—in the *Bible* the *solar* years are used—are not fanciful, as such, even if their application is quite erroneous; for they are only the distorted echo of the primitive Esoteric, and later of the Brâhmanical doctrine concerning the Yugas. A Day of Brahmâ equals 4,320,000,000 years, as also does a Night of Brahmâ, or the duration of Pralaya, after which a *new* "sun" rises triumphantly over a *new* Manvantara, for the Septenary Chain it illuminates. The teaching had penetrated into Palestine and Europe centuries before the Christian era,† and was present in the minds of the Mosaic Jews, who based upon it their small Cycle, though it received full expression only through the Christian chronologers of the *Bible*, who adopted it, as also the 25th of December, the day on which all the *solar* Gods were said to have been incarnated. What wonder, then, that the Messiah was *made* to be born in "the *lunar* year of the world 4,320"? The "Sun of Righteousness and Salvation" had once more arisen and had dispelled the pralayaic darkness of Chaos and Non-being on the plane of our objective little Globe and Chain. Once the

* Every scholar is aware, of course, that the Chaldeans claimed the same digits (432), or 432,000, for their Divine Dynasties as the Hindûs do for their Mahâyuga, namely 4,320,000. Therefore has Dr. Sepp, of Munich, undertaken to support Kepler and Wilford in their charge that the Hindûs borrowed them from the Christians, and the Chaldeans from the Jews, who, it is claimed, expected their Messiah in the lunar year of the world 4,320!!! As these figures, according to ancient writers, were based by Berossus on the 120 Saroses—each of the divisions meaning six Neroses of 600 years each, making a sum total of 432,000 years—they would appear to be peremptory, remarks De Mirville (*Des Esprits*, iii. p. 24). So the pious professor of Munich undertook to explain them *in the correct way*. He claims to have solved the riddle by showing that "the saros being composed, according to Pliny, of 222 synodial months, to wit, 18 years 6/10," the calculator naturally fell back on the figures "given by Suidas," who affirmed that the "120 saroses made 2,222 sacerdotal and cyclic years, which equalled 1,656 solar years." (*Vie de Notre Seigneur Jêsus Christ*, ii. p. 417.)

But Suidas said nothing of the kind; and, even supposing he had, he would prove little, if anything, by such a statement. The Neroses and Saroses were the same thorn in the side of *uninitiated* ancient writers as the apocalyptic 666 of the "Great Beast" is in that of the modern, and the former figures have found their unlucky Newtons, as have the latter.

† See *Isis Unveiled*, ii. p. 132.

subject of the adoration was settled upon, it was easy to make the supposed events of his birth, life, and death, fit in with the Zodiacal exigencies and the old traditions, though they had to be somewhat remodelled for the occasion.

Thus what Kepler said, as a great Astronomer, becomes comprehensible. He recognized the grand and universal importance of all such planetary conjunctions, "each of which"—as he has well said—"is a *climacteric* year of Humanity."* The rare conjunction of Saturn, Jupiter, and Mars has its significance and importance on account of its certain great results, in India and China as much as it has in Europe, for the respective Mystics of these countries. And it is certainly now no better than a mere assumption to maintain that Nature had only Christ in view, in building her (to the profane) fantastic and meaningless constellations. If it is claimed that it was no hazard that could lead the archaic architects of the Zodiac, thousands of years ago, to mark the figure of Taurus with the asterisk *a*, with no better or more valid proof of it being *prophetic* of the Verbum or Christ than that the *aleph* of Taurus means the "one" and the "first," and that Christ was also the *alpha* or the "one," then this "proof" may be shown to be strangely invalidated in more than one way. To begin with, the Zodiac existed before the Christian era, at all events; further, all the Sun-Gods—Osiris, for instance—had been mystically connected with the constellation Taurus and were all called by their respective votaries the "First." Further, the compilers of the mystical epithets given to the Christian Saviour were all more or less acquainted with the significance of the Zodiacal signs; and it is easier to suppose that they should have arranged their claims so as to match the mystic signs, than that the latter should have shone as a prophecy for one portion of humanity, for millions of years, taking no heed of the numberless generations that had gone before, and of those that were to be born hereafter.

We are told:

It is not simple chance that, in certain spheres, has placed on a throne the head of this bull [Taurus] trying to push back a Dragon with the ansated cross; we

* The reader has to bear in mind that the phrase "climacteric year" has more than the usual significance, when used by Occultists and Mystics. It is not only a critical period, during which some great change is periodically expected, whether in human or cosmic constitution, but it likewise pertains to universal spiritual changes. The Europeans called every 63rd year the "grand climacteric," and perhaps justly supposed those years to be the years produced by multiplying 7 into the odd numbers 3, 5, 7 and 9. But 7 is the real scale of Nature, in Occultism, and 7 has to be multiplied in quite a different way and method than is as yet known to European nations.

should know that this constellation of Taurus was called "*the great city of God and the mother of revelations,*" and also "*the interpreter of the divine voice,*" the Apis Pacis of Hermontis, in Egypt, which [as the patristic fathers would assure the world] is said to have proffered oracles that related to the birth of the Saviour.*

To this theological assumption there are several answers. Firstly, the ansated Egyptian cross, or Tau, the Jaina cross, or Svastika, and the Christian cross, have all the same meaning. Secondly, no peoples or nations except the Christians gave the significance to the Dragon that is given to it now. The Serpent was the symbol of WISDOM; and the Bull, Taurus, the symbol of physical or terrestrial *generation*. Thus the Bull, pushing off the Dragon, or spiritual Divine Wisdom, with the Tau, or Cross—which is esoterically "the foundation and framework of all construction"—would have an entirely phallic, physiological meaning, had it not had yet another significance unknown to our Biblical scholars and symbologists. At any rate, it has no special reference to the Verbum of St. John, except, perhaps, in a general sense. The Taurus—which, by the way, is no lamb, but a bull—was sacred in every Cosmogony, with the Hindûs as with the Zoroastrians, with the Chaldees as with the Egyptians. So much, every schoolboy knows.

It may perhaps help to refresh the memory of our Theosophists if we refer them to what was said of the Virgin and the Dragon, and the universality of periodical births and re-births of World-Saviours—Solar Gods—in *Isis Unveiled*,† with regard to certain passages in *Revelation*.

In 1853, the savant known as Erard-Mollien read before the Institute of France a paper tending to prove the antiquity of the Indian Zodiac, in the signs of which were found the root and philosophy of all the most important religious festivals of that country; the lecturer tried to demonstrate that the origin of these religious ceremonies goes back into the night of time to at least 3,000 B.C. The Zodiac of the Hindûs, he thought, was long anterior to the Zodiac of the Greeks, and differed from it much in some particulars. In it one sees the Dragon on a Tree, at the foot of which the Virgin, Kanyâ-Durgâ, one of the most ancient Goddesses, is placed on a Lion dragging after it the solar car. He said:

This is the reason why this Virgin Durgâ is not the simple *memento* of an astronomical fact, but verily the most ancient divinity of the Indian Olympus. She is evidently the same whose return was announced in all the Sibylline books—the source of the inspiration of Virgil—an epoch of universal renovation. . . .

* *Des Esprits*, iv. p. 61.

† ii. p. 490.

And why, since the months are still named after this Indian solar Zodiac, by the Malayalim-speaking people [of southern India], should that people have abandoned it to take that of the Greeks? Everything proves, on the contrary, that these zodiacal figures were transmitted to the Greeks by the Chaldeans, who got them from the Bráhmans.*

But all this is very poor testimony. Let us, however, remember also that which was said and accepted by the contemporaries of Volney, who remarks that as Aries was in its fifteenth degree 1,447 B.C., it follows that the first degree of Libra could not have coincided with the vernal equinox later than 15,194 years B.C.; if we add to this, he argues, the 1,790 years that have passed since the birth of Christ, it appears that 16,984 years must have elapsed since the origin of the Zodiac.†

Dr. Schlegel, moreover, in his *Uranographie Chinoise*, assigns to the Chinese Astronomical Sphere an antiquity of 18,000 years.‡

Nevertheless, as opinions quoted without adequate proofs are of little avail, it may be more useful to turn to scientific evidence. M. Bailly, the famous French Astronomer of the last century, Member of the Academy, etc., asserts that the Hindû systems of Astronomy are by far the oldest, and that from them the Egyptians, Greeks, Romans, and even the Jews derived their knowledge. In support of these views he says :

The astronomers who preceded the epoch 1491 are, first, the Alexandrian Greeks: Hipparchus, who flourished 125 years before our era, and Ptolemy, 260 years after Hipparchus. Following these were the Arabs, who revived the study of astronomy in the ninth century. These were succeeded by the Persians and the Tartars, to whom we owe the tables of Nassireddin in 1269, and those of Ulug-beg in 1437. Such is the succession of events in Asia as known prior to the Indian epoch 1491. What, then, is an epoch? It is the observation of the longitude of a star at a given moment, the place in the sky where it was seen, and which serves as a point of reference, a starting-point from which to calculate both the past and future positions of the star from its observed motion. But an epoch is useless unless the motion of the star has been determined. A people, new to science and obliged to borrow a foreign astronomy, finds no difficulty in fixing an epoch, since the only observation needed is one which can be made at any moment. But what it needs above all, what it is obliged to borrow, are those elements which depend on accurate determination, and which require continuous observation; above all, those motions which depend on time, and which can only be accurately determined by centuries of observation. These motions, then, must be borrowed from a nation which has made such observations, and has behind it the labours of centuries. We conclude,

* See *Recueil de l'Académie des Inscriptions*, 1853, quoted in *Des Esprits*, iv. p. 62.

† *Ruins of Empires*, p. 360.

‡ See pp. 54, 196, et seqq.

therefore, that a new people will not borrow the epochs of an ancient one, without also borrowing from them the "average motions." Starting from this principle we shall find that the Hindû epochs 1491 and 3102 could not have been derived from those of either Ptolemy or Ulug-beg.

There remains the supposition that the Hindûs, comparing their observations in 1491 with those previously made by Ulug-beg and Ptolemy, used the intervals between these observations to determine the average motions. The date of Ulug-beg is too recent for such a determination; while those of Ptolemy and Hipparchus were barely remote enough. But if the Hindû motions had been determined from these comparisons, the epochs would be connected together. Starting from the epochs of Ulug-beg and Ptolemy we should arrive at all those of the Hindûs. Hence foreign epochs were either unknown or useless to the Hindûs.*

We may add to this another important consideration. When a nation is obliged to borrow from its neighbours the methods or the average motions of its astronomical tables, it has even greater need to borrow, besides these, the knowledge of the inequalities of the motions of the heavenly bodies, the motions of the apogee, of the nodes, and of the inclination of the ecliptic; in short, all those elements the determination of which requires the art of observing, some instrumental appliances, and great industry. All these astronomical elements, differing more or less with the Greeks of Alexandria, the Arabs, the Persians and the Tartars, exhibit no resemblance whatever with those of the Hindûs. The latter, therefore, borrowed nothing from their neighbours.

If the Hindûs did not borrow their epoch, they must have possessed a real one of their own, based on their own observations; and this must be either the epoch of the year 1491 after, or that of the year 3102 before our era, the latter preceding by 4,592 years the epoch 1491. We have to choose between these two epochs and to decide which of them is based on observation. But before stating the arguments which can and must decide the question, we may be permitted to make a few remarks to those who may be inclined to believe that it is modern observations and calculations which have enabled the Hindûs to determine the past positions of the heavenly bodies. It is far from easy to determine the celestial movements with sufficient accuracy to ascend the stream of time for 4,592 years, and to describe the phenomena which must have occurred at that period. We possess to-day excellent instruments; exact observations have been made for some two or three centuries, which already permit us to calculate with considerable accuracy the average motions of the Planets; we have the observations of the Chaldeans, of Hipparchus and of Ptolemy, which, owing to their remoteness from the present time, permit us to fix these motions with greater certainty. Still we cannot undertake to represent with invariable accuracy the observations throughout the long period intervening between the Chaldeans and ourselves; and still less can we undertake to determine with exactitude events occurring 4,592 years before our day. Cassini and Maier have each determined the secular motion of the moon, and they differ by 3m. 43s. This difference would give rise in forty-six centuries to an uncertainty

* For a detailed scientific proof of this conclusion, see page 121 of M. Bailly's work, where the subject is discussed technically.

of nearly three degrees in the moon's place. Doubtless one of these determinations is more accurate than the other; and it is for observations of very great antiquity to decide between them. But in very remote periods, where observations are lacking, it follows that we are uncertain as to the phenomena. How, then, could the Hindûs have calculated back from the year 1491 A.D. to the year 3102 before our era, if they were only recent students of Astronomy?

The Orientals have never been what we are. However high an opinion of their knowledge we may form from the examination of their Astronomy, we cannot suppose them ever to have possessed that great array of instruments which distinguishes our modern observatories, and which is the product of simultaneous progress in various arts, nor could they have possessed that genius for discovery, which has hitherto seemed to belong exclusively to Europe, and which, supplying the place of time, causes the rapid progress of science and of human intelligence. If the Asiatics have been powerful, learned and wise, it is power and time which have produced their merit and success of all kinds. Power has founded or destroyed their empires; now it has erected edifices imposing by their bulk, now it has reduced them to venerable ruins; and while these vicissitudes alternated with each other, patience accumulated knowledge; and prolonged experience produced wisdom. It is the antiquity of the nations of the East which has erected their scientific fame.

If the Hindûs possessed in 1491 a knowledge of the heavenly motions sufficiently accurate to enable them to calculate backwards for 4592 years, it follows that they could only have obtained this knowledge from very ancient observations. To grant them such knowledge, while refusing them the observations from which it is derived, is to suppose an impossibility; it would be equivalent to assuming that at the outset of their career they had already reaped the harvest of time and experience. While on the other hand, if their epoch of 3102 is assumed to be real, it would follow that the Hindûs had simply kept pace with successive centuries down to the year 1491 of our era. Thus, time itself was their teacher; they knew the motions of the heavenly bodies during these periods, because they had seen them; and the duration of the Hindû people on earth is the cause of the fidelity of its records and the accuracy of its calculations.

It would seem that the problem as to which of the two epochs of 3102 and 1491 is the real one ought to be solved by one consideration, viz., that the ancients in general, and particularly the Hindûs, as we may see by the arrangement of their Tables, calculated, and therefore observed, eclipses only. Now, there was no eclipse of the sun at the moment of the epoch 1491; and no eclipse of the moon either fourteen days before or after that moment. Therefore the epoch 1491 is not based on an observation. As regards the epoch 3102, the Brâhmins of Tirvaloor place it at sunrise on February 18th. The sun was then in the first point of the Zodiac according to its true longitude. The other Tables show that at the preceding midnight the moon was in the same place, but according to its average longitude. The Brâhmins tell us also that this first point, the origin of their Zodiac, was, in the year 3102, 54 degrees behind the equinox. It follows that the origin—the first point of their Zodiac—was therefore in the sixth degree of Aquarius.

There occurred, therefore, about this time and place an average conjunction; and indeed this conjunction is given in our best Tables: La Caille's for the sun and Maier's for the moon. There was no eclipse of the sun, the moon being too distant from her node; but fourteen days later, the moon having approached the node, must have been eclipsed. Maier's tables, used without correction for acceleration, give this eclipse; but they place it during the day when it could not have been observed in India. Cassini's tables give it as occurring at night, which shows that Maier's motions are too rapid for distant centuries, when the acceleration is not allowed for; and which also proves that in spite of the improvement of our knowledge we can still be uncertain as to the actual aspect of the heavens in past times.

Therefore we believe that, as between the two Hindû epochs, the real one is the year 3102, because it was accompanied by an eclipse which could be observed, and which must have served to determine it. This is a first proof of the truth of the longitude assigned by the Hindûs to the sun and the moon at this instant; and this proof would perhaps be sufficient, were it not that this ancient determination becomes of the greatest importance for the verification of the motions of these bodies, and must therefore be borne out by every possible proof of its authenticity.

We notice, 1st, that the Hindûs seem to have combined two epochs together into the year 3102. The Tirvaloor Brâhmans reckon primarily from the first moment of the Kali Yuga; but they have a second epoch placed 2d. 3h. 32m. 30s. later. The latter is the true astronomical epoch, while the former seems to be a civil era. But if this epoch of the Kali Yuga had no reality, and was the mere result of a calculation, why should it be thus divided? Their calculated astronomical epoch would have become that of the Kali Yuga, which would have been placed at the conjunction of the sun and the moon, as is the case with the epochs of the three other Tables. They must have had some reason for distinguishing between the two; and this reason can only be due to the circumstances and the time of the epoch; which therefore could not be the result of calculation. This is not all; starting from the solar epoch determined by the rising of the sun on February 18th, 3102, and tracing back events 2d. 3h. 32m. 30s., we come to 2h. 27m. 30s. a.m. of February 16th, which is the instant of the beginning of Kali Yuga. It is curious that this age has not been made to commence at one of the four great divisions of the day. It might be suspected that the epoch should be midnight, and that the 2h. 27m. 30s. are a meridian correction. But whatever may have been the reason for fixing on this moment, it is plain that were this epoch the result of calculation, it would have been just as easy to carry it back to midnight, so as to make the epoch correspond to one of the chief divisions of the day, instead of placing it at a moment fixed by the fraction of a day.

2nd. The Hindûs assert that at the first moment of Kali Yuga there was a conjunction of all the planets; and their Tables show this conjunction while ours indicate that it might actually have occurred. Jupiter and Mercury were in exactly the same degree of the ecliptic; Mars being 8° and Saturn 17° distant from it. It follows that about this time, or some fifteen days after the commencement of Kali Yuga, and as the sun advanced in the Zodiac, the Hindûs saw four planets emerge successively from the Sun's rays; first Saturn, then Mars, then

Jupiter and Mercury, and these planets appeared united in a somewhat small space. Although Venus was not among them, the taste for the marvellous caused it to be called a general conjunction of all the planets. The testimony of the Brâhmins here coincides with that of our Tables; and this evidence, the result of a tradition, must be founded on actual observation.

3rd. We may remark that this phenomenon was visible about a fortnight after the epoch, and exactly at the time when the eclipse of the moon must have been observed, which served to fix the epoch. The two observations mutually confirm each other; and whoever made the one must have made the other also.

4th. We may believe also that the Hindûs made at the same time a determination of the place of the moon's node; this seems indicated by their calculation. They give the longitude of this point of the lunar orbit for the time of their epoch, and to this they add as a constant 40m., which is the node's motion in 12d. 14h. It is as if they stated that this determination was made thirteen days after their epoch, and that to make it correspond to that epoch, we must add the 40m. through which the node has retrograded in the interval. This observation is, therefore, of the same date as that of the lunar eclipse; thus giving three observations, which are mutually confirmatory.

5th. It appears from the description of the Hindû Zodiac given by M. C. Gentil, that on it the places of the stars named the Eye of Taurus and the Wheat-ear of Virgo, can be determined for the commencement of the Kali Yuga. Now, comparing these places with the actual positions, reduced by our precession of the equinoxes to the moment in question, we see that the point of origin of the Hindû Zodiac must lie between the fifth and sixth degree of Aquarius. The Brâhmins, therefore, were right in placing it in the sixth degree of that sign, the more so since this small difference may be due to the proper motion of the stars, which is unknown. Thus it was yet another observation which guided the Hindûs in this fairly accurate determination of the first point of their movable Zodiac.

It does not seem possible to doubt the existence in antiquity of observations of this date. The Persians say that four beautiful stars were placed as guardians at the four corners of the world. Now it so happens that at the commencement of Kali Yuga, 3,000 or 3,100 years before our era, the Eye of the Bull and the Heart of the Scorpion were exactly at the equinoctial points, while the Heart of the Lion and the Southern Fish were pretty near the solstitial points. An observation of the rising of the Pleiades in the evening, seven days before the autumnal equinox, also belongs to the year 3000 before our era. This and similar observations are collected in Ptolemy's calendars, though he does not give their authors; and these, which are older than those of the Chaldeans, may well be the work of the Hindûs. They are well acquainted with the constellation of the Pleiades, and while we call it vulgarly the "Poussinière," they name it Pillaloo-codi—the "Hen and chickens." This name has, therefore, passed from people to people, and comes to us from the most ancient nations of Asia. We see that the Hindûs must have observed the rising of the Pleiades, and have made use of it to regulate their years and their months; for this constellation is also called Krittikâ. Now they have a month of the same name, and this coincidence can only be due to the

fact that this month was announced by the rising or setting of the constellation in question.

But what is even more decisive as showing that the Hindûs observed the stars, and in the same way that we do, marking their position by their longitude, is a fact mentioned by Augustinus Riccius that, according to observations attributed to Hermes, and made 1,985 years before Ptolemy, the brilliant star in the Lyre and that in the heart of the Hydra were each seven degrees in advance of their respective positions as determined by Ptolemy. This determination seems very extraordinary. The stars advance regularly with respect to the equinox; and Ptolemy ought to have found the longitudes 28 degrees in excess of what they were 1,985 years before his time. Besides, there is a remarkable peculiarity about this fact, the same error or difference being found in the positions of both stars; therefore the error was due to some cause affecting both stars equally. It was to explain this peculiarity that the Arab Thebith imagined the stars to have an oscillatory movement, causing them to advance and recede alternately. This hypothesis was easily disproved; but the observations attributed to Hermes remained unexplained. Their explanation, however, is found in Hindû Astronomy. At the date fixed for these observations, 1,985 years before Ptolemy, the first point of the Hindû Zodiac was 35 degrees in advance of the equinox; therefore the longitudes reckoned for this point are 35 degrees in excess of those reckoned from the equinox. But after the lapse of 1,985 years the stars would have advanced 28 degrees, and there would remain a difference of only 7 degrees between the longitudes of Hermes and those of Ptolemy, and the difference would be the same for the two stars, since it is due to the difference between the starting-points of the Hindû Zodiac and that of Ptolemy, which reckons from the equinox. This explanation is so simple and natural that it must be true. We do not know whether Hermes, so celebrated in antiquity, was a Hindû, but we see that the observations attributed to him are reckoned in the Hindû manner, and we conclude that they were made by the Hindûs, who, therefore, were able to make all the observations we have enumerated, and which we find noted in their Tables.

6th. The observation of the year 3102, which seems to have fixed their epoch, was not a difficult one. We see that the Hindûs, having once determined the moon's daily motion of $13^{\circ} 10' 35''$, made use of it to divide the Zodiac into 27 constellations, related to the period of the moon, which takes about 27 days to describe it.

It was by this method that they determined the positions of the stars in this Zodiac; it was thus they found that a certain star of the Lyre was in $8^{\circ} 24'$, the Heart of the Hydra in $4^{\circ} 7'$, longitudes which are ascribed to Hermes, but which are calculated on the Hindû Zodiac. Similarly, they discovered that the Wheat-ear of Virgo forms the commencement of their fifteenth constellation, and the Eye of Taurus the end of the fourth; these stars being the one in $6^{\circ} 6' 40'$, the other in $1^{\circ} 23' 20'$ of the Hindû Zodiac. This being so, the eclipse of the moon which occurred fifteen days after the Kali Yuga epoch, took place at a point between the Wheat-ear of Virgo and the star θ of the same constellation. These stars are very approximately a constellation apart, the one beginning the fifteenth, the other the sixteenth. Thus it would not be difficult to determine the moon's place by

measuring her distance from one of these stars; from this they deduced the position of the sun, which is opposite to the moon, and then, knowing their average motions, they calculated that the moon was at the first point of the Zodiac according to her average longitude at midnight on the 17th-18th February of the year 3102 before our era, and that the sun occupied the same place six hours later according to his true longitude; an event which fixes the commencement of the Hindû year.

7th. The Hindûs state that 20,400 years before the age of Kali Yuga, the first point of their Zodiac coincided with the vernal equinox, and that the sun and moon were in conjunction there. This epoch is obviously fictitious;* but we may enquire from what point, from what epoch, the Hindûs set out in establishing it. Taking the Hindû values for the revolution of the sun and moon, viz., 365d. 6h. 12m. 30s., and 27d. 7h. 43m. 13s., we have—

$$\begin{aligned} 20,400 \text{ revolutions of the sun} &= 7,451,277\text{d. } 2\text{h.} \\ 272,724 \quad \quad \quad \text{“} \quad \quad \quad \text{moon} &= 7,451,277\text{d. } 7\text{h.} \end{aligned}$$

Such is the result obtained by starting from the Kali Yuga epoch; and the assertion of the Hindûs, that there was a conjunction at the time stated, is founded on their Tables; but if, using the same elements, we start from the era of the year 1491, or from another placed in the year 1282, of which we shall speak later, there will always be a difference of almost one or two days. It is both just and natural, in verifying the Hindû calculations, to take those among their elements which give the same result as they had themselves arrived at, and to set out from that one among their epochs which enables us to arrive at the fictitious epoch in question. Hence, since to make this calculation they must have set out from their real epoch, the one which was founded on an observation and not from any of those which were derived by this very calculation from the former, it follows that their real epoch was that of the year 3102 before our era.

8th. The Tirvaloor Brâhmans give the moon's motion as $7^{\circ} 2' 7''$ on the movable Zodiac, and as $9^{\circ} 7' 45' 1''$ as referred to the equinox in a great period of 1,600,984 days, or 4,386 years and 94 days. We believe this motion to have been determined by observation; and we must state at the outset that this period is of an extent which renders it but ill suited to the calculation of the mean motions.

In their astronomical calculations the Hindûs make use of periods of 248, 3,031, and 12,372 days; but, apart from the fact that these periods, though much too short, do not present the inconvenience of the former, they contain an exact number of revolutions of the moon referred to its apogee. They are in reality mean motions. The great period of 1,600,984 days is not a sum of accumulated revolutions; there is no reason why it should contain 1,600,984 rather than 1,600,985 days. It would seem that observation alone must have fixed the number of days and marked the beginning and end of the period. This period ends on the 21st of May, 1282 of our era, at 5h. 15m. 30s. at Benares. The moon was then in apogee, according to the Hindûs, and her longitude was .. $7^{\circ} 13' 45' 1''$
Maier gives the longitude as .. $7 \ 13 \ 53 \ 48$
And places the apogee at $7 \ 14 \ 6 \ 54$

* Why it should be "fictitious" can never be made plain by European Scientists.

The determination of the moon's place by the Brâhmins thus differs only by nine minutes from ours, and that of the apogee by twenty-two minutes, and it is very evident that they could only have obtained this agreement with our best Tables and this exactitude in the celestial positions by observation. If then, observation fixed the end of this period, there is every reason to believe that it determined its commencement. But then this motion, determined directly, and from nature, would of necessity be in close agreement with the true motions of the heavenly bodies.

And in fact the Hindû motion during this long period of 4,883 years, does not differ by a minute from that of Cassini, and agrees equally with that of Maier. Thus two peoples, the Hindûs and the Europeans, placed at the two extremities of the world, and perhaps as distant by their institutions, have obtained precisely the same results as regards the moon's motions; and an agreement which would be inconceivable, if it were not based on the observation and mutual imitation of nature. We must remark that the four Tables of the Hindûs are all copies of the same Astronomy. It cannot be denied that the Siamese Tables existed in 1687, when they were brought from India by M. de la Loubère. At that time the tables of Cassini and Maier were not in existence, and thus the Hindûs were already in possession of the exact motion contained in these Tables, while we did not yet possess it.* It must, therefore, be admitted that the accuracy of this Hindû motion is the point of observation. It is exact throughout this period of 4,383 years, because it was taken from the sky itself; and if observation determined its close, it fixed its commencement also. It is the longest period which has been observed and of which the recollection is preserved in the annals of Astronomy. It has its

* "The following is an answer to those men of science who might suspect that our astronomy was carried to India and communicated to the Hindûs by our Missionaries. 1st. Hindû astronomy has its own peculiar forms, characterized by their originality; if it had been our astronomy translated, great skill and knowledge would have been needed to disguise the theft. 2nd. When adopting the mean movement of the moon, they would have adopted also the inclination of the ecliptic, the equation of the sun's centre, the length of the year; these elements differ completely from ours, and are remarkably accurate as applying to the epoch of 3102; while they would be exceedingly erroneous if they had been calculated for last century. 3rd. Finally, our missionaries could not have communicated to the Hindûs in 1687 the tables of Cassini, which were not then in existence; they could have known only the mean motions of Tycho, Riccioli, Copernicus, Bouillaud, Kepler, Longomontanus, and those of the tables of Alphonso. I will now give a tabular view of these mean motions for 4,383 years and 94 days (Riccioli, *Almag.* I. p. 255):

Table.	Mean Motion.			Difference from Hindû.		
	D.	H.	M. S.		H.	M. S.
Alphonso	9	7	2 47	—	0	42 14
Copernicus	9	6	2 13	—	1	42 48
Tycho	9	7	54 40	+	0	9 39
Kepler	9	6	57 35	—	0	47 26
Longomontanus	9	7	2 13	—	0	42 48
Bouillaud	9	6	48 8	—	0	58 53
Riccioli	9	7	53 57	+	0	8 56
Cassini	9	7	44 11	—	0	0 50
India	9	7	45 1			

"None of these mean motions, except Cassini's, agrees with that of the Hindûs, who therefore, did not borrow their mean motions, since their figures agree only with those of Cassini, whose tables were not in existence in 1687. This mean motion of the moon belongs, therefore, to the Hindûs, who could only have obtained it by observation."—*Ibid.*, note, pp. xxxvi, xxxvii.

origin in the epoch of the year 3102 B.C., and it is a demonstrative proof of the reality of that epoch.*

Bailly is referred to at such length, as he is one of the few scientific men who have tried to do full justice to the Astronomy of the Âryans. From John Bentley down to Burgess' *Sûrya-Siddhânta*, not one Astronomer has been fair enough to the most learned people of Antiquity. However distorted and misunderstood the Hindû Symbology may be, no Occultist can fail to do it justice once that he knows something of the Secret Sciences; nor will he turn away from their metaphysical and mystical interpretation of the Zodiac, even though the whole Pleiades of Royal Astronomical Societies rise in arms against their mathematical rendering of it. The descent and reâscent of the Monad or Soul cannot be disconnected from the Zodiacal signs, and it looks more natural, in the sense of the fitness of things, to believe in a mysterious sympathy between the metaphysical Soul and the bright constellations, and in the influence of the latter on the former, than in the absurd notion that the creators of Heaven and Earth have placed in Heaven the types of twelve vicious Jews. And if, as the author of *The Gnostics and their Remains* asserts, the aim of all the Gnostic schools and the later Platonists

was to accommodate the old faith to the influence of Buddhistic theosophy, the very essence of which was that the innumerable gods of the Hindû mythology were but names for the Energies of the First Triad in its successive Avatârs or manifestations unto man,

whither can we better turn to trace these theosophic ideas to their very root, than to the old Indian wisdom? We say again: Archaic Occultism would remain incomprehensible to all, if it were to be rendered otherwise than through the more familiar channels of Buddhism and Hindûism. For the former is the emanation of the latter; and both are children of one mother—ancient Lemuro-Atlantean Wisdom.

* Bailly's *Traité de l'Astronomie Indienne et Orientale*, pp. xx. et seq. Ed. 1787.

SECTION XVII.

SUMMARY OF THE POSITION.

THE reader has had the whole case presented to him from both sides, and it remains with him to decide whether its summary stands in our favour or not. If there were such a thing as a void, a vacuum in Nature, one ought to find it produced, according to a physical law, in the minds of helpless admirers of the "lights" of Science, who pass their time in mutually destroying their teachings. If ever the theory that "two lights make darkness" found its application it is in this case, where one-half of the "lights" imposes its forces and "modes of motion" on the belief of the faithful, and the other half opposes the very existence of the same. "Ether, Matter, Energy"—the sacred hypostatical trinity, the three principles of the truly *unknown* God of Science, called by them PHYSICAL NATURE!

Theology is taken to task and ridiculed for believing in the union of three persons in one Godhead—one God as to substance, three persons as to individuality; and we are laughed at for our belief in unproved and unprovable doctrines, in Angels and Devils, Gods and Spirits. And, indeed, that which made the Scientists win the day over Theology in the Great "Conflict between Religion and Science," was precisely the argument that neither the identity of that substance, nor the triple individuality claimed—after having been conceived, invented, and worked out in the depths of Theological Consciousness—could be proved to exist by any scientific inductive process of reasoning, least of all by the evidence of our senses. Religion must perish, it is said, because it teaches "mysteries." "Mystery is the negation of Common Sense," and Science repels it. According to Mr. Tyndall, Metaphysics is "fiction," like poetry. The man of Science "takes nothing on trust"; rejects everything "that is not proven to him," while the Theologian accepts "everything on blind faith." The Theosophist and the

Occultist, who take nothing on trust, not even *exact* Science, the Spiritualist who denies dogma but believes in Spirits and in *invisible but potent influences*, all share in the same contempt. Very well, then; what we have to do now, is to examine for the last time whether *exact* Science does not act precisely in the same way as do Theosophy, Spiritualism, and Theology.

In a work by Mr. S. Laing, considered a standard book on Science, *Modern Science and Modern Thought*, the author of which, according to the laudatory review of the *Times*, "exhibits with much power and effect the immense discoveries of Science, and its numerous victories over old opinions, whenever they have the rashness to challenge conclusions with it," we read as follows:

What is the material universe composed of? Ether, Matter, Energy.

We stop to ask, What is Ether? And Mr. Laing answers in the name of Science:

Ether is not actually known to us by any test of which the senses can take cognizance, but is a sort of mathematical substance which we are compelled to assume in order to account for the phenomena of light and heat.*

And what is Matter? Do you know more about it than you do about the "hypothetical" agent, Ether?

In perfect strictness, it is true that chemical investigations can tell us nothing directly of the composition of living matter, and it is also in strictness true, that we know nothing about the compositions of any [material] body whatever as it is.†

And Energy? Surely you can define the third person of the Trinity of your Material Universe? We can take the answer from any book on Physics:

Energy is that which is only known to us by its effects.

Pray explain, for this is rather hazy.

[In mechanics there is actual and potential energy: work actually performed, and the capacity for performing it. As to the nature of molecular Energy or Forces], the various phenomena which bodies present show that their molecules are under the influence of two contrary forces, one which tends to bring them together, and the other to separate them. . . . The first force . . . is called *molecular attraction* the second force is due to the *vis viva*, or moving force.‡

Just so: it is the nature of this *moving force*, of this *vis viva*, that we want to know. What is it?

* Ch. III. "On Matter."

† *Lecture on Protoplasm*, by Mr. Huxley.

‡ Ganot's *Physics*, p. 68, Atkinson's Translation.

"We do not know!" is the invariable answer. "It is an empty shadow of my imagination," explains Mr. Huxley in his *Physical Basis of Life*.

Thus the whole structure of Modern Science is built on a kind of "mathematical abstraction," on a Protean "Substance which eludes the senses" (Dubois Reymond), and on *effects*, the shadowy and illusive will-o'-the-wisps of a *something* entirely unknown to, and beyond the reach of, Science. "Self-moving" Atoms! *Self-moving* Suns, Planets, and Stars! But who, then, or *what* are they all, if they are self-endowed with motion? Why then should you, Physicists, laugh at and deride our "Self-moving Archæus"? Mystery is rejected and scorned by Science, and as Father Felix has truly said:

She cannot escape it. Mystery is the fatality of Science.

The language of the French preacher is ours, and we quote it in *Isis Unveiled*. Who—he asks—who of you, men of Science:

Has been able to penetrate the secret of the formation of a body, the generation of a single atom? What is there, I will not say at the centre of a sun, but at the centre of an atom? Who has sounded to the bottom the abyss in a grain of sand? The grain of sand, gentlemen, has been studied four thousand years by science; she has turned and returned it; she divides it and subdivides it; she torments it with her experiments; she vexes it with her questions to snatch from it the final word as to its secret constitution; she asks it, with an insatiable curiosity: "Shall I divide thee infinitesimally?" Then suspended over this abyss, science hesitates, she stumbles, she feels dazzled, she becomes dizzy, and in despair says: "I DO NOT KNOW."

But if you are so fatally ignorant of the genesis and hidden nature of a grain of sand, how should you have an intuition as to the generation of a single living being? Whence in the living being does life come? Where does it commence? What is the life principle?*

Do the men of Science deny all these charges? By no means: for here is a confession of Tyndall, which shows how powerless is Science, even over the world of Matter.

The first marshalling of the atoms, on which all subsequent action depends, baffles a keener power than that of the microscope. . . . Through pure excess of complexity, and long before observation can have any voice in the matter, the most highly trained intellect, the most refined and disciplined imagination, retires in bewilderment from the contemplation of the problem. We are struck dumb by an astonishment which no microscope can relieve, doubting not only the

* See Vol. I. pp. 338, 339, quoted from *Le Mystère et la Science*, Conférences, Père Félix de Notre Dame.

power of our instrument, but even whether we ourselves possess the intellectual elements which will ever enable us to grapple with the ultimate structural energies of nature.

How little is known of the material Universe, indeed, has now been suspected for years, on the very admissions of these men of Science themselves. And now there are some Materialists who would even make away with Ether—or whatever Science calls the infinite Substance, the noumenon of which the Buddhists call Svabhâvat—as well as with Atoms, too dangerous both on account of their ancient philosophical, and their present Christian and theological, associations. From the earliest Philosophers, whose records passed to posterity, down to our present age—which, if it denies Invisible Beings in Space, can never be so insane as to deny a Plenum of some sort—the Fulness of the Universe has been an accepted belief. And what it was said to contain, one learns from Hermes Trismegistus (in Dr. Anna Kingsford's able rendering), who is made to say:

Concerning the void . . . my judgment is that it does not exist, that it never has existed, and that it never will exist, for all the various parts of the universe are filled, as the earth also is complete and full of bodies, differing in quality and in form, having their species and their magnitude, one larger, one smaller, one solid, one tenuous. The larger . . . are easily perceived; the smaller . . . are difficult to apprehend, or altogether invisible. We know only of their existence by the sensation of feeling, wherefore many persons deny such entities to be bodies, and regard them as simply spaces,* but it is impossible there should be such spaces. For if indeed there should be anything outside the universe . . . then it would be a space occupied by intelligible beings analogous to its [the universe's] Divinity I speak of the genii, for I hold they dwell with us, and of the heroes who dwell above us, between the earth and the higher airs; wherein are neither clouds nor any tempest.†

And we "hold" it too. Only, as already remarked, no Eastern Initiate would speak of spheres "*above* us, between the earth and the airs," even the highest, as there is no such division or measurement in Occult speech, no *above*, as no *below*, but an eternal *within*, *within two other within's*, or the planes of subjectivity merging gradually into that of terrestrial objectivity—this being for *man* the last one, his own

* Behold the work of Cycles and their periodical return! Those who denied such "Entities" (Forces) to be bodies, and called them "Spaces," were the prototypes of our modern "science-struck" public, and their official teachers, who speak of the Forces of Nature as the imponderable energy of Matter and as modes of motion, and yet hold electricity, for one, as being as *atomic as Matter itself*—(Helmholtz). Inconsistency and contradiction reign as much in official as in heterodox Science.

† *The Virgin of the World* of Hermes Mercurius Trismegistus, rendered into English by Dr. Anna Kingsford and Edward Maitland. Pp. 83, 84.

plane. This necessary explanation may be closed here by giving, in the words of Hermes, the belief on this particular point of the whole world of Mystics:

There are many orders of the Gods; and in all there is an intelligible part. It is not to be supposed they do not come within the range of our senses; on the contrary, we perceive them, better even than those which are called visible. . . . There are then Gods, superior to all appearances; after them come the Gods whose principle is spiritual; these Gods being sensible, in conformity with their double origin, manifest all things by a sensible nature, each of them illuminating his works one by another.* The supreme Being of heaven, or of all that is comprehended under this name, is Zeus, for it is by heaven that Zeus gives life to all things. The supreme Being of the sun is light, for it is by the disk of the sun that we receive the benefit of the light. The thirty-six horoscopes of the fixed stars have for supreme Being, or prince, him whose name is *Pantomorphos*, or having all forms, because he gives divine forms to divers types. The seven planets, or wandering spheres, have for supreme Spirits Fortune and Destiny, who uphold the eternal stability of the laws of Nature throughout incessant transformation and perpetual agitation. The ether is the instrument or medium by which all is produced.†

This is quite philosophical and in accordance with the spirit of Eastern Esotericism: for all the Forces, such as Light, Heat, Electricity, etc., are called the "Gods"—Esoterically.

This, indeed, must be so, since the Esoteric Teachings in Egypt and India were identical. And, therefore, the personification of Fohat, synthesizing all the manifesting Forces in Nature is a legitimate result. Moreover, as will be shown later, the real and Occult Forces in Nature only now begin to be known—and even in this case, by heterodox, not orthodox, Science,‡ though their existence, in one instance at any rate, is corroborated and certified by an immense number of educated people, and even by some official men of Science.

The statement, moreover, in Stanza VI—that Fohat sets in motion the primordial World-Germs, or the aggregation of Cosmic Atoms and Matter, "some one way, some the other way," in the opposite direction—looks orthodox and scientific enough. For there is, at all events, in support of this position, one fact fully recognized by Science, and it is this. The meteoric showers, periodical in November and

* "Hermes here includes as Gods the sensible Forces of Nature, the elements and phenomena of the Universe," remarks Dr. A. Kingsford in a foot-note explaining it very correctly. So does *Eastern Philosophy*.

† *Ibid.*, pp. 64, 65.

‡ See also Section IX, THE COMING FORCE.

August, belong to a system moving in an elliptical orbit around the Sun. The aphelion of this ring is 1,732 millions of miles beyond the orbit of Neptune, its plane is inclined to the Earth's orbit at an angle of $64^{\circ} 3'$, and the direction of the meteoric swarm moving round this orbit is *contrary to that of the Earth's revolution*.

This fact, recognized only in 1833, shows it to be the modern rediscovery of what was very anciently known. Fohat turns with his two hands in contrary directions the "seed" and the "curds," or Cosmic Matter; in clearer language, is turning particles in a highly attenuated condition, and nebulae.

Outside the boundaries of the Solar System, it is other Suns, and especially the mysterious Central Sun—the "Abode of the Invisible Deity" as some reverend gentlemen have called it—that determines the motion and the direction of bodies. That motion serves also to differentiate the homogeneous Matter, round and between the several bodies, into Elements and Sub-elements unknown to our Earth, and these are regarded by Modern Science as distinct individual Elements, whereas they are merely temporary appearances, changing with every small cycle within the Manvantara, some Esoteric works calling them "Kalpic Masks."

Fohat is the key in Occultism which opens and unriddles the multi-form symbols and allegories in the so-called mythology of every nation; demonstrating the wonderful Philosophy and the deep insight into the mysteries of Nature, contained in the Egyptian and Chaldean as well as in the Âryan religions. Fohat, shown in his true character, proves how deeply versed were all those prehistoric nations in every Science of Nature, now called the physical and chemical branches of Natural Philosophy. In India, Fohat is the scientific aspect of both Vishnu and Indra, the latter older and more important in the *Rig Veda* than his sectarian successor; while in Egypt, Fohat was known as Toom issued of Noot,* or Osiris in his character of a primordial God, creator of heaven and of beings.† For Toom is spoken of as the Protean God who *generates other Gods* and gives himself the form he likes; the "Master of Life, giving their vigour to the Gods."‡ He is the *overseer* of the Gods, and he "who creates spirits and gives them shape and

* "O Toom, Toom! issued from the great [female] which is in the bosom of the waters [the great Deep or Space], luminous through the two Lions," the dual Force, or power of the two *solar eyes*, or the electro-positive and the electro-negative forces. See *Book of the Dead*, ch. iii.

† See *Book of the Dead*, chapter xvii.

‡ Chapter lxxix.

life"; he is "the North Wind and the Spirit of the West"; and finally the "Setting Sun of Life," or the vital electric force that leaves the body at death; wherefore the Defunct begs that Toom should give him the breath from his *right* nostril (positive electricity) that he might live in his *second* form. Both the hieroglyph, and the text of chapter xlii in the *Book of the Dead*, show the identity of Toom and Fohat. The former represents a man standing erect with the hieroglyph of the *breaths* in his hands. The latter says:

I open to the chief of An (Heliopolis). I am Toom. I cross the water spilt by Thot-Hapi, the lord of the horizon, and am the divider of the earth [Fohat divides Space and, with his Sons, the Earth into seven zones]

I cross the heavens; I am the two Lions. I am Ra, I am Aam, I eat my heir.* I glide on the soil of the field of Aanroo,† given me by the master of limitless eternity. I am a germ of eternity. I am Toom, to whom eternity is accorded.

The very words used by Fohat in the XIth Book, and the very titles given him. In the Egyptian Papyri the whole Cosmogony of the Secret Doctrine is found scattered about in isolated sentences, even in the *Book of the Dead*. Number seven is quite as much insisted upon and emphasized therein as in the *Book of Dzyan*. "The Great Water [the Deep or Chaos] is said to be seven cubits deep"—"cubits" standing here of course for divisions, zones, and principles. Therein, "in the great Mother, all the Gods, and the Seven Great Ones are born." Both Fohat and Toom are addressed as the "Great Ones of the Seven Magic Forces," who, "conquer the Serpent Apap" or Matter.‡

No student of Occultism, however, ought to be betrayed, by the usual phraseology used in the translations of Hermetic Works, into believing that the ancient Egyptians or Greeks spoke of, and referred, monk-like, at every moment in conversation, to a Supreme Being, God,

* An image expressing the succession of divine functions, the transmutation of one form into another, or the correlation of forces. Aam is the electro-positive force, devouring all others, as Saturn devoured his progeny.

† Aanroo is in the domain of Osiris, a field divided into *fourteen* sections, "surrounded with an iron enclosure, within which grows the corn of life seven cubits high," the Kâma Loka of the Egyptians. Those only of the dead, who know the names of the janitors of the "seven halls," will be admitted into Amenti *for ever*; *i.e.*, those who have passed through the Seven Races of each Round—otherwise they will rest in the *lower fields*; and it represents also the seven successive Devachans, or Lokas. In Amenti one becomes pure spirit for the eternity (xxx. 4); while in Aanroo the "soul of the spirit," or the Defunct, is *devoured* each time by Uræus—the Serpent, Son of the Earth (in another sense the primordial vital principles in the Sun), *i.e.*, the Astral Body of the deceased or the "Elementary" fades out and disappears in the "Son of the Earth," *limited* time. The soul quits the fields of Aanroo and goes on earth under any shape it likes to assume. (See chapter xcix., *Book of the Dead*.)

‡ See *Book of the Dead*, chapter cviii. 4.

the "One Father and Creator of all," etc., in the way found on every page of such translations. No such thing indeed; and those texts *are not the original Egyptian* texts. They are Greek compilations, the earliest of which does not go beyond the early period of Neo-Platonism. No Hermetic work written by Egyptians—as we may see by the *Book of the Dead*—would speak of the one universal God of the Monotheistic systems; the one *Absolute* Cause of all, was as unnameable and unpronounceable in the mind of the ancient Philosopher of Egypt, as it is for ever *Unknowable* in the conception of Mr. Herbert Spencer. As for the Egyptian in general, as M. Maspero well remarks, whenever he

Arrived at the notion of divine Unity, the God One was never "God" simply. M. Lepage-Renouf very justly observed that the word Nouter, Nouti, "God" had never ceased to be a *generic name* to become a personal one.

Every God was the "one living and unique God" with them. Their

Monotheism was purely geographical. If the Egyptian of Memphis proclaimed the Unity of Phtah to the exclusion of Ammon, the Thebeian Egyptian proclaimed the unity of Ammon to the exclusion of Phtah [as we now see done in India in the case of the Shaivas and the Vaishnavas]. Ra, the "One God" at Heliopolis is not the same as Osiris, the "One God" at Abydos, and can be worshipped side by side with him, without being absorbed by him. The one God is but the God of the nome or the city, Noutir Nouti, and does not exclude the existence of the one God of the neighbouring town or nome. In short, whenever we are speaking of Egyptian Monotheism, we ought to speak of the Gods One of Egypt, and not of the One God.*

It is by this feature, preëminently Egyptian, that the authenticity of the various so-called *Hermetic Books*, ought to be tested; and it is totally absent from the Greek fragments known under this name. This proves that a Greek Neo-Platonic, or perhaps a Christian hand, had no small share in the editing of such works. Of course the fundamental Philosophy is there, and in many a place—intact. But the style has been altered and smoothed in a monotheistic direction, as much, if not more than that of the Hebrew Genesis in its Greek and Latin translations. They *may* be *Hermetic* works, but not works written by either of the two Hermes—or rather, by Thot Hermes, the directing Intelligence of the Universe† or by Thot his terrestrial incarnation called Trismegistus, of the Rosetta stone.

But all is doubt, negation, iconoclasm and brutal indifference, in our

* Maspero in the *Guide au Musée de Boulaq*, p. 152. Ed. 1883.

† See *Book of the Dead*, ch. xciv.

age of a hundred "isms" and no religion. Every idol is broken save the Golden Calf.

Unfortunately, no nation or nations can escape their Karmic fate, any more than can units and individuals. History itself is dealt with by the so-called historians as unscrupulously as legendary lore. For this, Augustin Thierry has made the *amende honorable*, if one may believe his biographers. He deplored the erroneous principle that made all the *would-be* historiographers lose their way, and each presume to correct tradition, "that *vox populi* which nine times out of ten is *vox Dei*"; and he finally admitted that *in legend alone rests real history*; for he adds:

Legend is living tradition, and three times out of four it is truer than what we call History.*

While Materialists deny everything in the Universe, save Matter, Archæologists are trying to dwarf Antiquity, and seek to destroy every claim of Ancient Wisdom by tampering with Chronology. Our present-day Orientalists and historical writers are to Ancient History that which the white ants are to the buildings in India. More dangerous even than those Termites, the modern Archæologists—the "authorities" of the future in the matter of Universal History—are preparing for the history of past nations the fate of certain edifices in tropical countries. As said Michelet:

History will tumble down and break into atoms in the lap of the twentieth century, devoured to its foundations by her annalists.

Very soon, indeed, under their combined efforts, it will share the fate of those ruined cities in both Americas, which lie deeply buried under impassable virgin forests. Historical facts will remain concealed from view by the inextricable jungles of modern hypotheses, denials and scepticism. But very happily *actual* History repeats herself, for she proceeds, like everything else, in cycles; and dead facts, and events deliberately drowned in the sea of modern scepticism, will ascend once more and reappear on the surface.

In Volume II, the very fact that a work with pretensions to Philosophy, which is also an exposition of the most abstruse problems, has to be commenced by tracing the evolution of mankind from what are regarded as supernatural beings—Spirits—will arouse the most malevolent criticism. Believers in, and the defenders of, the Secret Doc-

* *Revue des Deux Mondes*, 1865, pp. 157 and 158.

trine, however, will have to bear the accusation of madness *and worse*, as philosophically as for long years already the writer has done. Whenever a Theosophist is taxed with insanity, he ought to reply by quoting from Montesquieu's *Lettres Persanes* :

By opening so freely their lunatic asylums to their supposed madmen, men only seek to assure each other that they are not themselves mad.

END OF VOLUME I.

See page 204 - Rounds