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VI. THE MASKS OF SCIENCE.

PHYSICS OR METAPHYSICS?

If there is anything on earth like progress, Science will someday have to give up, *nolens volens*, such monstrous ideas as her physical, self-guiding *laws* — void of soul and Spirit, — and then turn to the occult teachings.

Vol. 1, Page 507 ACADEMICAL MISNOMERS.

It has done so already, however altered are the title-page and revised editions of the Scientific Catechism. It is now over half a century since, in comparing modern with ancient thought, it has been 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 other eminent men of Science. Atoms, Ether, evolution itself — all comes to modern Science from ancient notions, all is 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 found in the exotericism of the classical Greek writers. Yet, if we believe Mr. Tyndall, even Faraday was an Aristotelean, and an Agnostic more than a materialist. In his "Faraday, as a Discoverer" (p. 123) 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" (one, by the way, which has 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 as inorganic, or *dead* matter, in nature. Is anything *dead* or *inorganic* capable of transformation or change? Occultism asks. And is there anything under the sun which remains immutable or changeless?

This fallacy is nowhere better illustrated than in the scientific work of a German *savant*, Professor Philip Spiller (*Der Weltaether als Kosmische Kraft*). 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 power to act at a distance" (p. 4).

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* Something *dead* implies that it had been at some time *living*. When, at what period of cosmogony? Occultism says that in all cases when matter *appears* inert, it is the most active. 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; [[Footnote continued on next page]]

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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" (unkoerperlicher 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 that of scientific terms. Then this "stuff" is identified and connected by Spiller with the aether. Expressed in occult language it might be said with more correctness that this "force-substance" is the ever-active phenomenal positive aether — prakriti; while the omnipresent all pervading ether is the noumenon of the former, the substratum of all, or Akasa. Nevertheless, Stallo falls foul of 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 — aether is the source and cause.

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

What are Electricity and Light, in fact? How can Science know that one is a fluid and the other a "mode of motion"? Why is it not made clear why a difference should be made between them, since both are considered 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 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 demonstrated by Professor Grove nearly half a century ago.

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[[Footnote continued from previous page]] 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.

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

Vol. 1, Page 509 THE FIXING OF LIGHT.

"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, etc., etc."

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 through 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 the effect only of the 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 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 would be laughed at. But yet, when the physicist said that Electricity, stored up, was a fluid, or that light fixed on paper is still Sunlight — this is Science.* In the opinion of an experienced Occultist, one who has verified the whole series of Nidanas, 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, 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, that day is fast approaching when it will be confessed that the "forces" we know of 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, however, which ought to have become the motto of Science, but has not. Sir W. 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,

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* The newest Authorities have 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.

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"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*.* (See Buckwell's "Electric Science.")

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 premises, and are as apt to confuse the effects as they do the causes. It is incorrect, for instance, to say, as Stallo does, that "matter can no more be realized or conceived as mere spacial 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

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* 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?"

† Schelling, "Ideen," etc., p. 18.

Vol. 1, Page 511 WHAT IS FORCE?

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 when the argument is applied to things, in what the Kabalists call the supermundane spheres. Inertia, so called, "is force" according to Newton (*Princ. Def. iii.*), and for the student of Esoteric Sciences the greatest of the occult forces. A body may be considered divorced from its relations with other bodies — which, according to physical and mechanical sciences, give rise to its attributes — only *conceptually*, only on this plane of illusion. 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: but simply continues such interrelation on another plane. But what, if Stallo is right, can Dr. James Croll mean when, in speaking "On the Transformation of Gravity" (*Philosophical Magazine*, Vol. II., p. 252), 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* of the bodies and in open space — be it ether or 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 *Theorie Mecanique 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 re-adopt 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 "space between them," may be scientific enough; nevertheless it is not true.

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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!

The objection made that there are two distinct schools of physicists, by one of which "the force is assumed to be an *independent substantial entity*, which is not a property of matter nor is it essentially related to matter,"* is hardly likely to help the profane to any clearer understanding. It is, on the contrary, still more calculated to throw the question into 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 one way, and for those of the rival school in another way. 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 Ampere."§

This shows that either modern chemistry or modern physics is entirely wrong in its respective fundamental principles. For if the assumption of atoms of different specific gravities on the basis of the atomic theory in physics is deemed absurd, and chemistry meets, nevertheless, on its opposite basis (in the question of the formation and transformation of chemical compounds) with "unfailing experimental verification,"

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* "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 molecules 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.

Vol. 1, Page 513 THEY AGREE TO DISAGREE.

The explanations 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," are 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 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; the evolution of which the Eastern Occultist, who follows this scientific strife, beholds in the greatest bewilderment.

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 of 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 property.*" (Wundt, "*Die Theorie der Materie*," p. 381.)

And further:

"Chemistry in its ultimate form *must be atomic mechanics*." (Nazesmann, "*Thermochemie*," p. 150.)

And a moment after he is told that:

"Gases consist of atoms which *behave* like solid, *perfectly elastic* spheres." (Kroenig, Clausius, Maxwell, etc., *Philosophical Magazine*, Vol. XIX., p. 18.)

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

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energy to assume inelasticity, or anything short of perfect elasticity of the ultimate molecules whether of ultra mundane or mundane matter." (!!!) ("Philosophical Magazine," p. 321, loc. cit.)

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 their personal vanity to dogmatise on anything, as the majority do. There are several among them — perhaps more than dare publish openly 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., transcendentally objective substance, and 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 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. 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 mystificators.

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 1/4 lbs. It is, they are told, "the energy of the myriad ether 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 — a	stated
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† 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.

^{*} 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, yet was many times explained by the Alchemists.

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more than once before now — 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, as asserted by Science, set up 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., etc., in MATTER existing in *super-sensuous* 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 *Sushumna 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 *Akasa* (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.† We are also told that the two great obstacles to the fluid (?) theory of heat undoubtedly are: —

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* The names of the Seven Rays — which are, Sushumna, Harikesa, Viswakarman, Viswatryarchas, Sannaddha, Sarvavasu and Swaraj — are all mystical, and each has its distinct application in a distinct state of consciousness, for occult purposes. The *Sushumna*, 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 constitute, so to say, the physical *Upadhi* (basis) of the *Ether of Science*; in which Upadhi, light, heat, electricity, etc., 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 Upadhi, in the ether of the Occultist — or Akasa.

† 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." (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." (Buckle's History of Civilization, Vol. III., p. 384.)

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- (1.) The production of heat by friction excitation of molecular motions.
- (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 the latter 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 prehistoric times. It may err in particulars; it can never become guilty of a mistake in questions of Universal laws, simply because that Science, justly referred to by philosophy as the "divine," was born on higher planes, and was brought on 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 Hindu 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 Sushumna 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 held 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, were perfectly known to the old adepts.

Therefore, although, in its knowledge of the ultimate constitution of matter, or in the so-called ultimate analysis as opposed to the proximate in chemistry, occult science may be less well-informed as to the behaviour of compound elements in various cases of physical correlations: still, it is immeasurably higher 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 our Academies of Science, all taken together, possess, 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

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the Occultists meet successfully the two points, namely (a) the production of heat by friction — excitation of molecular motions; 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, are either solids, gases, or fluids. 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.

"What is Force?" argues this great man of Science, "what is it from a strictly scientific standpoint, 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 *laya* 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 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."

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

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"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." ("*Scientific Letters*," *Professor Butlerof*.)

We are assured that real science is not materialistic; and our own conviction tells us that it cannot be so, when its learning is real. There is a good reason for it, 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 latter probably unconsciously — and several others, have proved it. And it is, furthermore, demonstrated by the fact, that Kanada in India, and Leucippus, Democritus, 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 in a short synopsis of the ancient and modern 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 fullness, of atoms and vacuity. Even leaving aside the axiom — now absolutely demonstrated by telescope and microscope — taught by the ancients, that nature abhors

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vacuum, what is an atom? "It is, we are answered by Science," writes Professor Butlerof, "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*, a 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." Buchner, 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.

"See now what a curious contradiction this fundamental principle of the materialists is leading them into," writes Butlerof. "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 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-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 is possible for it out of the dilemma. 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."*

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* "Scientific Letters," Butlerof.	

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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 undreamt of by the most spiritually disposed chemists and physicists.

The above views were enunciated by an Academician, the greatest chemist in Russia, and a recognised 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 Zollner, and Hare did, as Mr. A. Russell 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 apply 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 they (the Scientists) have hitherto become acquainted. The most science can do is to assume the attitude of agnosticism and to maintain it. Then it can say: "Your case is no more proven than is ours; but we confess to knowing nothing in reality either about Force or matter, or that which lies at the bottom of the so-called correlations of Forces. Therefore, time alone can prove who is right and who is wrong. Let us wait patiently, and meanwhile show 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. To blend 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 meant are 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 Puranas, under allegories comprehensible only to the Initiates. Had they no meaning, then indeed all those long legends and allegories about the sacredness of the three types of fire, and the *forty-nine original fires* —

Vol. 1, Page 521 CHEMICAL GODS.

personified by the Sons of Daksha's daughters and the Rishis, their husbands, "who with the first son of Brahma 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 the 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 Puranas, where (as in the Vayu Purana) many of the qualities of the personified fires are explained. Thus, Pavaka is electric, or Vaidyuta, fire; Pavamana, the fire produced by friction, (or Nirmathya): and Suchi is solar (or Saura) fire* — all these three being the sons of Abhimanin, the Agni (fire), eldest son of Brahma and of Swaha. Pavaka, moreover, is made parent to Kavyavahana, the fire of the Pitris: Suchi to Havyavahana — the fire of the gods; and Pavamana, to Saharaksha, the fire of the Asuras. Now all this shows that the writers of the Puranas were perfectly conversant with the "Forces" of Science and their correlations; moreover, with the various qualities of the latter in their bearing upon those psychic and physical phenomena which receive no credit and are unknown to physical science now. 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 "Tantrika 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 known. So little credit, indeed, is given to the ancient Aryans for knowledge, that even such

glaring passages as in *Book I. chap.* ii, *Vishnu Purana*, 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 other qualities, existed as distinguishable according to their properties, 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 . . . they assumed through mutual association, the character of one mass of entire unity; and directed by 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 "undiscrete Principle" — *Avyaktanugrahena*, as applied

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

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to Parabrahmam and Mulaprakriti 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 the *protyle*, as Mr. Crookes has suggestively named matter, or primordial substance *beyond* the zero-line: — there where we place *Mulaprakriti*, 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 Visishtadwaita Vedantins, an orthodox and exoteric system, yet fully enunciated and taught in the XIth century (its founder, Ramanujacharya, being born in A.D. 1017), 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 absolute homogeneity, as "matter exists in two conditions, the *sukshma*, or latent and undifferentiated, and the *sthula* or differentiated condition." Then it became *anu*, atomic. It teaches of Sudda-satwa — "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 inhabitants of Vaikuntaloka (the heaven of Vishnu), the gods, are formed. That every particle or atom of Prakriti contains Jiva (divine life), and is the sarira (body) of that Jiva which it contains, while every Jiva is in its turn the sarira of the supreme spirit, as "Parabrahm pervades every Jiva, as well as every particle of matter." Dualistic and anthropomorphic as may be the philosophy of the Visishtadwaita, when compared with that of the Adwaita — the non-dualists, — it is yet supremely higher in logic and philosophy than the cosmogony accepted by either Christianity, or its great opponent, modern Science. The followers of one of the greatest minds that ever appeared on Earth, the Adwaita Vedantins are called Atheists, because they regard all save Parabrahm, the secondless, or 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 acquainted with the *noumena* of every spiritual as well as of every cosmic phenomenon.

Truly the young Brahmin 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 sciences; truly he has but to read in the light of the latter, and with an eye to the correlation of *The Secret Doctrine* by H. P. Blavatsky — Vol. 1

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VI. THE MASKS OF SCIENCE.

PHYSICS OR METAPHYSICS?

If there is anything on earth like progress, 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 then turn to the occult teachings.

Vol. 1, Page 507 ACADEMICAL MISNOMERS.

It has done so already, however altered are the title-page and revised editions of the Scientific Catechism. It is now over half a century since, in comparing modern with ancient thought, it has been 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 other eminent men of Science. Atoms, Ether, evolution itself — all comes to modern Science from ancient notions, all is 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 found in the exotericism of the classical Greek writers. Yet, if we believe Mr. Tyndall, even Faraday was an Aristotelean, and an Agnostic more than a materialist. In his "Faraday, as a Discoverer" (p. 123) 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" (one, by the way, which has 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 as inorganic, or *dead* matter, in nature. Is anything *dead* or *inorganic* capable of transformation or change? Occultism asks. And is there anything under the sun which remains immutable or changeless?

This fallacy is nowhere better illustrated than in the scientific work of a German *savant*, Professor Philip Spiller (*Der Weltaether als Kosmische Kraft*). 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 power to act at a distance" (p. 4).

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* Something *dead* implies that it had been at some time *living*. When, at what period of cosmogony? Occultism says that in all cases when matter *appears* inert, it is the most active. 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; [[Footnote continued on next page]]

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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" (*unkoerperlicher 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 that of scientific terms. Then this "stuff" is identified and connected by Spiller with the aether. Expressed in occult language it might be said with more correctness that this "force-substance" is the ever-active phenomenal *positive* aether — *prakriti*; while the omnipresent all pervading ether is the *noumenon* of the former, the substratum of all, or *Akasa*. Nevertheless, Stallo falls foul of 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 — aether is the source and *cause*.

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

What are Electricity and Light, in fact? How can Science know that one is a fluid and the other a "mode of motion"? Why is it not made clear why a difference should be made between them,

since both are considered 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 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 demonstrated by Professor Grove nearly half a century ago.

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[[Footnote continued from previous page]] 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.

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

Vol. 1, Page 509 THE FIXING OF LIGHT.

"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, etc., etc. . . . "

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 through 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 the effect only of the 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 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 would be laughed at. But yet, when the physicist said that Electricity, stored up, was a fluid, or that light fixed on paper is still Sunlight — this is Science.* In the opinion of an experienced Occultist, one who has verified the whole series of Nidanas, 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, 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, that day is

fast approaching when it will be confessed that the "forces" we know of 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, however, which ought to have become the motto of Science, but has not. Sir W. 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,

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* The newest Authorities have 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.

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"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*.* (See Buckwell's "Electric Science.")

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 premises, and are as apt to confuse the effects as they do the causes. It is incorrect, for instance, to say, as Stallo does, that "matter can no more be realized or conceived as mere spacial 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" (p. 161).

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* 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?"

† Schelling, "Ideen," etc., p. 18.

Vol. 1, Page 511 WHAT IS FORCE?

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 when the argument is applied to things, in what the Kabalists call the supermundane spheres. Inertia, so called, "is force" according to Newton (*Princ. Def. iii.*), and for the student of Esoteric Sciences the greatest of the occult forces. A body may be considered divorced from its relations with other bodies — which, according to physical and mechanical sciences, give rise to its attributes — only *conceptually*, only on this plane of illusion. 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: but simply continues such interrelation on another plane. But what, if Stallo is right, can Dr. James Croll mean when, in speaking "On the Transformation of Gravity" (*Philosophical Magazine*, Vol. II., p. 252), 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* of the bodies and in open space — be it ether or 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 *Theorie Mecanique 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 re-adopt 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 "space between them," may be scientific enough; nevertheless it is not true.

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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!

The objection made that there are two distinct schools of physicists, by one of which "the force is assumed to be an *independent substantial entity*, which is not a property of matter nor is it essentially related to matter,"* is hardly likely to help the profane to any clearer understanding. It is, on the contrary, still more calculated to throw the question into 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 one way, and for those of the rival school in another way. 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 Ampere."§

This shows that either modern chemistry or modern physics is entirely wrong in its respective fundamental principles. For if the assumption of atoms of different specific gravities on the basis of the atomic theory in physics is deemed absurd, and chemistry meets, nevertheless, on its opposite basis (in the question of the formation and transformation of chemical compounds) with "unfailing experimental verification," then it becomes apparent that it is the atomo-mechanical theory which is untenable.

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^{* &}quot;Concepts of Modern Physics," xxxi., Introductory to the 2nd edition.

‡ 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 molecules 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.

Vol. 1, Page 513 THEY AGREE TO DISAGREE.

The explanations 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," are 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 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; the evolution of which the Eastern Occultist, who follows this scientific strife, beholds in the greatest bewilderment.

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 of 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 property.*" (Wundt, "*Die Theorie der Materie*," p. 381.)

And further:

"Chemistry in its ultimate form *must be atomic mechanics*." (Nazesmann, "*Thermochemie*," p. 150.)

And a moment after he is told that:

"Gases consist of atoms which *behave* like solid, *perfectly elastic* spheres." (Kroenig, Clausius, Maxwell, etc., *Philosophical Magazine*, Vol. XIX., p. 18.)

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

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"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." (!!!) ("Philosophical Magazine," p. 321, *loc. cit.*)

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 their personal vanity to dogmatise on anything, as the majority do. There are several among them — perhaps more than dare publish openly 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., transcendentally objective substance, and 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 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. 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 mystificators.

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 1/4 lbs. It is, they are told, "the energy of the myriad ether waves;" and when they call it a "substance" impinging on that area, their explanation is proclaimed *unscientific*.

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- * 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, yet was 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.

Vol. 1, Page 515 THE MYSTIC RAYS.

There is no justification for such an accusation. In no way — as stated more than once before now — 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, as asserted by Science, set up 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., etc., in MATTER existing in *super-sensuous* 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 *Sushumna 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 *Akasa* (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.† We are also told that the two great obstacles to the fluid (?) theory of heat undoubtedly are: —

[[Footnote(s)]]

* The names of the Seven Rays — which are, Sushumna, Harikesa, Viswakarman, Viswatryarchas, Sannaddha, Sarvavasu and Swaraj — are all mystical, and each has its distinct application in a distinct state of consciousness, for occult purposes. The *Sushumna*, 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 constitute, so to say, the physical *Upadhi* (basis) of the *Ether of Science*; in which Upadhi, light, heat, electricity, etc., 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 Upadhi, in the ether of the Occultist — or Akasa.

† 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." (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." (Buckle's History of Civilization, Vol. III., p. 384.)

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- (1.) The production of heat by friction excitation of molecular motions.
- (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 the latter 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 prehistoric times. It may err in particulars; it can never become guilty of a mistake in questions of Universal laws, simply because that Science, justly referred to by philosophy as the "divine," was born on higher planes, and was brought on 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 Hindu 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 Sushumna 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 held 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, were perfectly known to the old adepts.

Therefore, although, in its knowledge of the ultimate constitution of matter, or in the so-called ultimate analysis as opposed to the proximate in chemistry, occult science may be less well-informed as to the behaviour of compound elements in various cases of physical correlations: still, it is immeasurably higher 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 our Academies of Science, all

taken together, possess, 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.

Vol. 1, Page 517 THE CAUSES AND THE EFFECTS.

Hence, the twitting query — "Can the Occultists meet successfully the two points, namely (a) the production of heat by friction — excitation of molecular motions; 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, are either solids, gases, or fluids. 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.

"What is Force?" argues this great man of Science, "what is it from a strictly scientific standpoint, 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 laya 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 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."

[[Footnote(s)]]

^{*} 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 zero.

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"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." ("Scientific Letters," Professor Butlerof.)

We are assured that real science is not materialistic; and our own conviction tells us that it cannot be so, when its learning is real. There is a good reason for it, 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 latter probably unconsciously — and several others, have proved it. And it is, furthermore, demonstrated by the fact, that Kanada in India, and Leucippus, Democritus, 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 in a short synopsis of the ancient and modern 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 fullness, of atoms and vacuity. Even leaving aside the axiom — now absolutely demonstrated by telescope and microscope — taught by the ancients, that nature abhors a vacuum, what is an atom?

Vol. 1, Page 519 THE VICIOUS CIRCLE.

"It is, we are answered by Science," writes Professor Butlerof, "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*, a

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." Buchner, 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.

"See now what a curious contradiction this fundamental principle of the materialists is leading them into," writes Butlerof. "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 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-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 is possible for it out of the dilemma. 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."*

[[Footnote(s)]]		
* "Scientific Letters," Butlerof.		

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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 undreamt of by the most spiritually disposed chemists and physicists.

The above views were enunciated by an Academician, the greatest chemist in Russia, and a recognised 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 Zollner, and Hare did, as Mr. A. Russell 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 apply 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 they (the Scientists) have hitherto become acquainted. The most science can do is to assume the attitude of agnosticism and to maintain it. Then it can say: "Your case is no more proven than is ours; but we confess to knowing nothing in reality either about Force or matter, or that which lies at the bottom of the so-called correlations of Forces. Therefore, time alone can prove who is right and who is wrong. Let us wait patiently, and meanwhile show 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. To blend 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 meant are 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 Puranas, under allegories comprehensible only to the Initiates. Had they no meaning, then indeed all those 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 Brahma and his three descendants constitute the forty-nine fires" — would be idiotic verbiage and no more.

Vol. 1, Page 521 CHEMICAL GODS.

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 the *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 Puranas, where (as in the *Vayu Purana*) many of the qualities of the *personified* fires are explained. Thus, *Pavaka* is electric, or *Vaidyuta*, fire; Pavamana, *the fire produced by friction*, (or *Nirmathya*): and *Suchi* is solar (or *Saura*) fire* — all these three being the sons of Abhimanin, the Agni (fire), eldest son of Brahma and of Swaha.

Pavaka, moreover, is made parent to Kavyavahana, the fire of the Pitris: Suchi to Havyavahana — the fire of the gods; and Pavamana, to Saharaksha, the fire of the Asuras. Now all this shows that the writers of the Puranas were perfectly conversant with the "Forces" of Science and their correlations; moreover, with the various qualities of the latter in their bearing upon those psychic and physical phenomena which receive no credit and are unknown to physical science now. 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 "Tantrika 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 known. So little credit, indeed, is given to the ancient Aryans for knowledge, that even such glaring passages as in Book I. chap. ii, Vishnu Purana, 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 other qualities, existed as distinguishable according to their properties, . . . 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 . . . they assumed through mutual association, the character of one mass of entire unity; and directed by 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 "undiscrete Principle" — Avyaktanugrahena, as applied to Parabrahmam and Mulaprakriti conjointly, and not to "Avyakta, either First Cause, or matter," as Wilson gives it.

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

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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 the *protyle*, as Mr. Crookes has suggestively named matter, or primordial substance *beyond* the zero-line: — there where we place *Mulaprakriti*, 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 *Visishtadwaita Vedantins*, an orthodox and exoteric system, yet fully enunciated and taught in the XIth century (its founder, Ramanujacharya, being born in A.D. 1017), 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 absolute homogeneity, as "matter exists in two conditions, the *sukshma*, or latent and undifferentiated, and the *sthula* or differentiated condition." Then it became *anu*, atomic. It teaches of *Sudda-satwa* — "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 inhabitants of Vaikuntaloka (the heaven of Vishnu), the gods, are formed. That every particle or atom of Prakriti contains *Jiva* (divine life), and is the *sarira* (body) of that Jiva which it contains, while every Jiva is in its turn the *sarira* of the supreme spirit, as "Parabrahm pervades every Jiva, as

well as every particle of matter." Dualistic and anthropomorphic as may be the philosophy of the Visishtadwaita, when compared with that of the *Adwaita* — the non-dualists, — it is yet supremely higher in logic and philosophy than the cosmogony accepted by either Christianity, or its great opponent, modern Science. The followers of one of the greatest minds that ever appeared on Earth, the *Adwaita* Vedantins are called *Atheists*, because they regard all save Parabrahm, the *secondless*, or 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 acquainted with the *noumena* of every spiritual as well as of every cosmic phenomenon.

Truly the young Brahmin 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 sciences; 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 Puranas, if he would learn how much more his ancestors knew than he will ever know — unless he becomes an occultist.

Vol. 1, Page 523 SUGGESTIVE ALLEGORIES.

Let him turn to the allegory of Pururavas and the celestial *Gandharva*,* who furnished the former with a vessel full 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 *Tretagni* (sacred triad of fires) obtained by the attrition of sticks made of the wood of the *Aswattha* tree (the Bo-tree, of Wisdom and Knowledge) — sticks "as many finger-breaths long as there are syllables in the gayatri" must have a secret meaning, or else the writers of the Vedas and Puranas were no sacred writers but mystificators. That it has such a meaning, the Hindu 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 threefold (*treta*) in our present Manvantara, by the Son of Ila (Vach), the primeval woman after the Deluge, the wife and daughter of Vaivasvata Manu. The allegory is suggestive, in whatever Purana it may be read and studied.

[[Footnote(s)]]

* 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 *Sushumna*, 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 latter 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 the Earth *the secrets of Heaven*.

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physical Forces, certain passages in his Puranas, 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 Pururavas and the celestial *Gandharva*,* who furnished the former with a vessel full 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 *Tretagni* (sacred triad of fires) obtained by the attrition of sticks made of the wood of the *Aswattha* tree (the Bo-tree, of Wisdom and Knowledge) — sticks "as many finger-breaths long as there are syllables in the gayatri" must have a secret meaning, or else the writers of the Vedas and Puranas were no sacred writers but mystificators. That it has such a meaning, the Hindu 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 threefold (*treta*) in our present Manvantara, by the Son of Ila (Vach), the primeval woman after the Deluge, the wife and daughter of Vaivasvata Manu. The allegory is suggestive, in whatever Purana it may be read and studied.

[[Footnote(s)]] —	 	 	

* 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 *Sushumna*, 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 latter 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 the Earth *the secrets of Heaven*.

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