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THE SUBSTANTIAL NATURE OF MAGNETISM*

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MATERIALISTS who arraign the Occultists and Theosophists for believing that every Force (so called) in Nature has at its origin a substantial NOUMENON, an Entity, conscious and intelligent, whether it be a Planetary (Dhyan Chohan) or an Elemental, are advised to fix their attention, first of all, on a far more dangerous body than the one called the Theosophical Society. We mean the Society in the U. S. of America whose members call themselves the Substantialists. We call it *dangerous* for this reason, that this body, combining in itself dogmatic Church Christianity, i. e., the anthropomorphic element of the Bible-with sterling Science, makes, nevertheless, the latter subservient in all to the former. This is equivalent to saying, that the new organization, will, in its fanatical dogmatism---if it wins the day---lead on the forthcoming generations to anthropomorphism past redemption. It will achieve this the more easily in our age of Science-worship, since a show of undeniable learning must help to impart additional strength to belief in a gigantic human god, as their hypotheses, like those of modern materialistic science, may be easily built to answer their particular aim. The educated and thoughtful classes of Society, once set free from ecclesiastical thralldom, could laugh at a St. Augustine's or a "venerable" Bede's scientific data, which led them to maintain on the authority and dead letter of what they regarded as Revelation that our Earth, instead of being a sphere, was flat, hanging under a crystalline canopy studded with shining brass nails and a sun no larger than it appears. But the same classes will be always forced by public opinion into respecting the hypotheses of modern Science---in whatever direction the nature of scientific speculation may lead them. They have been so led for the last century---into crass Materialism; they may be so led again in an opposite direction. The cycle has closed, and if Science ever falls into the hands of the Opposition---the learned "Reverends" and bigoted Churchmen---the world may find itself gradually approaching the ditch on the opposite side and be landed at no distant future in crass anthropomorphism. Once more the masses will have rejected true philosophy---impartial and unsectarian---and will thus be caught again in new meshes of their own weaving, the fruitage and results of the reaction created by an all-denying age. The solemn ideal of a universal, infinite, all-pervading Noumenon of Spirit, of an impersonal and *absolute* Deity, will fade out of the human mind once more, and will make room for the MONSTER-GOD of sectarian nightmares.

Now, modern official science is composed---as at present---of 5 per cent. of undeniable axiomatic truths and facts, and of 95 per cent of mere speculation. Furthermore, it has laid itself open to endless attacks, owing to its numerous mutually contradictory hypotheses, each one as scientific, in appearance, as the other. On the other hand, the Substantialists, who rank, as they boast, among their numbers some of the most eminent men of Science in the United States, have undeniably discovered and accumulated a vast store of facts calculated to upset the modern theories on Force and Matter. And once that their data are shown correct, in this conflict between (materialistic) Science and (a still more materialistic) Religion the outcome of the forthcoming battle "is not difficult to foresee: modern Science will be floored. The Substantiality of certain Forces of Nature cannot be denied---for it is a fact in Kosmos, No Energy or Force without Matter, no Matter without Force, Energy or *Life*---however latent. But this *ultimate* Matter is---Substance or the *Noumenon* of matter. Thus, the head of the golden Idol of scientific truth will fall, because it stands on feet of clay. Such a result would not be anything to be regretted, except for its immediate consequences: the golden Head will remain the same, only its pedestal will be replaced by one as weak and as much of *clay* as ever. Instead of resting on Materialism, science will rest on anthropomorphic superstition if the Substantialists ever gain the day. For, instead of holding to philosophy alone, pursued in a spirit of absolute impartiality, both materialists and adherents of what is so pompously called the "Philosophy of Substantialism" work on lines traced by preconception and with a prejudged object; and both stretch their facts on Procrustean beds of their respective hobbies. It is *facts* that have to fit their theories, even at the risk of mutilating the immaculate nature of Truth.

Before presenting the reader with extracts from the work of a Substantialist those extracts showing better than would any critical review, the true nature of the claims of "The Substantial Philosophy"---we mean to go no further, as we are really very little concerned with them, and intend to waste no words over their flaws and pretensions. Nevertheless, as their ideas on the nature of physical forces and phenomena are curiously---*in some respects only*---like the occult doctrines, our intention is to utilize their arguments---on Magnetism, to begin with. These are *unanswerable*, and we may thus defeat exact science by its own methods of observation and weapons. So far, we are only acquainted with the theories of the Substantialists by their writings. It is possible that, save the "vide divergence between our views on the *nature* of the "phenomena---producing causes"---as they queerly call physical forces---there is but little difference in our opinions with regard to the substantial nature of Light, Heat, Electricity, Magnetism, etc., etc., perhaps only one in the form and terms used. No Theosophist, however, would agree to such expressions as are used in the New

Doctrine: *e. g.*, "If its principles be true, then every force or form of Energy known to science *must be a substantial Entity.*" For although Dr. Hall's proofs with regard to magnetic fluid being something more than "a mode of motion" are *irrefutable*, still there are other "forces" which are of quite a different nature. As this paper, however, is devoted to prove the substantiality of magnetism---whether animal or physical---we will now quote from the *Scientific Arena* (July, 1886) the best arguments that have ever appeared against the materialistic theory of modern Science.

"To admit for one moment that a single force of nature, such as *sound, light, or heat*, is but the vibratory motion of matter, whether that material body be highly attenuated as in the case of the supposed *ether*, less attenuated as in the case of air, or solid as in the case of a heated bar of iron, is to give away to the rank claims of materialism the entire analogy of nature and science in favour of a future life for humanity; And well do the materialistic scientists of this country and Europe know it. And to the same extent do they fear the spread and general acceptance of the Substantial-Philosophy, knowing full well that the moment the forces of nature shall be recognised and taught by the schools as real substantial entities, and as soon as the mode-of-motion doctrines of sound, light, heat, etc., shall be abandoned, that soon will their materialistic occupation have gone forever.

"Hence, it is the aim of this present paper, after thus reiterating and enforcing the general scope of the argument as presented last month, to demonstrate force, *per se*, to be an immaterial substance and in no sense a motion of material particles. In this way we purpose to show the absolute necessity for Christian scientists everywhere adopting the broad principles of the Substantial Philosophy, and doing it at once, if they hope to break down materialistic atheism in this land or logically to defend religion by scientific analogy, and thus prove the substantial existence of God as well as the probable substantial existence of the human soul after death. This they now have the privilege of doing successfully, and of thus triumphantly re-enforcing their scriptural arguments by the concurrent testimony of nature herself.

"We could select anyone of several of the physical forms of force as the crucial test of the new philosophy, or as the touchstone of Substantialism. But to save circumlocution and detail of unnecessary explanation as much as possible, in this leading and paramount demonstration, we select what no scientist on earth will question as a representative natural force or so-called form of energy namely, *magnetism*. This force, from the very simple and direct manifestation of its phenomena in displacing ponderable bodies at a distance from the magnet, and without having any tangible substance connecting the magnet therewith, is

selected for our purpose, since it has well proved the champion physical puzzle to modern mode-of-motion philosophers, both in this country and in Europe.

"Even to the greatest living physicists, such as Helmholtz, Tyndall, Sir William Thomson, and others, the mysterious action of magnetism, under any light which modern science can shed upon it, admittedly affords a problem which has proved to be completely bewildering to their intellects, simply because they have, unfortunately, never caught a glimpse of the basic principles of the Substantial Philosophy which so clearly unravels the mystery. In the light of these principles such a thinker as Sir William Thomson, instead of teaching, as he did in his opening address on the five senses before the Midland Institute, at Birmingham, England, that magnetism was but the molecular motion, or as he expressed it, but the 'quality of matter' or the 'rotation of the molecules' of the magnet, would have seen at a glance the utter want of any relation, as cause to effect, between such moving molecules in the magnet (provided they do move), and the lifting of the mass of iron at a distance.

"It is passing strange that men so intelligent as Sir William Thomson and Professor Tyndall had not long ago reached the conclusion that magnetism must of necessity be a substantial thing, however invisible or intangible, when it thus stretches out its mechanical but invisible fingers to a distance from the magnet and pulls or pushes an inert piece of metal! That they have not seen the absolute necessity for such a conclusion, as the only conceivable explanation of the mechanical effects produced, and the manifest inconsistency of any other supposition, is one of the astounding results of the confusing and blinding influence of the present false theories of science upon otherwise logical and profound intellects. And that such men could be satisfied in supposing that the minute and local vibrations of the molecules and atoms of the magnet (necessarily limited to the dimensions of the steel itself) could by any possibility reach out to a distance beyond it and thus pull or push a bar of metal, overcoming its inertia, tempts one to lose all respect for the sagacity and profundity of the intellects of these great names in science. At all events, such manifest want of perspicacity in modern physicists appeals in a warning voice of thunder tones to rising young men of this country and Europe to think for themselves in matters pertaining to science and philosophy, and to accept nothing on trust simply because it happens to be set forth or approved by some great name.

"Another most remarkable anomaly in the case of the physicists to whom we have here referred is this: while failing to see the unavoidable necessity of an actual substance of some kind going forth from the poles of the magnet and connecting with the piece of iron by which to lift it and thus accomplish a physical result, that could have been effected in no other way, they are quick to

accept the agency of an all-pervading *ether* (a substance not needed at all in nature) by which to produce *light* on this earth as mere *motion*, and thus make it conform to the supposed sound-waves in the air! In this way, by the sheer invention of a not-needed material substance, they have sought to convert not only light, heat, and magnetism, but all the other forces of nature into modes of motion, *and for no reason except that sound had been mistaken as a mode of motion by previous scientists*. And strange to state, notwithstanding this supposed *ether* is as intangible to any of our senses, and just as unrecognised by any process known to chemistry or mechanics as is the substance which of necessity must pass out from the poles of the magnet to seize and lift the bar of iron, yet physicists cheerfully accept the former, for which no scientific necessity on earth or in heaven exists, while they stolidly refuse to recognise the latter, though absolutely needed to accomplish the results observed! Was ever such inconsistency before witnessed in a scientific theory?

"Let us scrutinize this matter a little further before leaving it. If the mere 'rotation of molecules' in the steel magnet can produce a mechanical effect on a piece of iron at a distance, even through a vacuum, as Sir William Thomson asserts, why may not the rotation of the molecules of the sun cause light at a distance without the intervening space being filled up with a jelly-like material substance, of 'enormous rigidity,' to be thrown into waves? It must strike every mind capable of thinking scientifically that the original invention of an all-pervading 'material,' 'rigid,' and 'inert' ether, as the essential cause of light at a distance from a luminous body, was one of the most useless expenditures of mechanical ingenuity which the human brain ever perpetrated---that is, if there is the slightest truth in the teaching of Sir William Thomson that the mere 'rotation of molecules' in the magnet will lift a distant bar of iron. Why cannot the rotation of the sun's molecules just as easily produce light at a distance?

"Should it be assumed in sheer desperation by the mode-of-motion philosophers that it is the *ether* filling the space between the magnet and the piece of iron, which is thrown into vibration by the rotating molecules of the steel, and which thus lifts the distant iron, it would only be to make bad worse. If material vibration in the steel magnet; which is wholly unobservable, is communicated to the distant bar through a material substance and its vibratory motions, which are equally unobservable, is it not plain that their effects on the distant bar should be of the same mechanical character, namely, unobservable? Instead of this the iron is lifted bodily and seen plainly, and that without any observed tremor, as if done by a vibrating 'jelly' such as ether is claimed to be! Besides, such bodily lifting of a ponderable mass is utterly incongruous with mere tremor, however powerful and observable such tremor or vibration might be, according to every principle known to mechanics. Common sense ought to

assure any man that mere vibration or tremor, however powerful and sensible, can pull or push nothing. It is impossible to conceive of the accomplishment of such a result except by some substantial agent reaching out from the magnet, seizing the iron, and forcibly pulling and thus displacing it. As well talk of pulling a boat to the shore without some rope or other substantial thing connecting you with the boat. Even Sir William Thomson would not claim that the boat could be pulled by getting up a molecular vibration of the shore, or even by producing a visible tremor in the water, as Dr. Hamlin so logically showed in his recent masterly paper on *Force*. (See *Microcosm*, Vol. V., p. 98).

"It is well known that a magnet will lift a piece of iron at the same distance precisely through sheets of glass as if no glass intervened. The confirmed atheist Mr. Smith, of Cincinnati, Ohio, to whom we referred in our papers on Substantialism, in *the Microcosm* (Vol. 111, pages 278, 311), was utterly confounded by this exhibition of the substantial force of magnetism acting at a distance through impervious plates of glass. When we placed a quantity of needles and tacks on the plate and passed the poles of the magnet beneath it, causing them to move with the magnet, he saw for the first time in his life the operation of a real substance, exerting a mechanical effect in displacing ponderable bodies of metal in defiance of all material conditions, and with no possible material connection or free passage between the source and termination of such substantial agency. And he asked in exclamation, if this be so, may there not be a substantial, intelligent, and immaterial God, and may I not have a substantial but immaterial soul which can live separately from my body after it is dead?

"He then raised the query, asking if we were certain that it was not the invisible pores of the glass plate through which the magnetic force found its way, and therefore whether this force might not be a refined form of matter after all? He then assisted us in filling the plate with boiled water, on which to float a card with needles placed thereon, thus to interpose between them and the magnet the most imporous of all known bodies. But it made not the slightest difference, the card with its cargo of needles moving hither and thither as the magnet was moved beneath both plates and water. This was sufficient even for that most critical but candid materialist, and he confessed that there were substantial but immaterial entities in his atheistic philosophy.

"Here, then, is the conclusive argument by which we demonstrate that magnetism, one of the forces of nature, and a fair representative of all the natural forces, is not only a real, *substantial* entity, but an absolutely *immaterial* substance:* thus justifying our original classification of the entities of the universe into material and immaterial substances.

* This is a very wrong word to use. See text.---H. P. B.

"1. If magnetism were not a real *substance*, it could not lift a piece of metal bodily at a distance from the magnet, any more than our hand could lift a weight from the floor without some substantial connection between the two. It is a self-evident truism as an axiom in mechanics, that no body can move or displace another body at a distance without a real, substantial medium connecting the two through which the result is accomplished, otherwise it would be a mechanical effect without a cause---a self-evident absurdity in philosophy. Hence, the force of magnetism is a real, substantial entity.

"2. If magnetism were not an immaterial substance, then any practically imporous body intervening between the magnet and the attracted object would, to some extent at least, impede the passage of the magnetic current, which it does not do. If magnetism were a very refined or attenuated form of matter, and if it thus depended for its passage through other material bodies upon their imperceptible pores then, manifestly, some difference in the freedom of its passage, and in the consequent attractive force of the distant magnet should result by great difference in the porosity of the different bodies tested, as would be the case, for example, in forcing wind through wire-netting having larger or smaller interstices, and consequently offering greater or less resistance. Whereas in the case of this magnetic substance, no difference whatever results in the energy of its mechanical pull on a distant piece of iron, however many or few of the practically imporous sheets of glass, rubber, or whatever other material body be made to intervene, or if no substance whatever but the air is interposed, or if the test be made in a perfect vacuum. The pull is always with precisely the same force, and will move the suspended piece of iron at the same distance away from it in each and every case, however refined and delicate may be the instruments by which the tests are measured."

The above quoted passages are positively unanswerable. As far as magnetic force, or fluid, is concerned the Substantialists have most undeniably made out their case; and their triumph will be hailed with joy by every Occultist. It is impossible to see, indeed, how the phenomena of magnetism---whether terrestrial or animal---can be explained otherwise than by admitting a material, or substantial magnetic fluid. This, even some of the Scientists do not deny---Helmholtz believing that electricity must be *as atomic as matter*---which it is (Helmholtz, "Faraday Lecture"). And, unless Science is prepared to divorce force from matter, we do not see how it can support its position much longer.

But we are not at all so sure about certain other Forces so far as their *effects* are concerned---and Esoteric philosophy would find an easy objection to every

assumption of the Substantialists---*e.g.*, with regard to sound. As the day is dawning when the new theory is sure to array itself against Occultism, it is as well, perhaps, to anticipate the objections and dispose of them at once.

The expression "immaterial Substance" used above in connection with *magnetism* is a very strange one, and moreover, it is self-contradictory. If, instead of saying that "magnetism is not only a real substantial *entity* but an *absolutely immaterial substance*," the writer should have applied this definition to light, sound or any other force in its effects, we would have nothing to say, except to remark that the adjective "supersensuous" would have been more applicable to any force than the "immaterial."* But to say this of the magnetic fluid is wrong, as it is an essence which is quite perceptible to any clairvoyant, whether in darkness--as in the case of odic emanations---or in light---when animal magnetism is practised. Being then a *fluid* in a supersensuous state, still *matter*, it cannot be "immaterial," and the expression becomes at once as illogical as it is sophistical. With regard to the other *forces*---if by "immaterial" is meant only that which is objective, but beyond the range of our present *normal* perceptions or senses, well and good; but then whatever Substantialists may mean by it, we Occultists and Theosophists demur to the form in which they put it. Substance, we are told in philosophical dictionaries and encyclopedias, is that which *underlies* outward phenomena; substratum; the permanent subject or cause of phenomena, whether material or spiritual; that in which properties inhere; that which is real in distinction from that which is only *apparent*---especially in this world of maya. It is in short---*real*, and the one real Essence. But the Occult sciences, while calling Substance the *noumenon* of every material form, explain that *noumenon* as being *still matter*---only on another plane. That which is *noumenal* to our human perceptions is matter to those of a Dhyān Chohan. As explained by our learned Vedantin Brother---T. Subba Row---*Mulaprakriti*, the first universal aspect of Parabrahma, its Kosmic Veil, and whose essence, to us, is unthinkable, is to the LOGOS "as material as any object is material to us" (*Notes on Bhag. Gita*). Hence---no Occultist would describe Substance as "immaterial" in *esse*.

Substance is a confusing term, in any case. We may call our body, or an ape, or a stone, as well as any kind of fabric---"substantial." Therefore, we call "Essence" rather, the material of the bodies of those Entities---the supersensuous Beings, in whom we believe, and who do exist, but whom Science and its admirers regard as superstitious nonsense, calling *fictions* alike a "personal" god and the angels of the Christians, as they would our Dhyān Chohans, or the Devas, "Planetary Men," Genii, etc., etc., of the Kabbalists and Occultists. But the latter would never dream of calling the phenomena of Light, Sound, Heat, Cohesion, etc:---"*Entities*," as the Substantialists do. They would define those Forces as

purely *immaterial* perceptive effects---without, of substantial and *essential* CAUSES---within: at the ultimate end of which, or at the origin, stands an ENTITY, the essence of the latter changing with that of the Element ¹ it belongs to. (See "Monads, Gods, and Atoms" of Volume I "Secret Doctrine," Book II.) Nor can the Soul be confused with FORCES, which are on quite another plane of perception. It shocks, therefore, a Theosophist to find the Substantialists so *unphilosophically* including Soul among the Forces.

* The use of the terms "matter, or substance existing in *supersensuous* conditions" or, "supersensuous states of matter" would avoid an outburst of fierce but just criticism not only from men of Science, but from any ordinary well educated man who knows the value of terms.

¹ Useless to remind again the reader, that by Elements it is not the *compound* air, water and earth, that exist present to our terrestrial and sensuous perceptions that are meant---but the *noumenal* Elements of the ancients.

Having---as he tells his readers---"laid the foundation of our argument in the clearly defined analogies of Nature," the editor of, the *Scientific Arena*, in an article called "The Scientific Evidence of a Future Life," proceeds as follows:---

"If the principles of Substantialism be true, then, as there shown, every force or form of energy known to science must be a substantial entity. We further endeavoured to show that if one form of force were conclusively demonstrated to be a substantial or objective existence, it would be a clear departure from reason and consistency, not to assume all the forces or phenomena-producing causes in nature also to be substantial entities, But if one form of physical force, or one single phenomenon-producing cause, such as heat, light, or sound, could be clearly shown to be the mere *motion* of material particles, and not a substantial entity or thing, then by rational analogy and the harmonious uniformity of nature's laws, all the other forces or phenomena-producing causes, whether physical, vital, mental or spiritual, must come within the same category as non-entitative *modes of motion* of material particles. Hence it would follow in such case, that the soul, life, mind, or spirit, so far from being a substantial entity which can form the basis of a hope for an immortal existence beyond the present life, must, according to materialism, and as the mere *motion* of brain and nerve particles, cease to exist whenever such physical particles shall cease to move at death."

SPIRIT,---a "substantial Entity"!! Surely Substantialism cannot pretend very seriously to the title of *philosophy*---in such case. But let us read the arguments

to the end. Here we find a just and righteous attack on Materialism wound up with the same unphilosophical assertion!

"From the foregoing statement of the salient positions of materialistic science, as they bear against the existence of the soul after death, we drew the logical conclusion that no Christian philosopher who accepts the current doctrines of sound, light and heat as but *modes of molecular motion*, can ever answer the analogical reasoning of the materialist against the immortality of man. No possible view, as we have so often insisted, can make the least headway against such materialistic reasoning or frame any reply to this great argument of Haeckel and Huxley against the soul as an entity and its possible existence separate from the body, save the teachings of Substantialism, which so consistently maintains that the soul, life, mind and spirit are necessarily substantial forces or entities from the analogies of physical science, namely, *the substantial nature of all the physical forces, including gravity, electricity, magnetism, cohesion, sound, light, heat,* etc.

"This impregnable position of the Substantialist from logical analogy, based on---the harmonious uniformity of nature's laws and forces, forms the bulwark of the Substantial Philosophy, and must in the nature of things for ever constitute the strong tower of that system of teaching. If the edifice of Substantialism, thus founded and fortified, can be taken and sacked by the forces of Materialism, then our labours for so many years have manifestly come to naught. Say, if you please, that the armies of Substantialism are thus burning the bridges behind them. So be it. We prefer death to either surrender or retreat; for if this fundamental position cannot be maintained against the combined forces of the enemy, then all is lost, Materialism has gained the day, and death is the eternal annihilation of the human race. Within this central citadel of principles, therefore, we have intrenched ourselves to survive or perish, and here, encircled by this wall of adamant, we have stored all our treasures and munitions of war, and if the agnostic hordes of materialistic science wish to possess them, let them train upon it their heaviest artillery

"How strange, then, when materialists themselves recognize the desperateness of their situation, and so readily grasp the true bearing of this analogical argument based on the substantial nature of the physical forces, that we should be obliged to reason with professed Substantialists, giving them argument upon argument in order to prove to them that they are no Substantialists at all, in the true sense of that term, so long as they leave one single force of nature or one single phenomenon-producing cause in nature, out of the category of substantial entities!

"One minister of our acquaintance speaks glowingly of the ultimate success of the Substantial Philosophy, and proudly calls himself a Substantialist, but refuses to include sound among the substantial forces and entities, thus virtually accepting the wave theory! In the name of all logical consistency, what could that minister say in reply to another 'Substantialist' who would insist upon the beauty and truth of Substantialism, but who could not include *Light*? And then another who could not include *heat, or electricity, or magnetism, or gravity*? Yet all of them good '*Substantialists*' on the very same principle as is the one who leaves sound out of the substantial category, while still claiming to be an orthodox Substantialist! Why should they not leave life-force and mind-force and spirit-force out of the list of entities, thus making them, like sound-force (as materialists insist), but the vibration of material particles, and still claim the right to call themselves good Substantialists? Haeckel and Huxley would then be duly qualified candidates for baptism into the church of Substantialism.

"The truth is, the minister who can admit for one moment that *sound* consists of but the motion of air-particles, and thus, that it is not a substantial entity, is a materialist at bottom, though he may not be conscious of the logical maelstrom that is whirling him to scientific destruction. We have all heard of the play of 'Hamlet,' with the Prince of Denmark left out. Such would be the scientific play of Substantialism with the sound question ignored, and the theory of acoustics handed over to Materialism. (See our editorial on 'The Meaning of the Sound Discussion,' *The Microcosm*, Vol. V., p. 197.)"

We sympathize with the "Minister" who refuses to include *Sound* among "Substantial *Entities*." We believe in FOHAT, but would hardly refer to his *Voice* and Emanations as "Entities," though they are produced by an electric shock of atoms and repercussions producing *both Sound and Light*. Science would accept no more our Fohat than the Sound or Light-*Entities* of the "Substantial Philosophy" (?). But we have this satisfaction, at any rate, that, once thoroughly explained, Fohat will prove more philosophical than either the materialistic or substantial theories of the forces of nature.

How can anyone with pretensions to both a *scientific* and *psychological* mind, speaking of *Soul* and especially of Spirit, place them on the same level as the physical phenomena of nature, and this, in a language one can apply only to physical facts! Even Professor Bain, "a monistic ANNIHILATIONIST," as he is called, confesses that "mental and bodily states are utterly contrasted."*

* The Substantialists call, moreover, Spirit that which we call Mind---(*Manas*), and thus it is Soul which takes with them the place of ATMA; in short they confuse the vehicle with the *Driver* inside.

Thus, the direct conclusion the Occultists and the Theosophists can come to at any rate on the *prima facie* evidence furnished them by writings which no philosophy can now rebut, is---that Substantial Philosophy, which was brought forth into this world to fight materialistic science and to slay it, surpasses it immeasurably in Materialism. No Bain, no Huxley, nor even Haeckel, has ever confused to this degree mental and physical phenomena. At the same time the "apostles of Materialism" are on a higher plane of philosophy than their opponents. For, the charge preferred against them of teaching that Soul is "the mere motion of brain and nerve particles" is untrue, for they never did so teach. But, even supposing such would be their theory, it would only be in accordance with Substantialism, since the latter assures us that Soul and *Spirit*, as much as all "the *phenomena-producing causes*," (?) whether physical, mental, or spiritual-if not regarded as SUBSTANTIAL ENTITIES---"must come within the same category as *non-entitative* (?) *modes of motion* of material particles." All this is not only painfully vague, but is almost meaningless.

The inference that the acceptance of the received scientific theories on light, sound and heat, etc., would be equivalent to accepting *the soul motion of molecules*

---is certainly hardly worth discussion. It is quite true that some thirty or forty years ago Buchner and Moleschott attempted to prove that sensation and thought are a movement of matter. But this has been pronounced by a well-known English *Annihilationist* "unworthy of the name of 'philosophy'." Not one man of real scientific reputation or of any eminence, not Tyndall, Huxley, Maudsley, Clifford, Bain, Spencer nor Lewis, in England, nor Virchow, nor Haeckel in Germany, has ever gone so far as to say:---"Thought *is* a motion of molecules." Their only quarrel with the believers in a soul was and is, that while the latter maintain that soul is the *cause* of thought, they (the Scientists) assert that thought is the *concomitant* of certain physical processes in the brain. Nor have they ever said (the *real* scientists and philosophers, however materialistic) that thought and nervous motion *are the same*, but that they are "the subjective and objective sides of the same thing."

John Stuart Mill is a good authority and an example to quote, and thus deny the charge. For, speaking of the rough and rude method of attempting to resolve sensation into nervous motion (taking as his example the case of the *nerve-vibrations* to the brain which are the physical side of the light perception), "at the end of all these motions, there is something which is *not motion*---there *is a feeling or sensation of color*" he says. Hence, it is quite true to say, that "the *subjective feeling* here spoken of by Mill will outlive even the acceptance of the undulatory theory of light, or heat, as a mode of motion." For the latter is based

on a *physical speculation* and the former is built on everlasting *philosophy*--- however imperfect, because so tainted with Materialism.

Our quarrel with the Materialists is not so much for their *soulless Forces*, as for their denying the existence of any "Force-bearer," the Noumenon of Light, Electricity, etc. To accuse them of not making a difference between mental and physical phenomena is equal to proclaiming oneself ignorant of their theories. The most famous *Negationists* are to-day the first to admit that SELF-CONSCIOUSNESS and MOTION "are at the opposite poles of existence." That which remains to be settled between us and the *materialistic IDEALISTS*---a living paradox by the way, now personified by the most eminent writers on *Idealistic* philosophy in England---is the question whether that consciousness is only experienced in connection with organic molecules of the brain or not. We say it is the thought or mind which sets the molecules of the physical brain in motion; they deny any existence to mind, independent of the brain. But even *they* do not call the seat of the mind "a molecular fabric," but only that it is "the *mind-principle*"---the seat or the organic basis of the manifesting mind. That such is the real attitude of materialistic science may be demonstrated by reminding the reader of Mr. Tyndall's confessions in his *Fragments of Science*, for since the days of his discussions with Dr. Martineau, the attitude of the Materialists has not changed. This attitude remains unaltered, unless, indeed, we place the *Hypo-Idealists* on the same level as Mr. Tyndall---which would be absurd. Treating of the phenomenon of Consciousness, the great physicist quotes this question from Mr. Martineau: "A man can say 'I feel, I think, I love'; but how does consciousness infuse itself into the problem?" And he thus answers: "The passage from the physics of the brain to the corresponding facts of consciousness is unthinkable. Granted that a definite thought and a molecular action in the brain occur simultaneously; we do not possess the intellectual organ, nor apparently any rudiments of the organ, which would enable us to pass by a process of reasoning from one to the other. They appear together, but *we do not know why*. Were our minds and senses so expanded, strengthened and illuminated, as to enable us to see and feel the very molecules of the brain; *were we capable* of following all their motions, all their groupings, all their electric discharges, if such there be; and were we intimately acquainted with the corresponding states of thought and feeling, we should be as far as ever from the solution of the problem, 'How are these physical processes connected with the facts of consciousness?' The chasm between the two classes of phenomena would still remain intellectually impassable."

Thus, there appears to be far less disagreement between the Occultists and modern Science than between the former and the Substantialists. The latter

confuse most hopelessly the *subjective* with the objective phases of all phenomena, and the Scientists do not, notwithstanding that they limit the subjective to the earthly or terrestrial phenomena only. In this they have chosen the Cartesian method with regard to atoms and molecules; we hold to the ancient and primitive philosophical beliefs, so intuitively perceived by Leibnitz. Our system can thus be called, as his was---"Spiritualistic and Atomistic."

Substantialists speak with great scorn of the vibratory theory of science. But until able to *prove* that their views would explain the phenomena as well, filling, moreover the actual gaps and flaws in the modern hypotheses, they have hardly the right to use such a tone. As all such theories and speculations are only provisional, we may well leave them alone. Science has made wonderful discoveries on the objective side of all the physical phenomena. Where it is really wrong is, when it perceives in matter *alone*---*i.e.*) in that matter which is known to it---the *alpha* and the *omega* of all phenomena. To reject the scientific theory, however, of vibrations in light and sound, is to court as much ridicule as the scientists do in rejecting *physical* and *objective* spiritualistic phenomena by attributing them all to fraud. Science has ascertained and *proved* the exact rapidity with which the sound-waves travel, and it has artificially imitated---on the data of transmission of sound by those waves---the human voice and other acoustic phenomena. The sensation of *sound*---the response of the sensory tract to an *objective* stimulus (atmospheric vibrations) is an affair of consciousness: and to call sound an "Entity" on this plane, is to *objectivate* most ridiculously a *subjective* phenomenon which is but an effect after all---the lower end of a concatenation of causes. If Materialism locates all in objective matter and fails to see the origin and primary causes of the Forces---so much the worse for the materialists; for it only shows the limitations of their own capacities of hearing and seeing limitations which Huxley, for one, recognizes, for he is unable on his own confession to define the boundaries of our senses, and still asserts his materialistic tendency by locating sounds only in cells of matter, and on our sensuous plane. Behold, the great Biologist dwarfing our senses and curtailing the powers of man and nature in his usual ultra-poetical language. Hear him (as quoted by Sterling "Concerning Protoplasm") speak of "the wonderful noonday silence of a tropical forest," which "*is after all due only to the dullness of our hearing*, and could our ears only catch the murmurs of these tiny maelstroms as they whirl in the innumerable myriads of living cells which constitute each tree, we should be stunned as with the roar of a great city."

The telephone and the phonograph, moreover, are there to upset any theory except the vibratory one---however *materialistically* expressed. Hence, the attempt of the Substantialists "to show the fallacy of the wave-theory of sound as universally taught, and to outline the substantial theory of acoustics," cannot be

successful. If they show that sound is not *a mode of motion in its 'origin* and that the forces are not merely the qualities and property of matter induced or generated *in, by* and *through* matter, under certain conditions---they will have achieved a great triumph. But, whether as substance, matter or effect, sound and light can never be divorced from their modes of manifesting through *vibrations* ---as the whole subjective or occult nature is one everlasting perpetual motion of VORTICAL *vibrations*.

H. P. B.