

SCIENCE AND CRITICISM

Articles by H. P. Blavatsky

THE SIGNS OF THE TIMES

LITERARY JOTTINGS

THE BLESSINGS OF PUBLICITY

THE ELECTRIC AND MAGNETIC AFFINITIES

BETWEEN MAN AND NATURE

THE SUBSTANTIAL NATURE OF MAGNETISM

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FOREWORD

IN “The Signs of the Times,” which appeared in *Lucifer* for October, 1887, H.P.B. took note of the spreading public interest in “the *Occult* side of nature,” as reflected in popular literature, novels, and scientific essays, remarking that this apparently irrepressible tendency was evidence that the “educated mind” of the time was struggling to free itself from the fetters of materialism. Having noted that even attacks, especially when aggressively hostile, had the effect of drawing attention to Theosophical ideas, she then turned to a darker aspect of that period, speaking of the crimes committed by hypnotists through the power of suggestion, and of the enormous danger of such practices to “the ignorant and unprepared.” Even the “occult” fiction of the time contained *facts*, regardless of invented plots and characters. “Occultism and sorcery,” she said, “are in the air, with no true philosophical knowledge to guide the experimenters and thus check evil results.” The present application of this discussion and comment will be evident to all readers.

“Literary Jottings,” an early departmental title in *Lucifer* during H.P.B.’s editorship, was posthumously published in *Lucifer* for September, 1892, and signed with her initials. Here speaks the bold declaration of what she elsewhere described as the “fighting, combative Manas” of her magazine. This article is a defense of criticism as “the sole salvation from intellectual stagnation.” Readers of *Isis Unveiled* and *The Secret Doctrine* are well aware of the necessity she was under to attack the orthodoxies of both religion and science, in order to gain a fair hearing for the occult doctrines. “New ideas,” one of her Teachers had said, “have to be planted on clean places,” and the exposure of prejudice and preconception was a first order of business for H.P.B. A graphic expression in this article may be applied to her

pioneer work, which was to cut “entirely new paths through the great virgin forests and thickets of public ignorance.”

The habit of some scientists and other modern writers to condemn or ridicule the idea of secrecy regarding certain occult truths was the target of H.P.B.’s article, “The Blessings of Publicity,” which also appeared after her death, in *Lucifer* for August, 1891. She briefly explained that “*there are secrets that kill* in the arcana of Occultism,” then pointed to the numerous parallels in scientific discovery, such as the invention of dynamite and its murderous application in “infernal machines.” Having shown that there is much in science that might better have been kept secret—a view hardly debatable a century later—she spoke of the far more dangerous and lethal uses to which “*occult secrets*” might be put. It is not, she concluded, in the present age of “suggestion” and “explosives” that “Occultism can open wide the doors of its laboratories except to those who *do* live the life.”

Since Newton’s time—although Newton was not himself an offender—there has been a tendency among scientists to put description in the place of explanation. This is one of the points made by H.P.B. in “The Electric and Magnetic Affinities between Man and Nature,” an article published in the *Theosophist* for February, 1881. Supposing the canons of scientific knowledge to be thus satisfied, they then feel free to reject and laugh at actual explanations offered by philosophers or transcendentalists. Yet behind many of the discoveries of science lie occult powers of nature, and the nature of these powers is by no means explained in scientific theory, but only the working of their effects. Various illustrations are given by H.P.B., drawn from the annals of science dealing with electrical and magnetic phenomena, especially the generation of electricity by human organisms and the electromagnetic relationships between man and nature. These examples of vital electricity are wholly without explanation, save in the doctrines of the occultists.

“The Substantial Nature of Magnetism,” another of H.P.B.’s posthumously printed articles, appeared in *Lucifer* for September, 1891. In this extended examination and criticism of the views of the Substantialists, a group of American Christians who in some of their

ideas had come very close to the occult teaching of magnetism, yet who clung to anthropomorphic beliefs, H.P.B. makes plain the grave mistake of personifying the dynamics of non-material forces which originate on supersensuous planes. This article is especially valuable in showing the crucial importance of metaphysical clarity and the need for care in philosophical definition and explanation. H.P.B. plainly prefers the candid denials of the materialists to the confusion of the Substantialists who, despite their recognition of what H.P.B. identifies as occult realities, insist upon calling “entities” what are no more than “*immaterial* perceptive effects.” Referring to the language used by the Substantialists, H.P.B. declares: “No Bain, no Huxley, nor even Haeckel, has ever confused to this degree mental and physical phenomena.” This article is filled with instruction on the important distinctions required by philosophical and scientific investigation.

Lucifer, October 1887

THE SIGNS OF THE TIMES

IT is intensely interesting to follow season after season the rapid evolution and change of public thought in the direction of the mystical. The educated mind is most undeniably attempting to free itself from the heavy fetters of materialism. The ugly caterpillar is writhing in the agonies of death, under the powerful efforts of the psychic butterfly to escape from its science-built prison, and every day brings some new glad tidings of one or more such mental births to light.

As the New York "Path" truly remarks in its September issue, when "Theosophical and kindred topics ... are made the texts for novels," and, we may add, scientific essays and *brochures*, "the implication is that interest in them has become diffused through all social ranks." That kind of literature is "paradoxically proof that Occultism has passed beyond the region of careless amusement and entered that of serious enquiry." The reader has but to throw a retrospective glance at the publications of the last few years to find that such topics as Mysticism, Magic, Sorcery, Spiritualism, Theosophy, Mesmerism, or, as it is now called, Hypnotism, all the various branches in short of the *Occult* side of nature, are becoming predominant in every kind of literature. They visibly increase in proportion to the efforts made to discredit the movements in the cause of truth, and strangle enquiry—whether on the field of theosophy or spiritualism—by trying to besmear their most prominent heralds, pioneers and defenders, with tar and feathers.

The key-note for mystic and theosophic literature was Marion Crawford's "Mr. Isaacs." It was followed by his "Zoroaster." Then followed "The Romance of Two Worlds," by Marie Corelli; R. Louis

Stevenson's "Dr. Jekyll and Mr. Hyde"; "The Fallen Idol," by Anstey; "King Solomon's Mines" and the thrice famous "She," by Rider Haggard; "Affinities" and "The Brother of the Shadow," by Mrs. Campbell Praed; Edmund Downey's "House of Tears," and many others less noticeable. And now there comes a fresh outburst in Florence Marryat's "Daughter of the Tropics," and F. C. Philips' "Strange Adventures of Lucy Smith." It is unnecessary to mention in detail the literature produced by avowed theosophists and occultists, some of whose works are very remarkable, while others are positively scientific, such as S. L. Macgregor Mathers' "Kabbalah Unveiled," and Dr. F. Hartmann's "Paracelsus," "Magic, White and Black," etc. We have also to note the fact that theosophy has now crossed the Channel, and is making its way into French literature. "La France" publishes a stranger romance by Ch. Chincholle, pregnant with theosophy, occultism and mesmerism, and called "La Grande Pretresse" while *La Revue politique et Utteraire* (19 Feb. 1887, *et seq.*) contained over the signature of Th. Bentzon, a novel called *Emancipee*, wherein esoteric doctrines and adepts are mentioned in conjunction with the names of well-known theosophists. A sign of the times!

Literature—especially in countries free from government censorship—is the public heart and pulse. Besides the glaring fact that were there no demand there would be no supply, current literature is produced only to please, and is therefore evidently the mirror which faithfully reflects the state of the public mind. True, Conservative editors, and their submissive correspondents and reporters, still go on slashing occasionally in print the fair faces of mystic spiritualism and theosophy, and some of them are still found, from time to time, indulging in a *brutal* personal attack. But they do no harm on the whole, except perhaps to their own editorial reputations, as such editors can never be suspected of an exuberance of culture and good taste after certain ungentlemanly personal attacks. They do good on the contrary. For, while the theosophists and spiritualists so attacked, may view the Billingsgate poured upon them in a true Socratean spirit, and console themselves with the knowledge that none of the epithets used can possibly apply to them, on the other hand, *too much* abuse and

vilification generally ends by awakening the public sympathy for the victim, in the right-minded and the impartial, at any rate.

In England people seem to like fair play on the whole. It is not *bashi-boozook-tike* actions, the doughty deeds of those who delight in mutilating the slain and the wounded, that can find sympathy for any great length of time with the public. If—as maintained by our lay enemies and repeated by some *naif* and too sanguine missionary organs—Spiritualism and Theosophy are “dead as a doornail” (*sic, vide* American Christian periodicals)—aye, “dead and buried,” why, in such case, good Christian fathers, not leave the dead at rest till “Judgment Day”? And if they are not, then editors—the profane as well as the clerical—why should you still fear? Do not show yourselves such cowards if you have the truth on your side. *Magna est veritas et prevalebit*, and “murder will out,” as it always has, sooner or later. Open your columns to *free* and fearless discussion, and do as the theosophical periodicals have ever done, and as LUCIFER is now preparing to do. The “bright Son of the morning” fears no light. He courts it, and is prepared to publish any inimical contributions (couched, of course, in decent language), however much at variance with his theosophical views. He is determined to give a fair hearing in any and every case, to both contending parties and allow things and thoughts to be judged on their respective merits. For why, or what should one dread when fact and truth are one’s only aim? *Du choc des opinions jaillit la verite* was said by a French philosopher. If Theosophy and Spiritualism are no better than “gigantic frauds and will-o’-the-wisps of the age” why such *expensive* crusades against both? And if they are not, why should Agnostics and searchers after truth in general, help bigoted and narrow-minded materialists, sectarians and dogmatists to hide our light under a bushel by mere brutal force and usurped authority? It is easy to surprise the good faith of the fair-minded. Still easier to discredit that, which by its intrinsic strangeness, is already unpopular and could hardly be credited in its palmy days. “We welcome no supposition so eagerly as one which accords with and intensifies our own prejudices” says, in “Don Jesualdo,” a popular author. Therefore, *facts* become often cunningly concocted “frauds”; and self-evident, glaring lies are accepted as gospel truths at the first

breeze of Don Basilio’s *Calumnias*, by those to whose hard-crusted preconceptions such slander is like heavenly dew.

But, beloved enemies, “the light of Lucifer” may, after all, dispel some of the surrounding darkness. The mighty roaring voice of denunciation, so welcome to those whose little spites and hates and mental stagnation in the grasp of the social respectability it panders to, may yet be silenced by the voice of truth—“the still small voice”—whose destiny it ever was to first preach in the desert. That cold and artificial light which still seems to shine so dazzlingly over the alleged iniquities of professional mediums and the supposed sins of commission and omission of *non-professional* experimentalists, of free and independent theosophists, may yet be extinguished at the height of all its glory. For it is not quite the perpetual lamp of the alchemist philosopher. Still less is it that “light which never shone on sea or land,” that ray of divine intuition, the spark which glimmers latent in the spiritual, never-erring perceptions of man and woman, and which is now awakening—for its time is at hand. A few years more, and the Aladdin’s lamp, which called forth the ministering genius thereof, who, making three salutes to the public, proceeded forthwith to devour mediums and theosophists, like a juggler who swallows swords at a village fair, will get out of order. Its light, over which the anti-theosophists are crowing victory to this day, shall get dim. And then, perhaps, it will be discovered that what was claimed as a direct ray from the source of eternal truth was no better than a penny rush-light, in whose deceitful smoke and soot people got hypnotized, and saw everything upside down. It will be found that the hideous monsters of fraud and imposture had no existence outside the murky and dizzied brains of the Aladdins on their journey of discovery. And that, finally, the good people who listened to them, had been all the time seeing sights and hearing things under unconscious and mutual *suggestion*,

This is a scientific explanation, and requires no black magicians or *dugpas* at work: for “suggestion” as now practised by the sorcerers of science is—*dugpaship* itself, *pur sang*. No Eastern “adept of the left hand” can do more mischief by his infernal art than a grave hypnotiser of the Faculty of Medicine, a disciple of Charcot, or of any other scientific *light* of the first magnitude. In Paris, as in St.

Petersburg, crimes have been committed under “suggestion.” Divorces have occurred, and husbands have nearly killed their wives and their supposed co-respondents, owing to tricks played on innocent and respectable women, who have thus had their fair name and all their future life blasted for ever. A son, under such influence, broke open the desk of an avaricious father, who caught him in the act, and nearly shot him in a fit of rage. One of the keys of Occultism is in the hands of science—cold, heartless, materialistic, and crassly ignorant of the other truly psychic side of the phenomenon: hence, powerless to draw a line of demarcation between the physiological and the purely spiritual effects of the disease inoculated, and unable to prevent future results and consequences of which it has no knowledge, and over which it has, therefore, no control.

We find in the “Lotus” of September, 1887, the following:

A French paper, the *Paris*, for August 12th, contains a long and excellent article by G. Montorgueil, entitled, *The Accursed v Sciences*, from which we extract the following passage, since we are, unfortunately, unable to quote the whole:

“Some months ago, already, in I forget what case, the question of ‘suggestion’ was raised and taken account of by the judges. We shall certainly see people in the dock accused of occult malpractices. But how will the prosecution go to work? What arguments will it bring to bear? The crime by ‘suggestion’ is the ideal of a crime without proof. In such a case the gravest charges will never be more than presumptions, and fugitive presumptions. On what fragile scaffolding of suspicions will the charge rest? No examination, but a moral one, will be possible. We shall have to resign ourselves to hearing the Solicitor-general say to the accused: ‘Accused, it appears from a perquisition made into your brain, etc’

Ah, the poor jurymen! it is they who are to be pitied. Taking their task to heart, they already have the greatest difficulty in separating the true from the false, even in rough and ready cases, the facts of which are obvious, all the details of which are tangible and the responsibilities clear. And we are going to ask them on their soul and conscience to decide questions of black magic! Verily their reason will not hold out through the fortnight; it will give way before that and sink into thaumaturgy.

We move fast. The strange trials for sorcery will blossom anew; somnambules who were merely grotesque will appear in a tragic light; the coffee grounds, which so far only risked the police court, will hear their sentence at the assizes. The evil eye will figure among criminal offences.

These last years of the XIXth century will have seen us step from progress to progress, till we reach at last this judicial enormity: a second Laubardemont prosecuting another Urbain Grandier.”

Serious, scientific, and political papers are full of earnest discussions on the subject. A St. Petersburg “Daily” has a long *feuilleton* on the “Bearing of *Hypnotic Suggestions* upon Criminal Law.” “Cases of Hypnotism with criminal motives have of late begun to increase in an ever progressing ratio,” it tells its readers. And it is not the only newspaper, nor is Russia the only country where the same tale is told. Careful investigations and researches have been made by distinguished lawyers and medical authorities. Data have been assiduously collected and have revealed that the curious phenomenon—which sceptics have hitherto derided, and young people have included among their evening *petits jeux innocents*—is a new and terrible danger to state and society.

Two facts have now become patent to law and science:

(I.) *That, In the perceptions of the hypnotised subject, the visionary representations called forth by “suggestion”, become real existing actualities, the subject being, for the moment, the automatic executor of the will of the hypnotiser; and—*

(II.) *That the great majority of persons experimented upon, is subject to hypnotic suggestion.*

Thus Liebeault found only *sixty* subjects intractable out of the *seven hundred* he experimented upon; and Bernheim, out of 1,014 subjects, failed with *only twenty-six*. The field for the natural-born *jadoo-wala* (sorcery-mongers), is vast indeed! Evil has acquired a play-ground on which it may now exercise its sway upon many a generation of unconscious victims. For crimes undreamt of in the waking state, and felonies of the blackest dye, are now invited and encouraged by the new “accursed science.” The real perpetrators of these deeds of darkness may now remain for ever hidden from the vengeance of human justice. The hand which executes the criminal suggestion is only that of an irresponsible automaton, whose memory preserves no trace of it, and who, moreover, is a witness who can easily be disposed of by compulsory suicide—again under “suggestion.” What better means than these could be offered to the

fiends of lust and revenge, to those dark Powers— called human passions—ever on the look out to break the universal commandment: “Thou shalt not steal, nor murder, nor lust after thy neighbour’s wife?” Liebeault *suggested* to a young girl that she should poison herself with prussic acid, and she swallowed the supposed drug without one moment’s hesitation; Dr. Liegois *suggested* to a young woman that she owed him 5,000 francs, and the subject forthwith signed a cheque for the amount. Bernheim *suggested* to another hysterical girl a long and complicated vision with regard to a criminal case. Two days after, although the hypnotiser had not exercised any new pressure upon her in the interim, she repeated distinctly the whole suggested story to a lawyer sent to her for the purpose. Had her evidence been seriously accepted, it would have brought the accused to the guillotine.

These cases present two dark and terrible aspects. From the moral stand point, such processes *andsuggestions* leave an indelible stain upon the purity of the subject’s nature. Even the innocent mind of a ten year old child can thus be inoculated with vice, the poison-germ of which will develop in his subsequent life.

On the judicial aspect it is needless to enter in great detail.

Suffice to say that it is this characteristic feature of the hypnotic state—the absolute surrender of will and self-consciousness to the hypnotiser—which possesses such importance, from its bearing upon crime, in the eyes of legal authorities. For if the hypnotiser has the subject entirely at his beck and call, so that he can cause him to commit any crime, acting, so to say, invisibly within him, then what are not the terrible “judicial mistakes” to be expected? What wonder then, that the jurisprudence of one country after the other has taken alarm, and is devising, one after the other, measures for repressing the exercise of hypnotism! In Denmark it has just been forbidden. Scientists have experimented upon sensitives with so much success that a hypnotised victim has been jeered and hooted through the streets on his way to commit a crime, which he would have completed unconsciously, had not the victim been warned beforehand by the hypnotiser.

In Brussels a recent and sad case is well-known to all. A young

girl of good family was seduced while in a hypnotised state by a man who had first subjected her to his influence at a social gathering. She only realised her condition a few months later, when her relatives, who divined the criminal, forced her seducer to make the only possible reparation—that of marrying his victim.

The French Academy has just been debating the question: how far a hypnotised subject, from a mere victim, can become a regular tool of crime. Of course, no jurist or legislator can remain indifferent to this question; and it was averred that the crimes committed under *suggestion* are so unprecedented that some of them can hardly be brought within the scope of the law. Hence the prudent legal prohibition, just adopted in France, which enacts that no person, save those legally qualified to exercise the medical profession, shall hypnotise any other person. Even the physician who enjoys such legal right is permitted to hypnotise a person only in the presence of another qualified medical man, and with the written permission of the subject. Public *seances* of hypnotism are forbidden, and they are strictly confined to medical *cliniques* and laboratories. Those who break this law are liable to a heavy fine and imprisonment.

But the keynote has been struck, and many are the ways in which this *black art* may be used—laws notwithstanding. That it will be so used, the vile passions inherent in human nature are sufficient guarantee.

Many and strange will be the romances yet enacted; for truth is often stranger than fiction, and what is thought fiction is still more often truth.

No wonder then that occult literature is growing with every day. Occultism and sorcery are in the air, with no true philosophical knowledge to guide the experimenters and thus check evil results. “Works of *fiction*” the various novels and romances are called. “Fiction” in the arrangement of their characters andtheadventures of their heroes and heroines—admitted. Not so, as to the *facts* presented. These are *no fictions*, but true *presentiments* of what lies in the bosom of the future, and much of which is already born—nay corroborated by *scientific* experiments. Sign of the times! Close of a

psychic cycle! The time for phenomena with, or through mediums, whether professional or otherwise, is gone by. It was the early season of the blossoming, of the era mentioned even in the Bible;¹ the tree of Occultism is now preparing for “fruiting,” and the Spirit of the Occult is awakening in the blood of the new generations. If the old men only “dream dreams,” the young ones see already visions,² and—record them in novels and works of fiction. Woe to the ignorant and the unprepared, and those who listen to the sirens of materialistic science! For indeed, indeed, many will be the unconscious crimes committed, and many will be the victims who will innocently suffer death by hanging and decapitation at the hands of the righteous judges and the *too innocent* jurymen, both alike ignorant of the fiendish power of “SUGGESTION.”

Lucifer, September 1892

LITERARY JOTTINGS

ON CRITICISM, AUTHORITIES, AND OTHER MATTERS

BY AN UNPOPULAR PHILOSOPHER

THEOSOPHISTS and editors of Theosophical periodicals are constantly warned, by the prudent and the faint-hearted, to beware of giving offence to “authorities,” whether scientific or social. Public Opinion, they urge, is the most dangerous of all foes. Criticism of it is fatal, we are told. Criticism can hardly hope to make the person or subject so discussed amend or become amended. Yet it gives offence to the many, and makes Theosophists hateful. “Judge not, if thou wilt not be judged,” is the habitual Earning.

It is precisely because Theosophists would themselves be judged and court impartial criticism, that they begin by rendering that service to their fellow-men, Mutual criticism is a most healthy policy, and helps to establish final and definite rules in life—practical, not merely theoretical. We have had enough of theories. The *Bible* is full of wholesome advice, yet few are the Christians who have ever applied any of its ethical injunctions to their daily lives. If one criticism is hurtful so is another; so also is every innovation, or even the presentation of some old thing under a new aspect, as both have necessarily to clash with the views of this or another “authority.” I maintain, on the contrary, that criticism is the great benefactor of thought in general; and still more so of those men who never think for themselves but rely in everything upon acknowledged “authorities” and social routine.

For what is an “authority” upon any question, after all? No more, really, than a light streaming upon a certain object through one single, more or less wide, chink, and illuminating it *from one side only*. Such

¹ “It shall come to pass that I will pour out my Spirit upon all flesh; your sons and your daughters shall prophesy, your old men shall dream dreams; your young men shall see visions” (Joel ii. 28).

² It is curious to note that Mr. Louis Stevenson, one of the most powerful of our imaginative writers, stated recently to a reporter that he is in the habit of constructing the plots of his tales in dreams, and among others that of Dr. Jekyll. “I dreamed,” he continued, “the story of ‘Olalla’... and I have at the present moment two unwritten stories which I have likewise dreamed.... Even when fast asleep I know that it is I who am inventing” ... But who knows whether the idea of “invention” is not also “a dream”!

light, besides being the faithful reflector of the *personal views* of but one man—very often merely that of his special hobby—can never help in the examination of a question or a subject from all its aspects and sides. Thus, the authority appealed to will often prove but of little help, yet the profane, who attempts to present the given question or object under another aspect and in a different light, is forthwith hooted for his great audacity. Does he not attempt to upset solid “authorities,” and fly in the face of respectable and time-honoured routine thought?

Friends and foes! Criticism is the sole salvation from intellectual stagnation. It is the beneficent goad which stimulates to life and action—hence to healthy changes—the heavy ruminants called Routine and Prejudice, in private as in social life. Adverse opinions are like conflicting winds which brush from the quiet surface of a lake the green scum that tends to settle upon still waters. If every clear stream of independent thought, which runs through the field of life outside the old grooves traced by Public Opinion, had to be arrested and to come to a standstill, the results would prove very sad. The streams would no longer feed the common pond called Society, and its waters would become still more stagnant than they are. Result: it is the most orthodox “authorities” of the social pond who would be the first to get sucked down still deeper into its ooze and slime.

Things, even as they now stand, present no very bright outlook as regards progress and social reforms. In this last quarter of the century it is women alone who have achieved any visible beneficent progress. Men, in their ferocious egoism and sex-privilege, have fought hard, but have been defeated on almost every line. Thus, the younger generations of women look hopeful enough. They will hardly swell the future ranks of stiff-necked and cruel Mrs. Grundy. Those who to-day lead her no longer invincible battalions on the war-path, are the older Amazons of respectable society, and her young men, the male “flowers of evil,” the nocturnal plants that blossom in the hothouses known as clubs. The Brummels of our modern day have become worse gossips than the old dowagers ever were in the dawn of our century.

To oppose or criticize such foes, or even to find the least fault

with them, is to commit the one unpardonable social sin. An Unpopular Philosopher, however, has little to fear, and notes his thoughts, indifferent to the loudest “war-cry” from those quarters. He examines his enemies of both sexes with the calm and placid eye of one who has nothing to lose, and counts the ugly blotches and wrinkles on the “sacred” face of Mrs. Grundy, as he would count the deadly poisonous flowers on the branches of a majestic *mancenillier*—through a telescope from afar. He will never approach the tree, or rest under its lethal shade.

“Thou shalt not set thyself against the Lord’s anointed,” saith David. But since the “authorities,” social and scientific, are always the first to break that law, others may occasionally follow the good example. Besides, the “anointed” ones are not always those of the Lord; many of them being more of the “self-anointed” sort.

Thus, whenever taken to task for disrespect to Science and its “authorities,” which the Unpopular Philosopher is accused of rejecting, he demurs to the statement. To reject the *infallibility* of a man of Science is not quite the same as to repudiate his learning. A *specialist* is one, precisely because he has some one specialty, and is therefore less reliable in other branches of Science, and even in the general appreciation of his own subject. Official school Science is based upon temporary foundations, so far. It will advance upon straight lines so long only as it is not compelled to deviate from its old grooves, in consequence of fresh and unexpected discoveries in the fathomless mines of knowledge.

Science is like a railway train which carries its baggage van from one terminus to the other, and with which no one except the railway officials may interfere. But passengers who travel by the same train can hardly be prevented from quitting the direct line at fixed stations, to proceed, if they so like, by diverging roads. They should have this option, without being taxed with libelling the chief line. To proceed *beyond the terminus* on horseback, cart or foot, or even to undertake pioneer work, by cutting entirely new paths through the great virgin forests and thickets of public ignorance, is their undoubted prerogative. Other explorers are sure to follow; nor less sure are they to criticize the newly-cut pathway. They will thus do more good than harm. For

truth, according to an old Belgian proverb, is always the result of conflicting opinions, like the spark that flies out from the shock of two flints struck together.

Why should men of learning be always so inclined to regard Science as their own personal property? Is knowledge a kind of indivisible family estate, entailed only on the elder sons of Science? Truth belongs to all, or ought so to belong; excepting always those few special branches of knowledge which should be preserved ever secret, like those two-edged weapons that both kill and save. Some philosopher compared knowledge to a ladder, the top of which was more easily reached by a man unencumbered by heavy luggage, than by him who has to drag along an enormous bale of old conventionalities, faded out and dried. Moreover, such a one must look back every moment, for fear of losing some of his fossils. Is it owing to such extra weight that so few of them ever reach the summit of the ladder, and that they affirm there is *nothing* beyond the highest rung *they* have reached? Or is it for the sake of preserving the old dried-up plants of the Past that they deny the very possibility of any fresh, living blossoms, on new forms of life, in the Future?

Whatever their answer, without such optimistic hope in the ever-becoming, life would be little worth living. What between “authorities,” their fear of, and wrath at the slightest criticism—each and all of them demanding to be regarded as infallible in their respective departments—the world threatens to fossilize in its old prejudices and routine. Fogeism grins its skeleton-like sneer at every innovation or new form of thought. In the great battle of life for the survival of the fittest, each of these forms becomes in turn the master, and then the tyrant, forcing back all new growth as its own was checked. But the true Philosopher, however “unpopular,” seeks to grasp the actual life, which, springing fresh from the inner source of Being, the rock of truth, is ever moving onward. He feels equal contempt for all the little puddles that stagnate lazily on the flat and marshy fields of social life.

H.P.B.

Lucifer, August 1891

THE BLESSINGS OF PUBLICITY

A WELL-KNOWN public lecturer, a distinguished Egyptologist said, in one of his lectures against the teachings of Theosophy, a few suggestive words, which are now quoted and must be answered:

“It is a delusion to suppose there is anything in the experience or wisdom of the past, the ascertained results of which can only be communicated from beneath the cloak and mask of mystery. . . . Explanation is the Soul of Science. They will tell you *we cannot have their knowledge without living their life*. . . . Public experimental research, the printing press, and a free-thought platform, have abolished the need of mystery. It is no longer necessary for science to take the veil, as she was forced to do for security in times past,” etc

This is a very mistaken view in one aspect. “Secrets of the purer and profounder life” not only *may* but *must* be made universally known. But *there are secrets that kill* in the arcana of Occultism, and unless a man *lives the life* he cannot be entrusted with them.

The late Professor Faraday had very serious doubts whether it was quite wise and reasonable to give out to the public at large certain discoveries of modern science. Chemistry had led to the invention of too terrible means of destruction in our century to allow it to fall into the hands of the profane. What man of sense — in the face of such fiendish applications of dynamite and other explosive substances as are made by those incarnations of the Destroying Power, who glory in calling themselves Anarchists and Socialists—would not agree with us in saying:—Far better for mankind that it should never have blasted a rock by modern perfected means, than that it should have shattered

the limbs of one per cent even of those who have been thus destroyed by the pitiless hand of Russian Nihilists, Irish Fenians and Anarchists. That such discoveries, and chiefly their murderous application, ought to have been withheld from public knowledge may be shown on the authority of statistics and commissions appointed to investigate and record the result of the evil done. The following information gathered from public papers will give an insight into what may be in store for wretched mankind.

England alone—the centre of civilization—has 21,268 firms fabricating and selling explosive substances.¹ But the centres of the dynamite trade, of infernal machines, and other such results of modern civilization, are chiefly at Philadelphia and New York. It is in the former city of “Brotherly Love” that the now most famous manufacturer of explosives flourishes. It is one of the well-known respectable citizens—the inventor and manufacturer of the most murderous “dynamite toys”—who, called before the Senate of the United States anxious to adopt means for the repression of a *too free trade* in such implements, found an argument that ought to become immortalised for its cynical sophistry: “my machines,” that expert is reported to have said—“are quite *harmless to look at*; as they may be manufactured in the shape of oranges, hats, boats, and anything one likes. . . . Criminal is he who murders people by means of such machines, not he who manufactures them. The firm refuses to admit that were there no supply there would be no incentive for demand on the market; but insists that every demand should be satisfied by a supply ready at hand.”

That “supply is the fruit of civilization and of the publicity given to the discovery of every murderous property in matter. What is it? As found in the Report of the Commission appointed to investigate the variety and character of the so-called “infernal machines,” so far the following implements of instantaneous human destruction are already on hand. The most fashionable of all among the many varieties fabricated by Mr. Holgate, are the “Ticker,” the “Eight Day Machine,”

¹ Nitro-glycerine has found its way even into medical compounds. Physicians and druggists are vying with the Anarchists in their endeavours to destroy the surplus of mankind. The famous chocolate tablets against dyspepsia are said to contain nitroglycerine! They may save, but they can kill still more easily.

the “Little Exterminator,” and the “Bottle Machine.” The “Ticker” is in appearance like a piece of lead, a foot long and four inches thick. It contains an iron or steel tube, full of a kind of gunpowder invented by Holgate himself. That gunpowder, in appearance like any other common stuff of that name, has, however, an explosive power two hundred times stronger than common gunpowder; the “Ticker” containing thus a powder which equals in force two hundred pounds of the common gunpowder. At one end of the machine is fastened an invisible clock-work meant to regulate the time of the explosion, which time may be fixed from one minute to thirty-six hours. The spark is produced by means of a steel needle which gives a spark at the touch-hole, and communicates thereby the fire to the whole machine.

The “Eight Day Machine” is considered the most powerful, but at the same time the most complicated, of all those invented. One must be familiar with handling it before a full success can be secured. It is owing to this difficulty that the terrible fate intended for London Bridge and its neighbourhood was turned aside by the instantaneous killing instead of the two Fenian criminals. The size and appearance of that machine changes, Proteus-like, according to the necessity of smuggling it in, in one or another way, unperceived by the victims. It may be concealed in bread, in a basket of oranges, in a liquid, and so on. The Commission of Experts is said to have declared that its explosive power is such as to reduce to atoms instantly the largest edifice in the world.

The “Little Exterminator” is an innocent-looking plain utensil having the shape of a modest jug. It contains neither dynamite nor powder, but secretes, nevertheless, a deadly gas, and has a hardly perceptible clock-work attached to its edge, the needle of which points to the time when that gas will effect its escape. In a shut-up room this new “vriil” of lethal kind, will *smother to death, nearly instantaneously*, every living being within a distance of a hundred feet, the radius of the murderous jug. With these three “latest novelties” in the high season of Christian civilization, the catalogue of the dynamiters is closed; all the rest belongs to the old “fashion” of the past years. It consists of hats, *porte cigars*, bottles of ordinary kind, and even *ladies’ smelling bottles*, filled with dynamite, nitro-glycerine, etc., etc.—weapons, some

of which, following unconsciously Karmic law, killed many of the dynamiters in the last Chicago *revolution*. Add to this the forthcoming long-promised Keely's vibratory force, capable of reducing in a few seconds a dead bullock to a heap of ashes, and then ask yourself if the *Inferno* of Dante as a locality can ever rival earth in the production of more hellish engines of destruction!

Thus, if purely material implements are capable of blowing up, from a few corners, the greatest cities of the globe, provided the murderous weapons are guided by expert hands—what terrible dangers might not arise from magical *occult* secrets being revealed, and allowed to fall into the possession of ill-meaning persons! A thousand times more dangerous and lethal are these, because neither the criminal hand, nor the *immaterial*, invisible weapon used, can ever be detected.

The congenital *black* magicians—those who, to an innate propensity towards evil, unite highly-developed mediumistic natures—are but too numerous in our age. It is nigh time then that psychologists and believers, at least, should cease advocating the beauties of publicity and claiming knowledge of the secrets of nature for all. It is not in our age of “suggestion” and “explosives” that Occultism can open wide the doors of its laboratories except to those who *do* live the life.

H.P.B.

Theosophist, February 1881

THE ELECTRIC AND MAGNETIC AFFINITIES BETWEEN MAN AND NATURE

WITHOUT going too deeply into certain vexed questions based upon what the orthodox men of science please to term the “hypothetical” conclusions of the Psychological School, whenever we meet with discoveries made by the former, coinciding perfectly with the teachings of the latter, we think ourselves entitled to make them known to the world of skeptics. For instance, this psychological, or spiritual, school holds that “every being and naturally-formed object is in its beginning, a spiritual or monadial entity” which, having its origin in the spiritual or monadial plane of existence, must necessarily have as many relations with the latter as it has with the material or sensuous plane in which it physically develops itself. That each, according to species, evolves from its monadial centre an essential aura, which has positive and negative magnetoid relations with the essential aura of every other, and that, *mesmeric* attraction and repulsion exhibiting a strong analogy with *magnetic* attraction and repulsion, this analogous attraction and repulsion obtains not only between individuals of the same, but of different species, not only in animate but in inanimate nature.” {*Clairvoyance, Hygienic and Medical*, by Jacob Dixon, L.S.A.L.)

Thus if we give our attention but to the electric and magnetic fluids in men and animals, and the existing mysterious but undoubted interrelation between these two, as well as between both of them and plants and minerals, we will have an inexhaustible field of research, which may lead us to understand more easily the production of certain phenomena. The modification of the peripheral extremities of nerves by which electricity is generated and discharged in certain genera of fishes, is of the most wonderful character, and yet, to this very day its

nature remains a mystery to exact science. For when it has told us that the electric organs of the fish generate the electricity which is rendered active by nervous influence, it has given us an explanation as hypothetical as that of the psychologists whose theories it rejects *in toto*. The horse has nerves and muscles as well as a fish, and even more so; the existence of animal electricity is a well-established fact, and the presence of muscular currents has been found in the undivided as well as in the divided muscles of all the animals, and even in those of man. And yet by the simple lashing of its feeble tail a small electrical fish prostrates a strong horse! Whence this electric power, and what is the ultimate nature and essence of the electric fluid? Whether as a cause or effect, a primary agent or a correlation, the reason for each of its manifestations is yet hypothetical. How much, or how little has it to do with vital power? Such are the ever-recurring and always unanswerable queries. One thing we know, though, and that is, that the phenomena of electricity as well as those of heat and phosphorescence, within the animal body, depend on chemical actions; and that these take place in the system just as they would in a chemist's laboratory; ever modified by and subjected to this same mysterious Proteus—the Vital Principle, of which science can tell us *nothing*.

The quarrel between Galvani and Volta is well known. One was backed by no less an authority than Alexander Humboldt, the other by the subsequent discoveries of Matteucci, Dubois Reymond, Brown-Sequard, and others. By their combined efforts, it was positively established that a production of electricity was constantly going on in all the tissues of the living animal economy; that each elementary bundle of fibrils in a muscle was like a couple in a galvanic battery; and that the longitudinal surface of a muscle acts like the positive pole of a pile, or galvanic battery, while the transverse surface acts like the negative pole. The latter was discovered by one of the greatest physiologists of our century—Dubois Reymond: who, nevertheless, was the greatest opponent of Baron Reichenbach, the discoverer of the *Od Force*, and ever showed himself the most fierce and irreconcilable enemy of transcendental speculation, or what is best known as the study of the occult, *i.e.*, the yet undiscovered forces in nature.

Every newly-discovered power, each hitherto unknown correlation of that great and unknown Force or the Primal Cause of all, which is no less hypothetical to skeptical science than to the common credulous mortals, was, previous to its discovery, an *occult power of nature*. Once on the track of a new phenomenon science gives an exposition of the facts—first independent of any hypothesis as to the causes of this manifestation; then—finding their account incomplete and unsatisfactory to the public, its votaries begin to invent generalizations, to present hypotheses based upon a certain knowledge of principles alleged to be at work by reasserting the laws of their mutual connection and dependence. They have *hot explained* the phenomenon; they have but suggested how it might be produced, and offered more or less valid reasons to show how it could not be produced, and yet a hypothesis from their opponents' camp, that of the Transcendentalists, the Spiritualists and Psychologists, is generally laughed down by them before almost these latter have opened their mouths. We will notice a few of the newly-discovered electro-magnetic phenomena which are still awaiting an explanation.

In the systems of certain people the accumulation and secretion of electricity, reach under certain conditions, to a very high degree. This phenomenon is especially observed in cold and dry climates, like Canada, for instance; as well as in hot, but at the same time, dry countries. Thus—on the authority of that well-known medical journal, the *Lancet*—one can frequently meet with people who have but to approach their index fingers to a gas-beak from which a stream of gas is issuing, to light the gas as if a burning match had been applied to it. The noted American physiologist, Dr. J. H. Hammond, possesses this abnormal faculty upon which he discourses at length in his scientific articles. The African explorer and traveller Mitchison informs us of a still more marvellous fact. While in the western part of Central Africa, he happened at various times in a fit of passion and exasperation at the natives, to deal with his whip a heavy blow to a negro. To his intense astonishment the blow brought out a shower of sparks from the body of the victim; the traveller's amazement being intensified by his remarking that the phenomenon provoked no comments, nor seemed to excite any surprise among the other natives who witnessed the

fact. They appeared to look upon it as something quite usual and in the ordinary run of things. It was by a series of experiments that he ascertained at last, that under certain atmospheric conditions and especially during the slightest mental excitement it was possible to extract from the ebony-black body of nearly every negro of these regions a mass of electric sparks; in order to achieve the phenomenon it sufficed to gently stroke his skin, or even to touch it with the hand. When the negroes remained calm and quiet no sparks could be obtained from their bodies.

In the *American Journal of Science*, Professor Loomis shows that “persons, especially children, wearing dry slippers with thin soles, and a silk or woolen dress, in a warm room heated to at least 70°, and covered with a thick velvet carpet, often become so electrically excited by skipping across the room with a shuffling motion, and rubbing the shoes across the carpet, that sparks are produced on their coming in contact with other bodies, and on their presenting a finger to a gas-burner, the gas may be ignited. Sulphuric ether has been thus inflamed, and in dry, cold weather sparks, half an inch in length, have been given forth by young ladies who had been dancing, and pulverized resin has been thus inflamed.” So much for electricity generated by human beings. But this force is ever at work throughout all nature; and we are told by Livingstone in his *Travels in South Africa*, that the hot wind which blows during the dry seasons over the desert from north to south “is in such an electric state that a bunch of ostrich feathers, held a few seconds against it, becomes as strongly charged as if attached to a powerful electric machine, and clasps the advancing hand with a sharp cracking sound.... By a little friction the fur of the mantles worn by the natives gives out a luminous appearance. It is produced even by the motion communicated in riding; and a rubbing with the hand causes sparks and distinct crepitations to be emitted.”

From some facts elicited by M. J. Jones, of Peckham, we find them analogous to the experiments of Dr. Reichenbach. We observe that “a magnetoid relation subsists between subjects of a nervous temperament and shells—the outgrowth of living entities, and which, of course, determined the dynamical qualities of their natural

coverings.” The experimenter verified the results upon four different sensitive subjects. He says that he “was first drawn to the enquiry by the fact of a lady looking at a collection of shells, complaining of pain while holding one of them. His method of experimenting was simply to place a shell in the subject’s hand; the *purpura chocolatum*, in about four minutes, produced contraction of the fingers, and painful rigidity of the arm, which effects were removed by quick passes, without contact, from the shoulders off at the fingers.”

Again, he experimented with about thirty shells, of which he tried twelve, on May 9, 1853; one of these causing acute pain in the arm and head followed by insensibility.

He then removed the patient to a sofa, and the shells to a sideboard. “In a short time,” says Mr. Dixon, from whose book we quote the experiment, “to his astonishment the patient, while still insensible, gradually raised her clasped hands, turning them towards the shells on the sideboard, stretching the arms out at full length, and pointing to them. He put down her hands; she raised them again, her head and body gradually following. He had her removed to another room, separated from that containing the shells by a nine-inch wall, a passage, and a lath and plaster wall; the phenomenon, strange to say, was repeated. He then had the shells removed into a back room, and subsequently into other places, one of which was out of the house. At each removal the position of the hands altered to each new position of the shells. The patient continued insensible ... for four days. On the third of these days the arm of the hand that had held the shells was swollen, spotted, and dark-coloured. On the morning of the fourth day, these appearances had gone, and a yellow tinge only remained on the hand. The effluence which had acted most potently, in this experiment, proceeded from the *cinder murex* and the *chama macrophylla*, which was most wonderful; the others of the twelve were the *purpurata cookia*, *cerethinum orth.*, *pyrula ficordis*, *sea urchin* (Australia), *voluta castanea*, *voluta musica*, *purpura chocolatum*, *purpura hyp-pocas tanum*, *melanatria fluminea*, and *monodonta declives*”

In a volume entitled “The Natural and the Supernatural” M. Jones

reports having tested the magnetoid action of various stones and wood with analogous results; but, as we have not seen the work we can say nothing of the experiment. In the next number we will endeavour to give some more facts and then proceed to compare the “hypotheses” of both the exact and the psychological sciences as to the causes of this inter-action between man and nature, the *Microcosm* and the *Macrocosm*.

Lucifer, September 1891

THE SUBSTANTIAL NATURE OF MAGNETISM

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 generationstoanthropomorphismpast 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 the 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 wide 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, sti* 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 scientist 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 for ever. . . .

“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 any one 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 of 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 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 imponderable 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 shewed in his recent masterly paper on *Force*. (*See Microsm*, 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. III, 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:¹ thus justifying our original classification of the entities of the universe into material and immaterial substances.

“1. If magnetism were not a real *substance*¹, 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.

¹ This is a very wrong word to use. See text.—H.P.B.

“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 word “immaterial.”² 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 *noumenon* 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*).

² 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.

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 Kabalists 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 Element³ 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.

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,

³ 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.

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 nonentitative *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 un-philosophical 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 teaching 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 law 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.”⁴

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.

⁴ 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.

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 a something which is *not motion*—there is a *feeling or sensation of colour*”... 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 *Hylo-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, withstanding 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 shew 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.