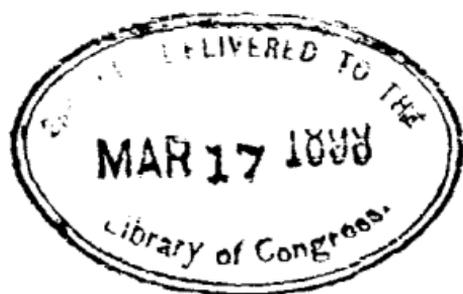


MATERIALIZATION
AND OTHER SPIRITUAL PHENOMENA
FROM A SCIENTIFIC
STANDPOINT

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L. H. DALTON
J. V. WALLACE



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AND

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BY

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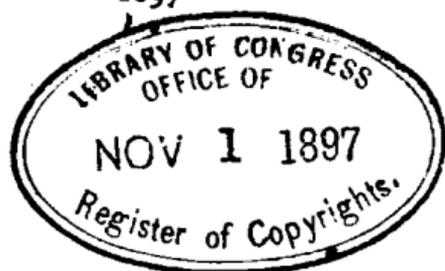


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Preface.

IN putting forth these few thoughts upon spiritualistic phenomena, the authors think it wise to state in advance a few words about themselves. Most of the literature upon this and kindred subjects is, perhaps of necessity, of a partisan nature. It is written by men whose beliefs are known and who regard themselves, therefore, as the advocates of a prejudged cause. By education, affiliation, and reputation, they are constrained to uphold whatever side of the case they have espoused, and are thus, in some measure at least, incapacitated to weigh with absolute justice not only the *pros* but the *cons* of the subject of which they treat.

The authors of this little book are able to disclaim all such influences. Whatever they may think, believe, or know in their "heart of hearts," they have no dogmatic or spiritualistic reputation to maintain. They are not known to their *most intimate*

Preface.

friends as spiritualists, belong to no spiritual organization, and have here no other reputation to maintain than that for accuracy of scientific statement.

We trust the Reader will appreciate the spirit of fairness with which we have sought to place the few following thoughts before him.

L. H. DALTON.

J. V. WALLACE.

Boston, September, 1897.

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Introduction.

IMMORTALITY is a subject co-important with the hopes of the human race; yet, with regret be it said, there has been very little written about it in a truly scientific spirit. The inquiring mind is usually referred to the testimony of a single Book, and the popular, though *not* universal, belief of the various races of the great human family that there is a life after death. Those who cannot regard the testimony of the Bible as conclusive seem to find but very little literature penned with sufficient scientific candor and accuracy to impress them with the reality of a conscious, individual existence after death. If this is to be regretted, so also is to be deplored the failure, in a great measure, of the better class of trained scientific minds to reduce the phenomena of spiritualism to philosophic proportions.

Conditions of Scepticism.

IT is not our purpose in this discussion to indulge in sentiment. Enough of that sort of thing will be found elsewhere. We cannot content ourselves with the position, "We wish it; therefore it must be so." The sceptic does not doubt, be assured, because he is indifferent to the return of his sacred dead. Many such an unbeliever would give his heart's blood, drop by drop, for so much as a morsel of what would appeal to *him* as proof of the ability of his beloved departed to come back and communicate with him. The plea of the illogical, "Believe because it will make life so much happier," draws from him only the sighing rejoinder, "One believes not as he *would*, but as he *must*."

It is to this class of readers that we wish to offer the following scientific data, with a view to their determining, without let or hindrance, whether or not the facts adduced make toward or from belief in the verity

Conditions of Scepticism.

of spiritualistic phenomena. We submit, in passing, that belief in *materialization* rests upon precisely the same sort of evidence as that which is adduced in favor of clair-audience, clairvoyance, etc., and that it is illogical to accept the last and reject the first.

Conditions Necessary to Phenomena.

THE cry is often raised that if spirits can be materialized under *one* set of conditions, they should be able to materialize under *another* set. Mediums are doubted because they object, in certain cases, to too bright a light. It is easy enough, in these instances, to assert fraud as the reason; but if the investigator have the courtesy to assume the medium honest till the reverse has been proved, a very good explanation may be found.

It is our ignorance, in many cases, that is the cause of our harsh criticisms. If we knew a little more of the culture of the Eastern Yogi; if we were better informed of the practices which produce Indian Adepts, — the long, hard struggle of the novice in his conquest of self, and the attainment of the higher powers, — we might not so glibly shout fraud till we had

Conditions Necessary

sought for other explanations. Because fraud unquestionably exists, and because darkness *as* unquestionably assists in its perpetration, is no reason for asserting that a certain degree of darkness may not have other and legitimate uses. Because a pair of shears has been misused to stab a man, is that any reason for asserting that they may not have a good and justifiable use? Because darkness has been connected with fraud, is that any reason for assuming that a dim light of necessity means fraud? Let us see, for a moment, if a more charitable explanation is not patent to any one who honestly looks for it.

Take, for example, clairvoyance. Is not the condition necessary thereto unquestionably one of *subjectivity*? Is it not essential that the *objective* brain should be *set aside* for the nonce, and the *subjective brain* held in such *delicate equilibrium* as to be swayed by forces relatively weak? There are scales made so delicate as to readily weigh a pencil-mark upon a sheet of paper. What would they do if their *delicacy of adjustment* were interfered with by an environment of

to Phenomena.

straws *pulling the moving parts in varied directions?* Where the force to be *used* is *subtle* and *relatively weak*, the mechanism or medium *using that force* must be *excessively delicate* and *sensitive*, and must *not be polarized strongly* either by his OWN WILL or *conditions* of environment. It frequently happens that any knowledge a medium has of the sitter militates against the result of the communication from the very fact that it stimulates the front or reasoning brain and interferes with the absolute predominance of the subjective brain. Does not experience show that mediums, as a rule, are *not* strongly polarized, and that they *are, subjectively, excessively sensitive?*

If the will, or the brain life, is to be thrown back into the cerebellum will it not be fatal to the result desired if the cerebrum, or perceptive brain, be making *loud demands for attention* through the senses? Will a man be apt to rise superior to his sense-perceptions if a light be flashed in his eyes, or a tin horn blown in his ears? Do poets attain their sublimest heights by writing in a pandemonium of rumbling carts?

Why did Carlyle want to assassinate an organ-grinder who broke in upon his train of thought? Why does Herbert Spencer, the greatest philosopher this planet has produced, write with corks in his ears? Why do we turn out our lights when we wish to sleep? Why do we seek quiet when we wish to think? Why do we stop doing *one* thing when we do another? Simply because we *must*, if we would succeed. Does this not answer the question of why the medium does not strive to *submerge* his perceptive faculties by permitting them to be *stimulated into activity by light*?

The importance of the absolute annihilation of the senses is well understood by the Eastern Yogi. The novitiate who rolls his naked body hundreds of miles over the burning sands to the Ganges, does not do so for *amusement*. The candidate for higher powers who, in the effort to live apart from and above his sense perceptions, maintains a slow fire for years upon his naked scalp has what appeals to *him* as being a *very important end in view*. The Buddhist who clinches his hands in an unrelaxing grip

to Phenomena.

until the finger-points have worked themselves through the palm and out at the back of the hand, and he who holds his arm aloft for years until it solidifies and remains fixed in that position, have both a very definite end in view. They are seeking to submerge their *perceptive faculties* under what the *veriest sceptic* would regard as peculiarly "test conditions." They are seeking to get the powers we are discussing so under control that no *pain*, no *light*, no *tumult* shall arouse them out of their trance-like state. Can we not see from this just *why* certain *conditions* may be necessary to the production of certain *phenomena*? Any actor who has faced a critical audience, any lecturer who has talked to antagonistic hearers, knows what is meant by conditions of inharmony. Ask a young woman to sing at a parlor gathering, and let her perceive a member of the party sneer as she is called upon, and if she have sufficient sensitiveness to be an artist her performance will be ruined. When the great Edmund Kean played Othello to a particularly cold audience, he paused, after one of his impas-

Conditions Necessary to Phenomena.

sioned utterances which met with no response, rushed down to the footlights and exclaimed, "My God, ladies and gentlemen, I can't act if you don't applaud!" Would it have been reasonable for any one to have jumped up and shouted, "You are no artist if you are subject to conditions"?

The effect of music is too well known to need discussion. Confirmed insomnia, which is caused by an abnormally stimulated *front* brain, has been known to yield to the lulling effects of mere rhythm tapped out by one piece of wood upon another. If to rhythm be added pitch, melody, harmony, etc., will not the salutary effect be enhanced? The power of music to overcome the effect of harmful conditions has been recognized throughout all ages.

Historical Points.

THE argument so often made use of by religious people disbelieving spiritualism, that Christianity must be true since belief therein has been so persistent, applies with *added force*, let them not forget, to spiritualistic phenomena, belief wherein extends far back of the earliest Christian tenets. From the old days of oracular utterances, to confine ourselves to profane history, through all the spiritual phenomena of mythology, to the days of that more recent witchcraft, to which even Blackstone refers in his "Commentaries" * as a fact assured beyond the possibility of doubt, we

* "To deny the possibility, nay, actual existence, of witchcraft and sorcery is at once flatly to contradict the Word of God in various passages both of the Old and New Testament; and the thing itself is a truth to which every nation in the world hath in its turn borne testimony, either by examples seemingly well attested, or by prohibitory laws, which at least suppose the possibility of a commerce with evil spirits."—*Sir William Blackstone, "Commentaries on the Laws of England."*

find a constantly augmenting body of testimony certifying to spiritualistic phenomena, until to-day there are comparatively few thinking men, whatever their religious beliefs, who care to *deny the existence* of such phenomena, albeit they may call them by a variety of different names, ranging anywhere from witchcraft or black magic to hypnotism or mind-reading. It matters little *what* the name, so that they realize that there is *something to be named*. Again, when it is remembered that the Bible is replete with testimony making toward spiritualistic phenomena in general, and materialization in particular, one cannot but be seized with surprise at the attitude of many of the followers of Evangelical religion. Assuredly what was commonly called "witchcraft" is held by these doubters of spiritualism to be a state of possession by *evil* spirits. Add to this that they *believe* in *good* spirits, and the inconsistency of their claim that no one can be possessed or "controlled" by good spirits is apparent. Should any claim that the founders of present creeds, together with their noted con-

Points.

temporaries, did not believe in any such spiritual phenomena, good or bad, let them consider the following.

A woman charged with witchcraft, with having caused children to vomit crooked pins, and having nursed devils, was tried and convicted before Sir Matthew Hale, one of the great judges and lawyers of England, who, in his charge to the jury, impressively stated that there was no doubt as to the existence of witches, the fact being established by *all history* and expressly taught by the Bible.

“Sir Thomas More declared that to give up witchcraft was to throw away the sacred Scriptures.”

The founder of the Methodist Church, John Wesley, “was a firm believer in ghosts and witches, and insisted upon it years after all the laws upon the subject had been repealed in England.”

Popes Alexander, Leo, and Adrian directed bulls against witchcraft. “Protestants were as active as Catholics, and in Geneva five hundred witches were burned at the stake in a period of three months.

About one thousand were executed in one year in the diocese of Como. At least one hundred thousand victims suffered in Germany alone, the last execution (in Wurtzburg) taking place as late as 1749. Witches were burned in Switzerland as late as 1780 . . . In Brown's Dictionary of the Bible, published at Edinburgh, Scotland, in 1807, it is said that 'a witch is a woman that has dealings with Satan. That such persons are among men is abundantly plain from Scripture, and that they ought to be put to death.'"

Again: "Cotton Mather once saw a black cat perched on the shoulder of an innocent, chattering old gran'ma. The next day a neighbor had a convulsion; and Cotton Mather went forth and exorcised Tabby with a hymn-book, and hanged gran'ma by the neck, high on Gallows Hill, until she was dead.

"Had the Reverend Mather possessed but a mere modicum of humor he might have exorcised the cat, but I am sure he would never have troubled old gran'ma. But alas, Cotton Mather's conversation was

Points.

limited to yea, yea, and nay, nay,—generally nay, nay,—and he was in dead earnest.

“In the Boston Public Library is a book written in 1685 by Cotton Mather, entitled *Wonders of the Invisible World*. This book received the endorsement of the Governor of the Province and also of the president of Harvard College. The author cites many cases of persons who were bewitched; and also makes the interesting statement that the devil knows Greek, Latin, and Hebrew, but speaks English with an accent. These facts were long used at Harvard as arguments in favor of the classics. And when Greek was at last made optional, the devil was supposed to have filed a protest with the Dean of the Faculty.”

In our own country, in Salem, Mass., in 1692, nineteen persons were executed for witchcraft. Belgium had a trial as late as 1815, and Hela, near Dantzic, as late as 1836.

Martin Luther himself believed in witches and materialization.

All this has been cited to show the stand-

Historical Points.

point of religion with regard to beings controlled by *evil* spirits. No one can be more insistent on the point of the existence of *good* spiritual forces than these same religious doubters of spiritualism. What, then, for the logic of their position? Is not their stand simply this: *evil* spirits are *potent*; *good* spirits are *impotent*; an all-wise, all-loving, all-powerful Father has given to *evil* the immense advantage over *good* of *active, potent propagation*? Is this logical? Is it pleasant? IS IT TRUE?

Materialization and the Bible.

A WORD now about the phenomena of materialization from a religious standpoint. Is it not more likely that, in the many cases of translation mentioned in the Bible, the transfigured spirit, or the astral body, or the materialized form was transported, rather than the ponderable flesh and bones? Let it be remembered that the Bible does not in the cases cited state that these forms, or presences, were created or materialized on the spot, but that they were carried from distant localities in a few seconds. We ask the questions without any attempt at dogmatism or desire to *prejudice the answer*.

Was it the literal body of the Prophet Habakkuk that was transported from Judea to Babylon? Was it the corporeal self of Philip the Evangelist that had a similar experience? Was St. Paul's physical body translated into the third heaven? Was Christ's literal body placed by the Devil

on a pinnacle of the temple? Was not the Saviour's appearance after death an instance of tangible materialization? Did he not himself say he was no mere intangible vision? Is there any other explanation so simple, so natural, so probable?

We cite these Biblical instances, not as puzzling from our standpoint, but as difficult to reconcile with the usual belief entertained by the average Christian mind. Which is the most likely, that Christ walked out on the water, or that his living spirit materialized there, or — as the East Indian would put it — that he projected his astral form? for, according to Oriental belief, this type of what we call "materialization" can be effected by the living subject. For Christ to have walked out upon the water he must have violated laws known never to have had another exception; but his living spirit might have *materialized* through the observance of *natural forces* as yet not *reduced to fixed law*. Which is the more reasonable? Which in strictest accord with what is known in logic as the "law of parsimony"?

and the Bible.

In submitting these data bearing upon materialization it is our wish to avoid everything that in the least degree smacks of dogmatism,—to content ourselves, in short, with the mere statement and terse explanation of scientific facts, permitting the reader to draw from these facts his *own* conclusion. We shall regret if anything herein, *other than the facts adduced*, seems to render this conclusion inevitable. Indeed, we could wish him to look upon us as investigators candidly and fearlessly examining all the facts bearing upon the present subject, and placing them before him, as fully as present space permits, without in any way attempting to coerce his judgment or bias his conclusion.

Evidence.

A VARIETY of opinion, where it exists between investigators who are intelligent, unbiased, and honest, is usually the result of one of two factors. First, the truth or falsity of the phenomena presented. Second, the degree in which an admitted fact constitutes evidence. To the average person not skilled in argument, nothing more perplexing can be said in reply to his predication of a point than : “ I admit your assertion, but what are you going to prove by it ? ”

The great difficulty with much that has been written upon this and similar subjects has been along these lines. The phenomena adduced have not been sufficiently correlated, in most instances, to prove anything definite, *even if admitted*. Again ; let it be briefly hinted that *all* knowledge is of necessity relative. Nothing can be known *absolutely*. We say we know that the sun will rise on the morrow, and we

Evidence.

mean by this, if we are careful in our statements, that the probability thereof is so overwhelming as to meet the demands of what we commonly call "certainty," notwithstanding which, however, a philosophic mind must recognize that the possibility of the failure of the sun on the morrow could be mathematically expressed could we but know how many times it has already arisen.

Let it be borne in mind then, on the one hand, that evidence becomes conclusive *not* through *absolute knowledge*, which can *never be had*, but by virtue of *overwhelming likelihood*; and, on the other hand, that the difficulty besetting us here, as in polemics, is in the determination of just when evidence *is* overwhelming. Evidence which is positive and conclusive to *one* mind is often only tributary and circumstantial to another. Let those who regard direct evidence as the only credible testimony remember that astute Daniel Webster said that he preferred a chain of *circumstantial evidence* to anything else that could be given. In this connection we beg to quote the following from a report of the charge

Evidence.

to the jury in the O'Neil-McCloud murder case, delivered by Chief Justice Mason, July 27, 1897: "A combined series of facts, *each in itself unimportant*, may make a *combined whole* that is *irresistible*," and, "In certain cases *circumstantial evidence* is *more conclusive* than *direct* evidence." (The italics are ours.) We beg to submit that the data which we have the pleasure of here presenting partake of the nature of a chain of circumstantial evidence with but few missing or doubtful links.

For a treatment of circumstantial evidence more extended than present space permits us to give, we refer the Reader to Edgar Allan Poe's "The Mystery of Marie Roget." We trust, furthermore, that the Reader will not fail to realize the vast difference between negative and positive evidence. Suppose a diamond to have been lost in a small inclosure. A million of men search there for it and, failing to find it, give their *negative* evidence to the effect that it is not there; but another man gives his *positive* evidence that it *is* there, and that he sees it. Now, granting that the veracity, intelligence, and earnestness of

Evidence.

the million and the one are absolutely above reproach, upon which side will fall the weight of evidence? Clearly upon the side of positive evidence, for though a million ~~of~~ men might have *overlooked* it, the one could not have *seen* it had it not been there. If, therefore, a man has, to his own satisfaction and beyond the possibility of a doubt, witnessed the phenomena of materialization, will it not be natural for him to regard his evidence as *positive*, and the failure of the million of others to witness the same manifestation as testimony at once *negative* and *weak*?

In like kind, a thousand cases of alleged spiritual phenomena which subsequently are admittedly proved false are completely overcome and rendered worthless as evidence against the possibility of spiritual manifestation by a *single assured case of actual materialization*. Because a man occasionally gets a counterfeit coin, does he for that reason deny that the government mints actually produce genuine dollars, and refuse to have anything to do with our medium of exchange?

Phenomena Sometimes Mistaken for Spiritualism.

IF besides those cases which may be believed to be intentional fraud are also found other demonstrations, some of which are accountable in other ways than by spirit force, shall that in any wise testify against phenomena at present explicable only from the standpoint of spiritualism? If Tom Jones thinks he sees a ghost, and it later turns out to be explained by persistence of vision or retinal fatigue, is that proof positive that John Smith's mother did not appear to him? If Clarke feels, with overwhelming certainty, that he has been in the same place before, seen the same things, and that he knew before the last sentence was spoken just what that sentence would be, despite his positive knowledge that he had never before been within a hundred miles of the place, and if all this be accounted for by reflex action, or mental

Phenomena Mistaken for Spiritualism.

echo, does that prevent Hill from actual prevision? Indeed, was it not Sir Walter Scott who in his writings described a place which his spirit had visited in dreams with such accuracy and minute detail that years after he was startled, when visiting the locality for the first time, to find his prevision had been astonishingly accurate?

Because a man having lost a limb frequently complains that the amputated and buried limb aches, and in his pain grasps at the place formerly occupied by it, and because such a man shall state that the ache is really in the unamputated astral limb which, though invisible, exists notwithstanding, shall this be taken as disproof of the East Indian idea of astral bodies, simply because science determines, *in this one case*, that it is merely the ends of the severed nerves which ache, and which, having for years reported the state of the missing limb, are still associated in the mind as ending in, and reporting the condition of, that member?

The Senses. Perception.

WHEN we carefully consider the data of knowledge we cannot but be impressed with the extreme fallibility of the senses. Man comes into the world, says a great scientist, "a bundle of inherited capacities and tendencies, labeled from the indefinite past to the indefinite future; and he makes his transit from the one to the other through the education of the present time." Everything that we know comes to us through the medium of the senses, and these senses, however *fallible* they may be, are *fundamentally* our *only educators*. Sensation itself is only a perception of a difference. Let a child be continually confined in such a manner that the color red is constantly before his eyes, and he will never sense the color at all.

Dependent for all knowledge, therefore, either mediately or immediately on our senses, let us not fail to realize how easily these may be deceived. Not one is infal-

The Senses. Perception.

libile. Perspective deceives the eye into making flat surfaces look solid. Cross the first and second fingers, place a pea between the points thus crossed and two peas are felt. When mustard is placed upon the tongue the painful result appeals to us as taste, when in reality it is a question of touch. A blow upon the head makes us see stars not tabulated by the best astronomers. A foot plunged in very hot water may for the moment feel cold, and *vice versa*, leaving the individual momentarily in doubt as to the real temperature of the water. Press upon the olfactory nerve and the patient senses an odor. Pinch a nerve of taste and the subject has a sense of taste. Sear the optic nerve and a flash of light is the result. Ventriloquy deceives the ear in the matter of distance, polyphony in the matter of source; and so on throughout the various senses. The mind, therefore, may be deceived again and again by what purports to be the reliable testimony of the senses. Indeed it often seems as if the animals understood this better

The Senses. Perception.

than we, for if you show a cat a piece of meat she will apparently regard it as too good to be true until she has verified the fact by her sense of smell.

Æther.

SINCE most of the scientific phenomena to which we are to call attention occur in the domain of what is known as the "HYPOTHETICAL ÆTHER," a few words of explanation upon this subject may be advisable. This interstellar ether has *nothing whatsoever* to do with the anæsthetic ether.

When the electric current is turned on to an incandescent lamp the carbon filament in the bulb glows at a white heat. Now, since the air has been exhausted from this bulb, it follows that the light which comes from the white-hot filament to our eyes must come at least a portion of the distance without the assistance of the air. How, then, does the light get from the filament, through the vacuum, and out of the glass? The answer is, by the vibration or undulation of a medium which science, for convenience, has called "ether." This medium is entirely independent of the

air, and is neither removed nor lessened, so far as is known, by the exhaustion of the air from the bulb. The light of the sun reaches us in about eight minutes, after traveling through ninety-three million miles of space. The atmosphere of our earth in all probability cannot extend upwards more than two hundred miles, and, we are told by a high scientific authority, "its density at the height of only one hundred miles is such that there would be only about one molecule to the cubic foot." How, then, does this light reach us? The answer is, the original impetus is conveyed to us through wave motions in the hypothetical ether. That light is a mode of motion, and is not *matter*, is proved in many ways — as, for example, by two lights producing darkness, as in the phenomena of interference. This may be seen in so simple a thing as the black spots of a soap-bubble.

This ether, about which so little is positively known, extends not only to the sun but to those most distant stars from which light reaches our telescopes,— stars so distant that, although their light reaches us ro-

Ether.

night, traveling at the rate of one hundred and eighty-six thousand miles a second, they may have ceased to exist before the first stone was laid in the oldest pyramid. So remote indeed are some of these stars that the light which left them on its way to us ten thousand years ago, and has ever since been traveling at the rate of nearly two hundred thousand miles a second, has not yet reached us. Over whatever space light crosses there must this ether be, a substance so fine as to permeate all matter without any appreciable friction,—devoid of weight, so far as we know,—invisible, and incapable of having any portion of itself isolated from the great ocean pervading all space. As to whether this ether is homogeneous and continuous, like a finer jelly, or whether it is granular is a matter not fully determined by science, and the discussion of which is here precluded by want of space.

Regarding the absurdity of that action at a distance without an intervening medium, so poignantly instanced by Sir Isaac Newton, the limits of the present article

forbid us to do more than to quote a few lines penned by the great scientist himself: "It is inconceivable that inanimate brute matter should, without the mediation of something else which is not material, operate upon and affect other matter without mutual contact, as it must do if gravitation, in the sense of Epicurus, be essential and inherent in it. . . . That gravity should be innate, inherent, and essential to matter, so that one body can act upon another at a distance through a vacuum, without the mediation of anything else, by and through which their action and force may be conveyed from one to another, is to me so great an absurdity that I believe no man who has in philosophical matters a competent faculty of thinking can ever fall into it." And again from the same author: "Perhaps the whole frame of nature may be nothing but various contextures of some certain ethereal spirits or vapors, condensed, as it were, by precipitation; and after condensation wrought into various forms, at first by the immediate

Æther.

hand of the Creator, and ever after by the power of nature."

Had the dead the power to "condense," to use this great thinker's phraseology, "certain ethereal spirits or vapors . . . as it were, by precipitation," and then, "after condensation," the ability to work them "into various forms," as they were, he says, originally worked by that Greater Spirit of which man's soul is an undivided part, or to use his language, "by the immediate hand of the Creator," then should we not have materialization in its very essence? The question is worthy your deepest consideration if you are a seeker for advanced truth regardless of any and all dogma.

Berkeley — Spiritualism —
Materialism.

FROM these wonderful words of Newton, so wise beyond his time, through the theory of Berkeley, to the latest reading of science as set forth by Sir William Thomson's vortex theory of matter, may be traced an ever-growing chain of evolution to which we cannot refrain from calling immediate attention, asking the Reader to bear the relation of these theories in mind as we proceed briefly to consider them. Regarding the question of matter and spirit, we are confronted, as is frequently the case in science, with two extremes and a "golden mean." Bishop Berkeley said, "All is spirit;" the French materialists, "All is matter;" and other philosophers, taking median ground, have asserted that both spirit and matter are but different rates of vibration of the same or similar things. They have said, call

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everything spirit, with Berkeley, if you please, and we have only then to say that what is *commonly* called “*matter*” is a grosser, or more sluggishly vibrating, spirit; or, call everything matter, with the materialists, and we have only then to say that what *others* call “*spirit*” is matter so subtly transfigured, so rapidly vibrating, as to lose, *in appearance*, all its grosser attributes

Personally, we feel that this latter view will be the ultimate reading of science, and we are, among other things, led to this by the general tendency and evolution of scientific thought. We cannot feel that there is more likely to be a sharp line of demarcation between spirit and matter than there is between the colors in the solar spectrum, in which it is impossible to say, just here ends the red and here begins the orange; in which green, having no particle of red in it, is yet reached from the red, its *direct opposite* or *complementary color*, through gradations so gradual that no point can be found where *one ceases* and the *other begins*.

Not so very long since it was generally

believed that there was a sharp line of demarcation between the animal and vegetable kingdoms. A deeper insight, a wider search, and a larger horizon has to-day changed all this. Who to-day thinks of making locomotion a distinctive attribute of animals? That barrier has been broken down. There are animals which remain fixed; there are plants which travel, root and all. No one to-day would seek to construct a dividing partition by saying that plants subsist on chemicals, while animals live upon vegetable growths, directly or indirectly; for there are plants which are *carnivorous*,—which seize their prey and devour it. For a long time the sponge was a candidate, in various minds, for both kingdoms; and even Agassiz pronounced some of the lower forms of sea life to be vegetable which are now unhesitatingly declared to be animal.

That wall between the animal and the human species which an ignorant sentimentality and a narrow prejudice has so long striven to set up is likewise swept away by the triumphant march of evolu-

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tion, the crowning intellectual glory of the nineteenth century. It was once thought sufficient to define man as a being who made use of fire, but the anthropoid apes are reported to have deprived the human race of even that poor distinction. Likewise, the old idea that man was the only laughing animal has disappeared before the claims of the hyena, an animal who pays for the usurpation of human laughter by conferring upon man many of his own attributes. That the highest man differs more widely from the lowest man, that the most highly evolved apes differ more widely from the least evolved, than does the *highest ape* from the *lowest man* is all that any rational, unprejudiced man requires to convince him that there is no sharp line of demarcation between the human animal and his less distinguished brother. Our arrogance is met by the little ant, far more highly specialized than we, albeit forming part of a branch springing from the biological tree at a point far below that at which the human branch joins the main trunk. The five sexes of the ant; its

remarkable intelligence; its first use of the phalanx in war; its method of trial for offenders; its burial ceremony and rites; its sanitary provisions; its methods of keeping and pasturing its cattle; and lastly its wonderful, and as yet inexplicable, means of *instant* communication from the head to the rear of a marching column a quarter of a mile long, are all data upon which to found human modesty.

The sharp boundary line between instinct and reason — that thin partition to which Pope alludes in the case of the “half-reasoning elephant” — has likewise disappeared. The monopoly of altruistic deeds, of the possession of a sense of obligation, so recently arrogated by the human species, has also been shown to be a false position. That the intelligent animal possesses every attribute (though perhaps in a less or even rudimentary degree) that is enjoyed by mankind, and that he is accordingly gifted with what is called a soul, is, to put it mildly, an all-but-proved thesis.

There has recently come to this country a report that an Italian physicist has

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made discoveries destined to annihilate the line dividing the dead chemical from the live animal kingdom. In view of these facts, then, is it not *overwhelmingly probable* that this *other* line of demarcation between matter and spirit should likewise disappear?

The theory of the materialists that everything is matter, and that of the spiritualists (we use the word "spiritualists" here as pertaining to that philosophy directly opposed to the materialistic school, and *not* in its more common sense) that all is spirit, we regard, as we have shown above, as a mere question of *name*, since it seems to us unimportant whether spiritual phenomena be called "material" or material phenomena called "spiritual." The *essential point* is the *existence* of the phenomena, *whatever their name*. The theory of Bishop Berkeley that matter does not exist save in the mind has never been disproved. Dr. Johnson stamped his foot at it; Dean Swift ridiculed it; but neither they nor any one else answered it finally. When Berkeley was ill of fever a friend of his wrote that

“poor Berkeley was sick unto death with the *idea* that he had a fever.” Once during a storm, when Berkeley called upon a friend, he was kept standing in the rain until drenched, by the failure of his friend to open the door. When later he complained, his friend replied that, according to his theory, the door was merely an idea, and did not need to be unlocked to admit him. It must be admitted that such practical jokes are hardly a scientific method of treating so profound a system as that evolved by Berkeley.

That we cognize matter only through the senses, and that our consciousness, to which our senses report, may get *precisely the same messages* when the object purporting to give rise to these messages of sensation is *not* present as when it *is* present, is a point of too deep import to be put aside with a wave of the hand. A man who in the midst of the Red Sea, with the thermometer far above a hundred, dreams that he is lost upon an ice-floe in the Arctic Circle sees icebergs, feels the congealing touch of the ice about him, hears the

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whistle of the frost-laden wind, tastes the blubber to which starvation has driven him, and scents the smoke from his last bit of fuel as literally, if the *testimony of his consciousness* may be taken as the *test*, as if he were in *reality* undergoing these experiences.

Thomson's Vortex Theory.

FROM a work published in 1892 we extract the following: "Nearly thirty years ago Helmholtz investigated, in a mathematical way, the properties of vortical motions, and, among others, pointed out that if a vortical motion was set up in a frictionless medium, the motion would be permanent and it could not be transformed. Sir William Thomson at once imagined that if such motions were set up in the ether, the persistence of their form and the possibility of a variety of motions would correspond very closely with the properties that the atoms of matter are known to possess. Such vortical motions as are here alluded to all have seen, as they are often formed by locomotives when about starting, if the air be quiescent. Horizontal rings, three or four feet in diameter, may be seen to rise wriggling into the air, sometimes to the height of several hundred feet. They may be formed

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also by smokers, by a vigorous throat movement, forcibly puffing the smoke from their mouths, and they can be made artificially by providing a box having a hole on one side an inch or two in diameter and the side opposite covered with a piece of cloth. A saucer containing strong ammonia-water and another with strong hydrochloric acid may be set inside, and dense fumes will fill the box. If the cloth be struck by the hand, a ring will issue from the hole, and may go forward several feet, and its behavior may be studied." The strange behavior of these rings caused Thomson to propound what is known as the "vortex theory." Perhaps there is no better way to briefly give the layman a general idea of what is meant by this theory than to state that it holds matter to be merely ether in a state of vortical motion, and to quote the following from "Matter, Ether, and Motion," by Prof. A. E. Dolbear: "Imagine, then, that vortex rings were in some way formed in the ether, constituted of ether. If the ether be, as it is generally believed to be, frictionless, then such a thing would

persist indefinitely : it would have just that quality of durability that atoms seem to possess. It would possess physical attributes, form, magnitude, density, energy ; that is, it would not be inert. It would be elastic, executing a definite number of vibrations per second." . . . "One may properly ask how one vortex ring can differ from another so there could be so many as seventy or more different kinds of atoms. To this it may be said that such rings may differ from each other not only in size but in their rate of rotation ; the ring may be a thick one or a thin one, may rotate relatively fast or slow, may contain a greater or less amount of the ether."

It is our purpose in this article to give our facts first, and to refrain from seeking to prejudice the conclusions of the Reader, even, in most cases, reserving any statement of what these facts tend to prove until the end of the article. We must, therefore, beg the Reader to carry in mind the cardinal points adduced, and especially to remember that we have shown that the materialistic *versus* spiritualistic contro-

Vortex Theory.

versy may, after all, be but a question of *name*; and also that the Berkeley idealistic theory, denying the existence of matter as we understand it, and the Thomson vortex theory, likewise offering a *new explanation* of those properties whereby we *cognize matter*, may have a similarity not apparent to the cursory observer. Bear in mind, also, this fact: if the vortex theory be true, then a material object is but a congeries of whirlpools in the infinite ocean of ether. That this theory is *more likely* to be correct than *any other* is a fact which, we submit, has the very best scientific guaranty.

If, now, we could show that spirit, embodied or disembodied, were able to produce in the ether these vortical motions, should we not have proved the *ability of spirit to materialize matter* from the *surrounding ether*, having *all the properties of matter* as we know it? We ask the Reader to peruse the following, critically examining the points brought forward, with a view to determining whether or not we are able to throw any light upon this point.

Irreconcilable Data.

WHEN the human mind is confronted by two positions, both of them seemingly self-evident, yet, on the basis of present knowledge, utterly irreconcilable, what does it indicate? Man's conception, his imaginative life, that creative faculty miscalled "intuition," tends ever to outrun his scientific demonstration. The great scientists, the deep philosophers, are poets of the highest order, whose antitheses are found in the struggle of natural forces, and whose analogies are cosmical. Their truths, infinite and eternal as mathematics, require no special horizon.

When the poet Goethe stated that the petal of the flower was but an evolution from its leaf, he was told to keep to his verse and let science alone; but the frequent discovery of flowers having, say, three white petals and a green leaf for the fourth was, among other things, sufficient to show that his poetic imagination had

Irreconcilable Data.

made no mistake, until to-day his theory is one of the well-founded tenets of botany. What shall we say when, in considering the question of space, we find ourselves bound, on the one hand, to believe it infinite, and unable, on the other, to *conceive* anything without a limit. When we are told that if we were to travel from our present position, in a straight line, with the rapidity of light, for a hundred million of years we should be no farther from the centre, and no nearer to the circumference, of space, do not our minds stand appalled? Since space *has* no centre or boundary this must of course be true. If, on the other hand, we try to *fix* a boundary to space, and, having traveled in imagination a million of years, put down our hands and say "Here endeth space," must we not reply even then to the question, "What is on the other side of the hands?" "More space"?

Similar irreconcilable data might be adduced with regard to time. Again, with regard to the question of the medium through which bodies act upon each other at a distance: this medium is either solid

or continuous, or it is not. In order to transmit motion as we know it, must not the medium be elastic? If elastic, *its particles* must be capable of movement to and from each other, which presupposes something else between these particles, in order that *they* may act at a distance, however slight, upon each other; and these particles must *themselves* be elastic, which again presupposes that *they* must be made up of *smaller particles* with an elastic medium between *them*, and so on indefinitely.

“ Great fleas have little fleas upon their backs to bite ’em,

And little fleas have lesser fleas, and so *ad infinitum*.

And the great fleas themselves, in turn, have greater fleas to go on ;

While these again have greater still, and greater still, and so on.”

This reduces the elastic theory to an unthinkable proposition ; and we have also seen that the theory of an inelastic medium is, considering its known functions, unthinkable *at the start*.

Considering the question of motion we are again confronted with irreconcilable

Data.

data. Between the *smallest movement* of a body and a state of *absolute rest* there is an *impassable gulf*; yet the mind cannot conceive of a body in motion being brought to rest without successively passing through all intermediate velocities. It is now moving half as fast as formerly; a minute *later* half as fast as *now*; and though you keep halving until the end of time there will *still* be a *fraction* of velocity left which will prevent the body *from ever coming* to rest. Notwithstanding all this, every hour's experience tells us that bodies *do* reach, through decreasing motion, a state of rest. Many other irreconcilable data might be cited if space permitted.

When the human mind finds itself confronted with *irreconcilable axioms*, if we may be permitted the phrase, what does it indicate? It would seem to us to show that the race is on the eve of some one or more new philosophic generalizations. We shall endeavor to show in the following how some of the difficulties of the mathematics of numbers and the mathematics of space might be reconciled by the addi-

Irreconcilable Data.

tion of one or more dimensions to the three now commonly supposed to be all that are conceivable; viz., length, breadth, and thickness.

Fourth Dimension of Space.

DID it ever occur to you just *why* we should measure bodies in the direction of three dimensions only? In algebra, when you used the square of a number, or its cube, you had a definite geometrical idea of what you meant; but did you ever ask yourself if your use of the *fourth* root or *fourth* power might have anything to do with the measurement of bodies? We cannot take the space to enter into a minute explanation of the theory of many-dimensional space, more commonly referred to as the “fourth dimension hypothesis;” and, if we had an abundance of room, proof of this theory is too abstruse — has too much to do with the higher mathematics — to render it readily intelligible to the scientific layman. Suffice it to say that this theory is held to be essential to the explanation of observed phenomena by many of the ablest mathematicians, geometricians, physicists,

Fourth Dimension

and philosophers of the present day. As the late Professor Huxley said, the ordinary mind cannot conceive of a fourth dimension; neither, he said, could he, but he *could* understand the reasoning which made such a theory *necessary*; and he said he knew those of such mathematical ability that they were able, as they told him, to actually form a concept of a fourth dimension. We shall run no risk in lending great credence to the conclusion of such an authority as the late Professor Huxley. Our failure to form a mental image of a four-dimensional body must not be considered *disproof* of its existence.

If one could imagine a being so small as to exist on a point, he would readily see that *such* a being would be prone to *deny the existence* of even one dimension, for there would be nothing in his experience permitting him to form a concept of such a thing as dimension; and we cannot refrain here from forcing home the truth that *all our conceptions* are dependent upon experience. You cannot get the desert-born savage to form an accurate mental

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picture of the ocean, for he has no experience out of which to weave it. Stanley found African tribes that had lived for centuries in a jungle so dense as to almost totally obscure the sun. All his powers of persuasion were unable to convince these benighted savages that there was a world of open sunlight outside their jungle, and he was finally reduced to the necessity of enticing some of them out and bringing them face to face with the, to them, miraculous experience of open sunlight, that they might return and tell their brothers that the wonderful story was indeed true. Ought we not then to realize that the person who feels convinced, *beyond a peradventure*, that he has experienced veritable spiritualistic phenomena may regard the unbeliever as a jungle-oppressed brother who must be in some way led to the light he denies simply because *he* has never experienced it?

A being living upon a line would appreciate only a single dimension. Suppose, if you please, that we have a being living a two-dimensional existence upon a flat hor-

Fourth Dimension

horizontal surface. To him there would be no *up* and no *down*. If such a being with two-dimensional perceptions existed here, we three-dimensional creatures would have only to jump up a little way, or let ourselves down into a hole, to *disappear* from his *world* so *miraculously* and *completely* as to fill him with *dread* and *amazement*. His dead brethren might easily find a mysterious and undiscoverable heaven a *foot above his head*; — yea, even more: two such beings all but absolutely touching might yet be, so far as *they* could determine, a million miles apart. For example, suppose a two-dimensional being to be at the *top* of this page, and another at the *bottom*, and the page to be a flat surface extending a million of miles between the two figures. If now the paper be bent till the top and the bottom of the sheet touch at the points occupied by the two beings, they will still, although touching in the direction of that *third* dimension which they cannot conceive, believe themselves a million of miles apart, since, perceiving only two dimensions, they must measure up around the

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looped surface in order to determine the distance between them.

Suppose, then, that we, ourselves, are three-dimensional creatures in a *four-dimensional* environment. A being gifted with four-dimensional powers could as readily pass into and out of *our* world of consciousness as a two-dimensional creature could step off of the line which was all the world to a one-dimensional being, or, on the other hand, a three-dimensional creature could materialize into or dematerialize from the world of a two-dimensional being. A cubical room of six solid steel walls would not be the least hindrance to a four-dimensional being. He would leave or enter it with the utmost freedom in the direction of the fourth dimension.

You see our conceptions are merely the inevitable result of experience. If we had not evolved to the sense of sight we should not be capable of conceiving such a thing as light or color. Our experience would deny it as stoutly as it can now possibly deny the fourth dimension. If we could know that death raised the spirit into a four-

Fourth Dimension of Space.

dimensional existence could we, or could we not, then see how the "unseen world," peopled with all that have gone before, might be close to and all about us, and our loved ones, bound to us by all the quivering strings of pleasure and pain, in *perpetual contact with us*? Again, cannot we, three-dimensional beings, walk with ease upon a flat, or two-dimensional, surface? If so, then, may not these *four*-dimensional beings enter and leave at will our *three*-dimensional world, and would not such a wonderful appearance and disappearance be *in every essential* the equivalent of materialization and dematerialization? We respectfully submit that there is food for thought here.

Fourth State of Matter.

UNTIL comparatively recently science supposed matter could have but three states, and there are to-day many laymen who think it must invariably be either solid, liquid, or gaseous. But, similarly to the acquisition of a fourth dimension, we now have also a fourth state of matter, called the "ultragaseous." For proof of this we are indebted to Professor Crookes, and we cite the discovery here to show, on the one hand, how science is being extended, and on the other, thinking perhaps to assist the Reader in accounting for some of the phenomena he may have observed. May we not have yet *other* states of matter besides the *four*, just as we are told there are *more* than *four* dimensions?

We cannot refrain from hazarding the question: May not what we call "spirit" be merely one of these yet-to-be-discovered states of "matter"?

The Human Brain. Immortality.

WHAT is the function of the human brain? The question seems easy, but pause a moment. The mass of grey matter which we call the brain, together with the spinal cord and ganglia, is a mechanism, and we are apt hastily to assume that the "mind," "thought," "soul," or whatever we may choose to call this cardinal factor of our personality, is the *function* of that *mechanism* — in short, that the brain is a *creator* of *thought*, the un-resting loom whose ceaseless product is a rainbow-colored web of thought. Either this *is* so or it is *not*. If *so*, what becomes of the belief in immortality? Consider it closely. From the beginning of time to the present moment, science has never discovered one single, solitary instance of a *function* without a *structure*, and the human brain has been evolved through countless ages by such experiences as have rendered such a thing as a structureless

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function utterly and hopelessly inconceivable. For a function to exist without a structure is to have an *action* without having *anything that acts*—a proposition which we not only cannot conceive *affirmatively*, but the *reverse* whereof we can predicate with an assurance as absolute as the racial experience is extensive.

If, then, the “mind,” or the “soul,” be the *function* of the brain, it is as near self-evident as things can ever get in an uncompleted universe that when that *structure* called the “*brain*” shall be broken down at death, as we positively know it *to be*, that *function* which, for the sake of clearness, we here call the “soul” will *likewise disappear*. It is no argument to cite the dictum of science that “*nothing can be destroyed*.” We neither assert, nor need to assert, that the grey matter which we call the “*brain*” is *annihilated* at death, only that it is *destroyed* as an *organism*, and that *such* destruction destroys likewise its former *function*. Break down the loom, distribute its gearing broadcast, and never more shall a

thread shoot through its warp or woof. Its function *as a loom* is finished, even though never so much as a wheel or pawl be broken. Its shuttle may be whole and uninjured, but, divorced from the mechanism that drives it, it will never more spin out the golden thread of design as it travels in obedience to the creative art of man. The same is true of the human brain and of the human soul, *provided* the former is the *structure* of which the latter is the *function*. We beg therefore to predicate two things: first, that no religious mind believing in the Christianity of to-day will accept this conclusion; second, that they must either *accept* the *conclusion* or *reject* the *premises*. We believe, without question, that the latter will be the course of the thoughtful. What position, then, must they take? Simply this: the "mind," or the "soul," mysteriously connected as it is with the human brain, is *not* itself the brain,—is not created *thereby*, and is not the *function thereof*,—but exists, instead, *pari passu* therewith,

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the relation being one of concomitance rather than of cause and effect.

Again, then, the brain is either a creator of thought or it is not. If the Reader be prone to consider the brain as a creator of thought and the organ of the soul, then we submit he must logically abandon belief in conscious immortality. If the brain be *not* the creator of thought, what, then, is its function? That it is intimately and indissolubly connected with the act of thinking, that it colors with its own peculiar tints — dyed into it not only by its own experiences, but by those of its ancestors — all the data which flow through it, as the iron-laden shores redden the rivers running between them, is of too common observation to require proof. The brain of the one man cannot conceive a dogma so absurd but another brain may be found sufficiently off the true color of sanity to accept it.

To this question, “What is the function of the brain?” the East Indian cults would doubtless answer that the difficulty is all removed if we simply assume that

there is an *astral* mind existing, *pari passu* with the literal grey matter, and that this *astral* mind is in no wise an effect of the literal brain, and, consequently, that the disorganization of the grey matter would in no sense estop the perpetuity of the astral or real mind or soul.

It is not our intention to assert that this is not a correct explanation; we prefer, rather, to put forth another hypothesis which seems to us to have fewer difficulties for the Occidental mind. Dogmatism is not our purpose; there is enough of that elsewhere. Let the Reader, therefore, accept whichever hypothesis appeals most loudly to his intelligence.

If the brain is not either itself the soul, or a creator of thought, and if, on the other hand, it is not a mere traveling companion to an astral mind, it would seem as if there were but one other thing that it could be; namely, not the *creator*, but the *recorder* of thought. This theory was advanced in an article in the *Boston Transcript* of July 7, 1894, over the signature of M. L. Severy. We believe we cannot do better than

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to quote, at some length, from the article referred to:—

“It is a very common thing to consider the mind as a machine whose output is thought, and yet, strange to say, the most vital feature of the analogue is almost always missed. Let me make myself clear. A machine is usually a mechanism for transmuting something—say a raw material—into some other form; or it may, as in the case of the clock, translate into readily perceived hours and minutes upon a dial, a motion, which at the pendulum would not be so convenient a record of time. Yet no one is guilty of supposing that a shoe-machine creates its own cows; or that the clock makes the time: all realize that the leather and the time would still exist if the two machines were destroyed. Here, then, is where the analogy is missed. We are told that the mind is a machine which either creates its own raw material outright, or makes it over out of the combined percepts, concepts, etc., of its history, and here, of course, the mystery seizes us. We ask: ‘Why should the

mind leap without any visible cause from one thing to another utterly dissimilar and unassociated thing?' The answer usually given is 'Unconscious cerebration,' which is another way of saying *inexplicable* cerebration, since we certainly cannot be expected to explain what we are not conscious of.

"One of the best tests of an hypothesis is its ability to account for observed phenomena; and the theory which explains the greatest number of phenomena is, other things equal, most deserving of credence. Suppose for an hypothesis we cling closely to the machine analogue and consider the brain a mechanism using raw material procured outside of itself. An illustration will make this clear. Our earth is in a state of constant tremor, yet, save in cases of pronounced earthquake, none of our senses recognize this vibration. The seismograph is an instrument which, by a line drawn on paper, translates this ever-present motion into terms within the scope of our consciousness, and, let it be noted, this record will be more or less accurate

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according to the delicacy of the instrument producing it; if rudely made, all but the strongest vibrations will pass it by unrecorded. It is now generally accepted that the light created the eye, and we all know that the destruction of an eye or of a seismograph will not destroy the vibrations which they were the instruments for transmuting into the terms of our consciousness. Suppose, then, we consider the BRAIN an instrument, immersed like the seismograph in a sea of vibrations, which, with a greater or lesser degree of perfection, dependent upon the fineness of its mechanism, it is capable of translating into consciousness, which is to say, into thought. In this view of things the brain becomes, as it were, a sense organ itself, as well as the consensus of the ordinary sense organs. By this view, too, is it not placed in harmony with all that we know of the senses proper, which are, I believe, in every case translators of external states?

“Let us see if such an hypothesis will cast any light upon observed phenomena.

“Under this assumption the evolution

of the thought-organ would be accounted for in precisely the same way as the evolution of the sight-organ, and its after-development would follow the same laws.

“There are cases almost without number of concurrence of thought on the part of persons having no communication (in the ordinary sense) with each other. Darwin and Wallace, Bell and Gray, might be used as the heading of a long list. It is a trite expression that certain inventions and discoveries are ‘in the air,’ and it seems as if their lighting on one or another brain were only a question of the sensitiveness of that mechanism to that particular kind of ether disturbance.

“The benumbing of the sense-organs, as by sleep, reverie, or by an anæsthetic, seems often to stimulate, rather than otherwise, those brain areas concerned with dreaming and unconscious cerebration. This could hardly be looked for if the perceptions, remote or immediate, were the *cause* of thought. If, however, some portion of the brain were an instrument for translating external wave-motions, it would

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only be necessary to suppose that portion (as is the case usually with the organ of comparison during dreams) exempt from the effect of sleep, of reverie, or of the anæsthetic.

“ The galvanometer does not make the current of electricity (indeed, for that matter, advanced thought tells us that the static machine does not create *its* electricity), it merely registers it. Thought, unquestionably, is a force, the result of a vibration or rotation of the ether, and being force, it is, of course, uncreated and uncreatable. The most we can do, then, is to take some other force and transmute it into thought. The brain is the mechanism which does this, and the question of greatest importance just at this juncture seems to be, does this machine, the brain, find within itself the raw material for thought, or only structures—the result of its history—determining the accuracy and delicacy with which it is possible for it to make use of forces external to itself, and in which it is immersed ? ”

We ask the Reader to weigh carefully

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the facts above submitted and the many others, making in a similar direction, which have doubtless occurred in his *own* experience, with a view to determining if the hypothesis stated above be not “probal to the thinking.”

Thought=Force.

THAT one brain is capable of affecting another through an intervening space is to-day a truth so trite as to require no extended exposition. In the old days the theory of Mesmer was scouted as absurd, and his demonstrations as Satanic. To-day, though science has revised his theories, there are very few individuals with good reasoning capacity and extended experience who doubt that such things as hypnotic phenomena, mind-reading, etc., actually occur. One may not feel sure that a given explanation is the *right* one, and yet he may be very certain of the phenomena to be explained.

We feel, then, that we may assume that the question of the influence of one *embodied* mind over another is proved to the satisfaction of the most cautious. That the conditions necessary to this phenomenon are not generally known in no wise weakens the assurance of its *existence*. How,

then, does one brain affect another over a distance however *small* or *great*? There can be but one thinkable answer; namely, through some medium connecting the two brains. That there are the very best reasons for assuming that *air* is not this medium will, we believe, be readily granted. What then is left? Either ether, or some *other* medium yet to be proposed. Inasmuch as the "hypothetical ether" is quite capable of accounting for the observed phenomena, it is hardly rational to drag in a new "hypothetical" medium for this especial purpose. Suffice it then to say that there can be no scientific doubt but that one brain affects another at a distance by *some kind of stress*—whether vibratory, rotatory, undulatory, or translatory does not immediately concern us—set up by it as a transmitter, and recorded by the other brain as a receiver, over a line composed of ether. If the grey matter of the brain, either as a recorder of thought or as a register thereof, be like unto a kaleidoscope, its various particles arranging themselves into new figures for each new

Thought=Force.

thought, this theory becomes yet more easily comprehensible. Now it is *generally believed* that each thought is in some way connected with its own special kaleidoscopic arrangement of particles of grey matter. Imagine, then, if you please, a kaleidoscope the slightest jar of which produces a new arrangement of its bits of brilliantly-colored glass, made beautifully symmetrical by reflection, and giving as a result a figure which could not be *exactly* reproduced by millions of subsequent trials. Suppose, then, that the *human brain* is *such* a kaleidoscope, its particles of grey matter being its pile of irregular bits of glass; its coördinating consciousness being the reflectors producing the symmetry of its figures; and its brilliant gems of thought, scintillant in philosophical glory and infinite variety, the forms of beauty and color following its every tremor. The question still remains, What *shakes* this intellectual kaleidoscope of grey matter into its multitudinous forms of thought? You may say, if you please, that it is the finger of sense-perception that jars ever upon its

delicately-balanced particles ; but we ourselves prefer, as already stated, to believe this kaleidoscope to be *immersed* in a sea of vibrations whose waves, beating ever with infinite restlessness against its thin walls, of necessity shake it into scintillant showers of many-colored thought-forms. Whichever way you look upon this, suppose two such brain-kaleidoscopes to be separated from each other, yet each surrounding itself by a sphere of vibrations reaching outward to the other and producing upon it the same condition of thought which gave rise to the original vibrations ; or, if you prefer, suppose each one to be immersed in the same sea of vibrations, and of necessity producing the same record thereof.

What, then, have we proved, or, not to dogmatize, what have we submitted as *likely* and probable ? First, that embodied minds affect each other through an intervening distance ; second, that they do so through a medium conveniently called "ether ;" third, that the message is carried by some sort of stress produced in this medium. We submit that no well-

Thought=Force.

informed scientific mind will seek to disprove any of these positions on the one hand, or to show them to be improbable on the other. That every atom of matter in the universe is bound by invisible and indissoluble bands to every other atom is one of the fundamental tenets of science. Could we annihilate a single grain of sand upon the seashore we should compel the sun to take a new position. Let fall an apple from the hand to the earth, and the earth as truly falls toward the apple as the apple falls toward the earth. It is only a question of *degree* in either case. *Every brain in the universe is anchored to every other brain with an infinite network of threads as potent as invisible.*

Such being the case, every vibrating brain must, of necessity, throw every other brain into a tremor, and it becomes simply a question of how *great* the *impetus*, on the one hand, and how *sensitive* the *organism*, on the other. And note this, too: if a vibrating brain, like unto the flame of a lamp, or a smitten bell, surrounds itself with a sphere of vibrations extending in all directions outwardly from their source, then

the intensity of these waves, and the strength of their effect on the recipient brain, will obey the usual law of inverse squares. By this law, if a brain ten feet away intercepted one hundred intellectual rays, a brain twenty feet away would only intercept twenty-five, whereas a brain five feet away would have intercepted four hundred rays.

A means of telegraphing without a wire has recently been discovered and perfected sufficiently to operate across considerable distances. In this system a source of electrical excitation is permitted to throw out its pulsatory waves in all directions, these waves not only going, as the operator *desires*, toward the recording instrument at a distance, but also in a manner which the operator does *not* desire, wasting the energy in every *other* direction as well. For this reason the device is only operated at present over a distance determined by the degree of *sensitiveness* which it is possible to attain in a *recording* mechanism. Would not precisely the same be true of the transmit-

Thought=Force.

ting brain throwing out *its* waves not only toward the *desired* receiving brain, but in every *other* direction as well? And would not the distance over which the one brain could act upon the other be likewise determined by the strength of the vibrations of the one and the delicacy of the mechanism of the other?

When we claim that every brain in the universe beats its ceaseless waves against the shores of every other brain, we do not claim that the shock is of necessity *great enough* to awaken the consciousness. The problem in telegraphy without wires is to find a way of directing *all* the energy toward the point *desired*. A word will show our meaning. The intensity of light, radiating in all directions from a point, is inversely as the square of the distance; but let these rays of light be rendered parallel, and their intensity then is *directly as the distance*. We put *reflectors* behind our *lamps* when we wish to concentrate the light in a given direction, and the electrician seeking wireless telegraphy is looking for a reflector to concen-

trate his *electrical* waves. If there be persons who have discovered a similar way of concentrating their *intellectual* waves,—of putting, in short, a reflector behind their *intellectual light*,—to what distance may they not throw its gleam with brilliancy enough to awaken the recipient consciousness? A word more upon the subject of the inter-effect of every particle of matter upon every other. We quote from “Matter, Ether, and Motion” the following: “As has already been pointed out, the ether transmits such wave motions in straight lines and to an indefinite distance — so great, at least, as to require not less than five thousand years to cross the space accessible to our observations. As such waves of all wavelengths travel with equal velocities, and as all known bodies of matter are continually radiating waves of many wavelengths, it follows that, in reality, every molecule of matter sets the whole visible and invisible physical universe in a tremor. The magnitude of this effect is not now under consideration.”

Disembodied Spirits.

AS all Christians, as well as the great mass of Western humanity, believe in the immortality of the "soul," the "mind," or the "spirit,"—call it what you please,—and as such immortality means to them, imbued with their Western ideas, nothing, or *worse* than nothing, if it be not *individual* and *conscious*, we may, for present purposes, assume that the investigator of spiritualistic and materialization phenomena is a believer in a conscious, personal existence after death.

The belief of the Buddhist that the individualized atom of consciousness called "man" loses itself, by the transition called "death," in the infinite, impersonal sea of Divine consciousness affords the Western heart but little comfort. "The dewdrop slips into the shining sea" has to the Oriental mind a significance vastly different from that which the Occidental mind, steeped in the experiences

of the setting sun, is able to accord to it. Granted, then, immortality as understood by the Western mind,—which presupposes the persistence of the conscious ego after death,—and granted the ability of the *embodied* mind to affect another mind at a distance, and we have only the weak bulwark of the religious disbelievers of spiritualism to set up against the belief that the *disembodied* spirit can communicate with an embodied spirit properly conditioned and properly attuned.

Examine, for a moment, the material out of which such a bulwark is constructed. To say, after being forced into the admission that embodied spirits can communicate with each other as aforesaid, that a *disembodied* spirit cannot communicate with an embodied spirit is to assert that *death* and the *very conditions of immortality* narrow and circumscribe the human soul, instead of *freeing, broadening, enlarging, and deepening* its powers, as we have so long been *by them* insistently told. As if it were not fair to assume that the effect of the spirit acting free from the

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inevitable friction of the flesh might be more pronounced than that of the embodied spirit ! To say this is again to say that this physical body of ours *increases* rather than *decreases* the powers of the soul. To say this is to say that the soul within, instead of shining "as through a glass, darkly" out of this gross curtain of flesh, finds rather in the corporeal body itself — with all its sins and littlenesses clinging to it like barnacles — a factor which gives an additional splendor to the less brilliant spiritual light within. If this is any nearer the logic of probability than it is to the oft-reiterated tenets of Christianity, the distance is so small as to be beyond the microscopy of our intelligence.

Again: for those who believe God to be an all-powerful, all-wise, ever-present *spirit*, and who likewise hesitate not to assert that "man is made in the image of his Maker," it should not be difficult to accept the Platonic idea, or rather the *Platonic statement* of their *own* idea, "man is a chip struck off from the Infinite."

Consider, then, for a moment, their position. If God is a Spirit and all-powerful, and if man be made in His image, as they assert, then man must *likewise* be a spirit, in *kind* like unto the Spirit creating him. And now the point. If *omnipotence* be the distinguishing feature of the Creative Spirit, can *impotence* be the essential attribute of that *part of the Omnipotent Spirit, like unto the whole*, possessed by man? Is it reasonable? *Is it logical?* Can there be two kinds of spirit? Can two infinities coexist? Is it right to call by a common term two things differing utterly and fundamentally in their very essential attributes? If divine spirit is infinite, can there be any other spirit? Man's spirit must, according to this then, be a part of the Divine Spirit, and the *part* must, of necessity, be permeated with the *same attributes* which characterize the whole.

If the Divine Spirit were able to hurl His creative fiat into chaos, far on the thither side of the nebular hypothesis, with the result that chaos blossomed into innumerable worlds, as the Christians be-

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lieve, is it preposterous or unthinkable that man, made in the Divine image and endowed with a part of that Infinite and Omnipotent Spirit, should be able, by his fiat, to call into existence minute parts of that universe? Is it not fair to say that *any improbability* which inheres in the *latter* should likewise inhere in the *former*? If the chief characteristic attribute of the *whole* of a thing be creative power, is it not logical to suspect that a *lesser* portion than the whole may have a power the same in *kind* but proportionately inferior in degree?

If the Great Spirit could will galaxies out of etheric chaos, is it not conceivable that finite portions of the Infinite Creator might bring into tangible existence, or *transmute* from *other conditions of existence*, *finite* portions of the infinite creation? Is not this necessary and inevitable to the successful exposition of the Christian doctrine? Would not such finite creation be equivalent to what is meant by materialization? Is there a weak link anywhere in the argument? Does not the *conclusion*

Disembodied Spirits.

inhere in those premises which are the very *fundamental tenets* of Christianity, and will not the *denial* of this conclusion *impugn the truth* of those tenets? The point is at least worthy of consideration.

East Indian Testimony.

THE phenomena of materialization which often so astounds the Western mind is so trite an affair with the Eastern Adept as to fail even to provoke a discussion. He regards it as proved beyond the necessity of substantiation. His ability to materialize matter from the surrounding ether, or to in some *other* way call it into observable existence, is often witnessed in India. A crowd of several thousand people is convened, the Adept harangues them for a short time, and then plants a mango-seed in the ground in plain sight of the assembled multitude. After a little the plant appears, grows in a few minutes to a tree forty feet or so high, blossoms, and bears fruit. In plain sight of four thousand people the Adept climbs this tree, plucks its fruit, and descends again to the ground. After a little the tree is dematerialized and nothing but the original mango-seed remains.

The Indian fakir permits himself to be buried under ground, hermetically sealed in a rubber sack, from "corn to corn." Deprived of food, of drink, of air, of sunlight, pulseless and inert, pronounced dead by attendant physicians, what is it that lives on throughout this six months? Evidence of the projection of the astral body of the Adept, often over immense distances, reaches us from many quarters. The Eastern Yogi unhesitatingly asserts that the spiritual insight is unailing, even when it *utterly contradicts* the sense-perceptions. These masters assert that the *astral* is the *real* body; that, if you please, it is the form over which the flesh is draped. We ourselves are sometimes confronted with the question, How is it that our bodies, constantly wearing out, are replaced in the same form — ever suited to our personality? To-day the Reader of these lines has not one molecule in his body that he possessed seven years ago. What mysterious *guidance* has been given these ever-changing repairs that they should keep the tenement of his soul of the same type of

Testimony.

architecture that has characterized it all those previous years? Considering his *brain*, the difficulty multiplies. Cell by cell it has been destroyed and repaired, without even so much as *jarring* those delicate kaleidoscopic figures which constitute his beliefs, his superstitions, his hopes and his fears, and form the make-up of his distinctive personality?

The narrow-minded doubter would *like* to say that it is all merely another case of the Scotchman's cart, which had been repaired until not so much as a former bolt remained, and which yet preserved its original form. This indeed seems at the first glance the easiest explanation, but we cannot permit it to be considered the *correct* one. Suppose we could show that half of one of the spokes of a wheel, isolated from the rest of the Scotchman's wagon, had yet, *in itself*, the seemingly miraculous power of reproducing out of its few shattered splinters the original cart in *absolute perfection*, even to the paint wherewith it was embellished — suppose we could prove *this*, would not the seemingly natural ex-

planation referred to above break of its own weight? As a matter of fact, we *can* demonstrate even *more* than this, for we can add to the cart analogue the, thus far, inexplicable mystery of life.

The sea-cucumber (*cucumaria planci*) sometimes discards all its viscera through the cloaca, and has to live without these organs until it can make a new set. The lobster reproduces the claw which has been broken from it. Upon what staging are the repairs made? More wonderful still, and *surpassing all ordinary cases*, is that of some of the radiata of the class Acalephs. The Portuguese man-of-war (*Physalia utriculus*) has about one hundred and twenty species. We need refer, for present purpose, to but one of these,—the Hydra,—as able to *reproduce the Scotchman's cart from a portion of one of its spokes*. We cannot do better than quote the following from a standard work: "One of the most extraordinary gifts of the Hydra is its power of reparation of injuries and reproduction of new individuals out of portions into which it has been accidentally or naturally di-

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vided. If a tentacle be cut off, an entire animal is formed out of it; if the body is cut in halves it will join together again if the parts are placed together, and if not, two individuals will result; if parts of one individual are placed on the cut surface of another, they will grow together; and if the body be turned inside out, the old ectoderm takes on the digestive power, and the former endoderm that of the skin." By what marvelous chemistry does a severed tentacle make itself into a *full and complete* organism? Would not the East Indian answer, "By virtue of the ever-present and complete astral body"? The old question arises here with renewed force, Does the body cause the spirit, does the spirit cause the body, or is their relation one of concomitance rather than one of cause and effect? To what is due the magnificence of that mechanism of grey matter which from a loaf of bread could produce the tragedy of Hamlet? By what marvelous chemistry is food transmuted into spiritual force? To those who believe that the terms "spirit" and "matter,"

East Indian Testimony.

like unto the words "hot" and "cold," are purely relative and possessed only of differences of degree and not of kind, the answer will be comparatively easy and reasonable, if not capable of *absolute demonstration*. To such, thought is as much a force as light or sound, and they will see no insuperable difficulty in the conversion of the carbon of bread into the magnificent spirituality of Hamlet, any more than they would anticipate in transmuting sound, an *air vibration*, into electricity, an *etheric disturbance*.

The Evolution of Scientific Thought.

THE mind of the scientist tends ever to become more and more hospitable, more and more open to the light of new truths. To-day the philosopher feels himself called upon to positively deny but little. The time when science repudiated the idea of thought-transference is passed, until to-day we can quote the following from no less an authority than Professor Dolbear: "Lastly, so far as mental action depends upon brain structure, any changes in the latter must produce corresponding changes in the brain field, and there must be a brain field if there be any truth in the foregoing; the conclusion is inevitable. Other similar structures must be affected in some degree by them, and whether such induced changes be able to induce similar brain changes with the accompanying mental phenomena or not must evidently de-

pend upon the possibility of synchronous action. This is not to be understood as asserting that such thought-transference as is implied in the foregoing actually occurs. All that is asserted is that the physical conditions necessary for such transference actually exist, and one who was acquainted with the properties of physical fields would certainly predict the possibility of thought-transference in certain cases." A few years ago and even the average scientific layman would have repudiated the possibility of the denizens of this earth being able to travel to any other planet. To-day we are told by a scientist of distinction that this is no longer unthinkable. We quote the following from "Matter, Ether, and Motion": "If there are inhabitants in Mars they are as unable to traverse space as we are; and the possibility of our yet being able to do that is not half so unlikely as it seemed to be but a very few years ago, since it evidently requires for accomplishment but a directed reaction against the ether; and we already know how to produce the reaction by elec-

Scientific Thought.

trical means; and every point in space has the energy for transformation. It is generally agreed that the so-called attraction of a magnet for its armature is really due to the pressure of the ether upon the latter, and it may be as great as two hundred pounds to the square inch. An electromagnet without an armature is therefore reacted upon by the ether to that degree. When this reaction can in any way be neutralized at one pole and not at the other, the ether reaction will push the magnet backwards, and the navigation of space will at once become mechanically possible." When we reflect how such a statement would have been regarded a few years ago, are we not impressed with the growth of scientific thought and the danger that besets us if we have the hardihood to flippantly meet a new claim with, "Nonsense; it is impossible"?

It is reported that Sir William Thomson has asserted that he has reasons for believing that what we call the atom is a composite affair, and not, as we were taught, simple and indivisible; and another scien-

The Evolution of Scientific Thought.

tist, generalizing upon this, gives it as *his* opinion that it may be possible to make gold synthetically, thus realizing the age-long dream of alchemy.

In the presence of such wonderful testimony from those highest in scientific authority, we submit that we, as laymen, cannot be too careful how *we* condemn and shout, "Fraudulent and impossible!" Every year extends the dominion of the possible and narrows the realm of the *impossible*.

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IN closing, then, let us briefly review the cardinal points brought forward. We have endeavored to show that, while the church-member draws what is *to him sufficient evidence* of immortality from the Bible, all others who cannot accept this Book as *conclusive* find little testimony making toward immortality outside of spiritualistic phenomena. Attention has been called to the fact that the argument of the truth of Christianity based upon its almost universal acceptance over large areas applies with *added force* to *spiritualism*, which was *old* before Christianity was *born*. Proof has been submitted that the Bible is full of evidence making not only toward *spiritualism in general*, but *materialization in particular*.

We have felt warranted in asserting that the best scientific minds admit the existence of phenomena which, if not *absolutely* spiritualistic, are so *nearly* so as to be con-

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sidered by many subject to the same laws. We have endeavored to make it clear that the difference in scientific positions is one of *name* merely. We have shown that the almost universal belief of Christendom throughout long ages in *evil* spirits, and the modern asseveration of the religious that *good* spiritual forces dominate the universe, is *not consistent with disbelief in spiritualism*. We have submitted that *evil* spirits cannot *logically* be considered *potent* and *good* spirits *impotent* in a universe *dominated* by an *all-good, all-wise, all-powerful Divine Spirit*. The fact has been cited that the founders, themselves, of evangelical religion believed in spiritualistic phenomena.

We have contended that Biblical translations might more easily be accounted for as *spiritualistic phenomena* at present *not fully understood* than by the *invention of new laws irreconcilably oppugnant* to those now known to govern the universe.

We have sought to impress upon the Reader the relativity of *all* knowledge, of whatsoever description, and have asked

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him to give due weight, in his logic, to the "law of parsimony," the observance of which requires that the reasoner, in the presence of several possible explanations, shall accept the one that is the *simplest*, on the one hand, and the *most in accord with previous knowledge*, on the other hand. When Keppler asserted that the planets were each one pushed about in their courses by a special angel, who took great care to observe how his brother angels were trundling about *their* respective planets, the explanation was permissible in *default* of a *better* one, *however it taxed one's credulity*; but when Newton propounded the theory of gravitation, the "law of parsimony" compelled all *well-organized* minds to abandon the idea of Keppler for that of gravitation.

We have explained how what we call "certainty" is merely overwhelming likelihood, and we have shown that *circumstantial* may be stronger than *direct* evidence, and have emphasized the difference between negative and positive evidence. It has been demonstrated that admitted

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fraud in *one* case does *not* prove fraud in another, and the claim has been made that a million instances of fraud are not sufficient to *disprove the possibility* of spiritualistic phenomena, on the one hand, while a *single, solitary, genuine instance* is sufficient, on the other hand, to *firmly establish the spiritualistic* position. The existence of counterfeits does not disprove the ability of our mints to utter genuine coin. The failure for years of expert miners to discover rich dirt in Alaska did not disprove the existence of the great wealth of the Klondike mines, discovered after the failure of *old-time experts* by the unskilled "tenderfoot." Again, we have shown that *genuine* phenomena, explicable on *other than spiritualistic* grounds, in no wise *disprove* spiritualistic phenomena *not* to be so accounted for.

We have also asked the Reader to consider carefully just *how* he knows things; to realize fully that all *knowledge* comes through *experience*, and all *experience* through the *senses*.

The Leibnitz theory of innate ideas is

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now, we are happy to say, exploded. That the senses are very fallible we have continual proof. That matter affects matter at a distance none will gainsay. That every brain must affect every *other* brain is another statement of the same truth. Is it then taxing the credulity overmuch, considering the intimate relation of brain and spirit, to believe that spirit *disembodied* may affect the embodied brain?

We have instanced the immense likelihood that thought is a disturbance of the ether. We have cited the wonderful words of Newton, showing his belief that spirit condensed matter from the ether in the building of the universe. We know that while ether is frictionless, as regards matter, it is extremely probable that different vibrations of ether inter-affect each other. Do we not know how the etheric strain of a magnetic field is capable of rotating the plane of polarization of a ray of light? This light is an ether disturbance of an electro-magnetic nature, according to the researches of Maxwell. This, then, we have: all matter affects all other matter,—

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every brain, every other brain; thought is an ether disturbance; one ether disturbance affects another; spirit is intimately connected with brain; why, then, should not the ether disturbance of *one* brain produce or modify the ether disturbance of another brain? The best scientists to-day admit this position. One step further, then: the *disembodied* mind or spirit, if it exist at *all*, must be *conditioned*; if not conditioned in *matter*, as perhaps it is in *life*, it must be conditioned in something *else*; what else is left but ether, or some higher, undiscovered medium? One of the conditions of ether vibrations is the inter-effect between them and other vibrations. Does not this conclusively prove spirit communication to all who accept the belief in the persistence of the conscious, individual, spiritual ego after death? Will any Reader deny such future existence?

We have striven to show how the materialistic *versus* the spiritualistic argument may, after all, be only a dispute over a name, and how that later generalization known as the "vortex theory" might as-

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sist in the explanation of materialization phenomena.

Man is but an evolved animal, and cannot therefore have acquired from the animals below him anything *they* did not themselves possess in at least a latent or rudimentary degree. If *he* has a soul, they, *too*, must at least have the rudiments of one. *De nihil, nihil fit.* The absence of all lines of demarcation between man and animal, between the animal and vegetable kingdoms, has been sufficiently dwelt upon.

We have invited the Reader to remember that Berkeley has never been answered, and to consider the immense significance of these two facts: (1) We get all knowledge from messages through the senses; (2) These messages to the consciousness are often fallible, on the one hand, and may, on the other, utterly lack any *tangible* verity behind them, as in the case of dreams.

That matter is composed of a congeries of ether whirlpools is a great scientific likelihood; that thought-transference is an

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etheric phenomenon there can be but little doubt. The human brain, then, or the spirit, produces ether vibrations, vortices, or other stresses in the *transference* of thought, if not, *indeed*, in the mere *act of thinking*. If, now, the *spirit* can produce *just the right kind of ether stress*, the result, from the standpoint of the vortex theory, would be *materialization*.

We have shown, from irreconcilable scientific data, that the race is very likely on the eve of the acquirement of new senses or perceptions, resulting in new scientific generalizations. We believe we have made our position in this matter sufficiently clear. The fourth-dimension theory, and the claims of some of its advocates, have been cited to show with what perfect ease a being endowed with fourth-dimensional powers could materialize or dematerialize to our three-dimensional senses. Such a theory, we submit, would explain how the "unseen world" might be close to and *all about us*. It would explain how a four-dimensional spirit could not be barred out by any conceivable bar-

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rier we three-dimensional beings could erect.

We have instanced the general broadening and extension of scientific knowledge, and the adding of a fourth state to the previous three known to be possessed by matter. We have hazarded the question whether or not what is called "spirit" may not be the fourth, or a yet-to-be-discovered *higher* state of matter, merely to set the Reader thinking.

We have submitted that the intimacy of the brain and what is called the "soul" makes irresistibly toward one of three views: (1) The brain is *itself* the soul; (2) The soul exists merely *pari passu* with the brain,—a traveling companion, if you please; (3) The brain is the *recorder of external forces*. The necessity of *structure* wherever there is a *function* cannot for a moment be doubted by any *sane mind*.

We have attempted to show that those who believe man's soul to be a *part* of the *Divine Spirit* cannot *logically deny* that *part* similar attributes, though in *less degree*, to those possessed by the *whole*. Such being

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the case, and if Divine Spirit be *infinite*, must it *not* be the case, unless two infinities can coexist, there would seem to be no good reason why man should not have those powers which belief in materialization would accord to him? Indeed, we ask the religious believer to realize that any doubt or improbability *here impugns the fundamental positions* of Christianity.

Despite the assertion of ignorant dogmatism in certain quarters everything in the universe is conditioned, and to say that a being is *unconditioned* is to say that he *does not exist*. If all things themselves are conditioned, then, likewise, every conceivable phenomenon flowing therefrom must be conditioned; and this is to say, by implication, that change of *condition* must invariably *destroy* or *alter* phenomena dependent on those conditions. We have endeavored to show from this how natural it is that mediums should require *favorable conditions*, and we have particularized and given reasons therefor at some length. We have shown that both the *objective* and *subjective* brain cannot have supremacy at the same

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time, and have cited the self-inflicted tortures of Indian novitiates to prove that this belief is *earnestly* held, to say the least.

It has been shown that certain forms of life will reproduce *the whole and complete organism*, of proper form, from a small, severed part. We have shown that the human brain changes its every particle, without so much as disturbing a single superstition, dogma, hope, or fear, and have asked the great question, "How is this done?" We have endeavored to make clear that the conversion of bread into thought is, fundamentally, no more marvelous than the transmutation of sound into electricity.

We have striven to lead the Reader to see the wonderful march of science and its ever-growing tendency to become *less and less sceptical*, until to-day inter-planetary communication and the claims of alchemy have been raised by it out of the limbo of the absolutely impossible.

All these facts have been adduced for the benefit of those persons whose wish is not the father of their thought — who

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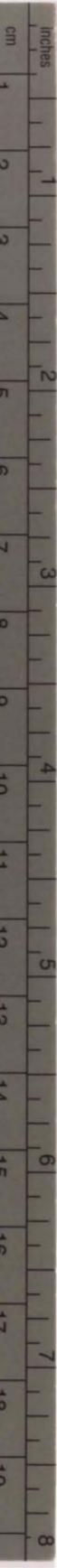
cannot believe a thing is *so*, simply because they would be happier *were* it so; and we have thought it well, in passing, to call attention to the fact that *materialization rests upon precisely the same kind of evidence as is adduced to substantiate all other spiritualistic phenomena.*

And now the great question: The mind of man being, as it were, a kaleidoscope, what shakes it into its infinite variety of many-colored thought-forms? We have shown that science positively asserts that every brain in the universe is anchored to, and affects, every other brain, and this, too, by a law so *fundamental* and *all-inclusive* in its *application* that it cannot possibly be gotten rid of. We submit, then, that the very best science asserts *that disembodied mind either does not exist — or that it affects every embodied mind in the universe.* What, then, becomes of the position of the religious doubter of spiritual communication? Let us strive to look at all the points adduced in a fair and intellectually hospitable spirit. If we *do* so, are we not *bound to admit* that one must be as sure of

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the effect of *disembodied spirits* upon their *living friends* as they are of a conscious, individual existence after death?

Need we say anything further? We have endeavored to adduce our facts in a fair and impartial light. Does this mass of testimony make toward or from the standpoint of the spiritualist?



Kodak Color Control Patches

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Blue	Cyan	Green	Yellow	Red	Magenta	White	3/Color	Black

Kodak Gray Scale



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- A 1 2 3 4 5 6 M 8 9 10 11 12 13 14 15 B 17 18 19