

SPIRITUALISM

ANSWERED

BY

SCIENCE;

WITH

THE PROOFS OF A PSYCHIC FORCE.

BY

EDWARD W. COX, S.L., F.R.G.S.

Same as Sergeant Cox

STATIONERS' HALL, LONDON, E.C.

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SOME NOTICES OF THE FIRST EDITION

OF

SPIRITUALISM ANSWERED BY SCIENCE.

From the BUILDER.

"It is quite clear that the matter was investigated scientifically, and the ground on which charlatans stand knocked away from under them. Serjeant Cox deserves credit for the step he has taken in this direction."

From the CIVILIAN.

"The scientific phase into which the subject of spiritualism has drifted since the investigation of the Dialectical Society's Committee, is indicated by the appearance of the above works, and by the large amount of interest manifested both by the London and provincial press on the subject of Psychic Force. Henceforth there are not two but three parties to the controversy respecting spiritualism. The extreme right still continues to accept, without doubt or question, whatever in the nature of spiritual phenomena finds its way into the spiritualist press. The extreme left, in like manner, persists in ridiculing what men of unblemished honour and undoubted capacity declare to have seen and tested by the most rigid rules of science. The party of the centre alone—among whom we may reckon Lord Lytton, Dr. Huggins, Dr. Richardson, Mr. Crookes, and Mr. Serjeant Cox—seem disposed to hold the scales evenly between the conflicting theories, and to judge in respect of each separate phenomenon according to the balance of evidence. The conclusion to which these gentlemen have, for the most part, arrived, are embodied with sufficient clearness in the *brochures* under review. Accepting the major part of the alleged spiritual phenomena as genuine, they can discover no evidence that spirits are in any way concerned in their production. On the contrary, they state, every indication points to the conclusion that the force and intelligence exhibited at the 'spiritual' *séances* are but the force and intelligence of the parties present, exerted in some mysterious and possibly undiscoverable manner."

From the ATHENÆUM.

"No man ever wrote nonsense so sensibly."

From the NEW YORK HOME JOURNAL.

"Dr. Huggins and Mr. Crookes have issued public statements disclaiming any conversion to spiritualism, but reiterating their conviction of the existence of some new force, the definite character of which the investigations thus far made did not enable them to declare. Mr. Serjeant Cox has also put forth a response, vindicating the committee, and summing up the case from the evidence and explanations of the contending parties. He gives an account of the experiments of the committee, and then proceeds, by a sort of inductive process, to establish a theory of Psychic Force as a solution of the problem. His reasoning seems to us far from conclusive, but his book is certainly very interesting, as showing the activity and tendencies of English thought in this particular department."

From the DORSET COUNTY CHRONICLE.

"The subject is argued with the subtle analysis and logical sequence to be expected from one whose long experience in the work of sifting and weighing evidence peculiarly qualified him for such an investigation."

From the BELFAST MORNING NEWS.

"The book is a most interesting one at the present time."

From the CHESTER CHRONICLE.

"The book is written with an evident conscientious desire to arrive at the truth."

NOTICES OF THE FIRST EDITION.

From the HAVERFORDWEST AND MILFORD HAVEN TELEGRAPH.

"A valuable contribution to scientific literature on a subject that has absorbed a vast amount of attention in every grade of society. The work is carefully compiled, and will be read with considerable interest by those who have and those who have not given attention to the phenomena of Spiritualism."

From the PETERBOROUGH ADVERTISER.

"What science makes of Spiritualism is shown in this book, which is the fruit of a series of scientific experiments in Psychic Force conducted with the aid of certain mechanical tests by Mr. Crookes, F.R.S., in the presence of Dr. Huggins, F.R.S., and Serjeant Cox."

From the RUGBY ADVERTISER.

"The charlatan may use it to impose upon the credulous and superstitious, but by quiet scientific investigation and experiment, the power will be rescued from such hands, and turned eventually to better purposes. The *Quarterly Review* publishes a sort of excuse or apology for having at one time made light of the investigation of this curious subject; there is in it, however, much that deserves consideration, and this is often not so readily yielded as inconsiderate condemnation. Mr. Cox's pamphlet clears up the matter well so far as the investigation has gone."

From the WILTS COUNTY MIRROR.

"An able reply to certain critics of the scientific experiments in Psychic Force conducted with the aid of mechanical tests by Mr. Crookes, F.R.S., in the presence of Dr. Huggins, F.R.S., and the author."

From the NOTTINGHAMSHIRE GUARDIAN.

"The arguments brought forward in favour of the theory of Psychic Force, as opposed to the theory of Spiritualism seems to us most fair and admissible."

From the DERBY AND CHESTERFIELD REPORTER.

"Serjeant Cox utterly rejects the spiritualistic notion, and believes that the power thus exerted is the result of a nerve fluid or ether, which surrounds us with a nerve atmosphere varying in its depth and intensity in various persons, that the persons who possess the extraordinary power of which illustrations have been given, and whom he calls Psychics, give off this nerve atmosphere with peculiar force; but that all persons do so in some degree, and that the combined volume of the waves of this nerve atmosphere produce the results which have been observed. The book seems written in a cautious and scientific spirit, and it is almost impossible to doubt the reality of the phenomena, whatever theory may be accepted in explanation of them."

From the EXETER AND PLYMOUTH GAZETTE.

"This is a book with a specific object—that of bringing the phenomena of so-called 'Spiritualism' within the domain of recognised fact. Serjeant Cox does not reject the doctrine of Mr. Home and his friends, much less does he attempt to ridicule it. He merely relegates it to what he deems its proper sphere, and raises upon it a curious side-issue which, while depriving the once-popular *séances* of the supernatural character claimed for them, gives them a certain experimental value in the eyes of psychologists. The writer asks us to accept the theory of a new force—which he and his friends have termed Psychic (or soul) Force. To this motive power is to be referred the table-rapping, chair-moving, music-producing demonstrations of which we have heard so much during the last five or six years. Serjeant Cox, and his friends Mr. Crookes, F.R.S., and Dr. Huggins, have been sharply and not altogether fairly criticised for their declarations in regard to this alleged discovery. Psychic Force, we are told, emanates, not from the spirits of the dead, but from those of the living."

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PREFACE TO THE SECOND EDITION.

ALTHOUGH termed a new edition, this is substantially a new book. Much has been added, much omitted, and the larger portion of the remainder has been re-written.

When I ventured to assert belief in the existence of the Soul, I was not ignorant of the treatment that would follow from the challenged materialism of our modern Scientists. When proclaimed by Theologians and Poets it is tolerated as a harmless imbecility. But to assert it on *scientific* grounds, to base it upon their own foundation, to attempt to *prove* it by scientific facts and evidence admissible in a Court of Justice, was an impudent and intolerable heresy, sure to bring down upon those who dared to depart from the orthodox creed of Science, not merely an avalanche of argument, but a pelting of personal abuse and vilification, always the favourite weapon of dogmatists, to whom refutation by the more laborious process of experiment is difficult or unpleasing. *We* are fools for accepting the evidence of our senses. *We* do *not* see what we see nor hear what we hear. The Scientist, though he shuts his eyes and ears, knows what occurred much better than we who witnessed it. It is more probable that fourteen persons should be simultaneously mistaken as to the movement of a table over a distance of several feet, than that there should be any fact or any law of nature not within the experience of the critics. *We* are fools. *They* only are wise. Whatever does not accord with *their* omniscience is "nonsense." (a) I commend to them the definition of that term by Horace Smith—"Nonsense. Anything opposed to our opinions or above our comprehension." So much has been designated by the Scientists as "nonsense" that the phrase has lost its significance. The steam engine was "nonsense" once.

(a) "Few people have ever talked 'nonsense' so sensibly."—*Athenæum*.

So was an express train. So was the electric telegraph. So was the motion of the earth. So was the circulation of the blood. So was Atlantic steaming. So was the magnet. So was galvanism. So were nine-tenths of the principles and practice of medicine. So was artificial somnambulism. So was the modern treatment of insanity. So *is* Psychic Force. Like them, the "nonsense" will, in its turn, come to be recognized as excellent sense. An argument may be refuted. A fact cannot be extinguished.

This work was originally designed merely to refute the false assertion of the writer in the *Quarterly Review*, that the recent scientific investigation of the phenomena to which the name of Psychism has been given had resulted in the conversion to the creed of Spiritualism of the Scientists by whom it was conducted, and to show that, so far from there being the slightest truth in such statement, the experiments thus patiently and carefully tried had satisfied them that the operations of the Force are directly associated with, and entirely dependent upon, some unexplained, because as yet unexplored, conditions of the human organization.

In this new edition I have set forth in full *the evidence* that carried conviction to our own minds against the strongly adverse prejudices with which we entered upon the investigation; not, however, asking others to accept the existence of a Psychic Force on the faith of *our* experiments and tests, but only in the hope that others will examine it as we have done, and satisfy themselves by an equally patient and careful inquiry.

The Postscript to the First Edition, hastily written after the sheets were in the hands of the binder, referred to the confession made by the *Quarterly Review*, in a postscript to its second edition, of the errors in the article whose personalities have excited such universal reprobation.

But that confession of error, tardily made and unaccompanied by any apology or the slightest expression of regret by the Reviewer for having so unjustifiably assailed the personal characters of gentlemen of social and scientific status at least equal to his own, was an aggravation rather than an extenuation of the original offence.

The Reviewer had been guilty of a reckless disregard for truth, admitted by his own confession. Having the *Quarterly Journal of Science* before him (for he places it at the head of his essay as the subject of his review), with my letter attached to the article, which he cites, and which therefore he must have read, and with the letter of Dr. Huggins also full in view, he called us converts to Spiritualism, although my letter contained a distinct and emphatic assertion to the contrary, and the letter of Dr. Huggins also expressly stated that he reserved his opinion as to the cause of the phenomena he had witnessed. Moreover, the Reviewer asserted that Mr. Varley had been unable to obtain admission to the Royal Society; the *fact* being, that he had been elected to that honour some months previously. For the purpose of further disparagement, he also stated, with a sneer, that Dr. Huggins was a brewer—an aspersion utterly untrue; but if it had been true, a pitiful ground of attack upon an eminent Scientist by a brother Scientist.

These are some instances of the untruths of the Reviewer, not to be excused on the plea of error which he has since put forth. Men who employ personal calumny as a weapon in scientific warfare have no right to blunder; they are bound to use *extraordinary* caution, and not to scatter abuse broadcast without being assured that there is at least *some* truth in it. There is *none* in the abuse to which the Reviewer stooped.

But not even a shadow of excuse can be offered for the littleness of mind that could condescend to the use of *such* a weapon for *such* a purpose. The abuse was so entirely unprovoked and uncalled for, the object with which it was employed was so paltry—*being merely to discredit the report of a scientific experiment*—that it would have been incredible if not seen. That, in a discussion purely scientific, any scientific man, in this age of free thought and at this time of daily discovery, should have deliberately written several pages for the purpose of running down the reputations of gentlemen of some note and of fair fame, the equals of the Reviewer in character and status, by sneers at their birth, parentage and education, and dirty insinuations against their personal claims to the positions they had won for themselves,

is not merely disgraceful to the assailant, but an offence against good morals and manners, aggravated by the fact that it was done in the most cowardly form, under the convenient cloak of the anonymous.

And, then, to complete the discreditable exhibition, instead of omitting from the second edition the confessed falsehoods and the personalities based upon them, they are reprinted, without note or comment, retraction or apology, in the text of the article where they are read by everybody, while the tardy confession is buried in a postscript at the end of the number, where it is read by nobody.

Some of our men of Science would seem to have forgotten the maxim, freely translated from Dr. Döllinger, and which should be written in letters of gold in all institutions devoted to Science :

THE HIGHEST ETHICAL LAW OF SCIENCE IS LOVE OF
TRUTH, AND THE PRIESTS OF TRUE SCIENCE, THOUGH
LIABLE TO ERROR, WILL NEVER LIE.

I commend this to the *Quarterly Reviewer*.

That postscript intimates that the article has been without warrant attributed to Dr. Carpenter. For the credit of that gentleman, and for the honour of Science that would have been disgraced through him had *he* been guilty of it, I am glad to be so assured ; and I am pleased that the comments in another page are applicable to some other man whom shame will doubtless induce to preserve the anonymity he has assumed.

March 8th, 1872.

EXTRACT FROM THE PREFACE TO THE FIRST EDITION.

SOME of the Critics of the scientific experiments in Psychic Force, conducted with the aid of certain mechanical tests by MR. CROOKES, F.R.S., in the presence of DR. HUGGINS, F.R.S., and myself, have erroneously assumed that we were converted by the results of those experiments to the creed of Spiritualism. The fact was the very reverse. Those experiments proved conclusively that the Force, supposed by many to be spiritual, is in fact a Force proceeding from the human organism.

The crucial tests applied by the skill and science of MR. CROOKES

confirmed the results of a series of other experiments, conducted with care and caution, which had been instituted for the purpose of investigating if any and what of the alleged phenomena were real; and, if real, whether they are physical or spiritual, natural or supernatural.

The conclusion from that patient inquiry has been, that many of the alleged phenomena are real, though some are delusions and others impostures; that the Power dignified by the title of Spiritual, because attributed to the presence and action of spirits of the dead, is in fact a Psychic Force proceeding from the human structure and directed by the human intelligence.

But from what part of the human structure that Force proceeds—whether from nerve, ganglion, or brain—if it be the “vital force,” or the “nerve ether” of DR. RICHARDSON—if the directing intelligence is the “Unconscious Cerebration” of DR. CARPENTER, or if there be a Soul (or Spirit) inhabiting the body and distinct from it, by which those effects are produced—are problems remaining for close, patient, and extensive research, by steadily pursuing the course of scientific investigation which MR. CROOKES has so successfully begun.

I am pleased to be enabled to state that, to promote this inquiry by discussion, disquisition, and experiment, a Society is in progress of formation, to be called *The Psychological Society of Great Britain*, which should be joined by all who are interested in a subject the importance of which at this time it is impossible to exaggerate.

For Theology and modern Science are directly at issue as to the existence of a Soul in Man. Theology affirms and Science either denies or doubts, demanding proofs. If Psychic Force be the reality that they who have scientifically examined and tested it assert, it shakes to its foundation the materialism of modern Science, by the probability it raises that, *as a fact in Nature*, there is in us an entity, distinct from the corporeal structure, which can exercise an active force, directed by intelligence, beyond the limit of the bodily powers, and which is not material, but something other than that the scalpel carves and the microscope reveals.

The purpose of this brief treatise is to state fully and frankly the facts and arguments that have conducted to the conclusion that there is such a Force, and a non-corporeal something in us that controls it, and that Science may yet be enabled to restore the faith Science has shaken in the existence of the Soul and the consequent prospect of immortality.

November, 1871.

POSTSCRIPT TO THE PREFACE.

I HAVE to acknowledge, with thanks, the receipt of many communications, volunteered by readers in various parts of the country, narrating cases of Psychism in the families of the writers, where many of the phenomena described in these pages are of daily occurrence, but sedulously withheld from publicity because of the prejudices which the Psychics and their friends want courage to encounter. All my correspondents are persons of social position, Magistrates, Physicians, Clergymen, and such like, who in confidence append their names to their narratives. In every case the Psychic is a relative or intimate friend of the writer. One is a youth from a public school, where his Psychic Force was first discovered by his schoolfellows in sounds on the floor and walls and the spontaneous movement of chairs, tables, books, &c. Another is the son of an M.D., with whom the like phenomena occur and which the Doctor minutely details to me. A third is the niece of a Lady of rank, through whom intelligent communications are made by tiltings of tables or chairs. The fourth is the wife of a Baronet, in whose presence automatic movements of articles in the room are frequent. A fifth is the son of a Magistrate, in whose presence, when sitting with his parents only, the furniture is often thrown violently about the room; and a few days before the date of the communication, a table at which they were having tea was drawn asunder, the central leaf taken out and thrown to the wall.

As I am very desirous to collect all well authenticated *facts* relating to Psychic Force, I venture to prefer a request to those many persons in whose families, or among whose friends, cases similar to the above are daily occurring, to favour me with full particulars of the phenomena, in strict confidence as to names of persons or places, which I promise to keep secret. From the

number of cases already sent to me, it is manifest that Psychics are far more frequent in private families than has been supposed; and there can be no doubt that, if trial were made in every family circle in the manner described in a subsequent page, many more persons possessing Psychic Force would be discovered, but in whom it has not been suspected hitherto. It is obviously a faculty frequently dormant until called forth by trial, and capable of almost indefinite development by cultivation.

OBJECTIONS ANSWERED.

I TURN now to a more agreeable task. As with all who take the middle path, I have been assailed by two opposing classes of objectors.

The Spiritualists charge me with partial treatment of the subject, by making no reference to certain phenomena upon which they have built up their creed.

The opponents on the other side dispute *the facts* asserted, not by declaring that they have made trial of them, and found them *not to be*, but by the illogical process of argumentative objection.

I will answer each in turn.

First for the objections of the Spiritualists.

I have been asked by some advocates of Spiritualism if I have not witnessed other phenomena than those described, and why I make no reference to them? I answer, that I *have* seen many that are by the Spiritualists termed "the higher phenomena," and which they esteem much more than the purely *physical* phenomena. But I have only witnessed them. I have not subjected them to test or to experiment. I see in them much that is questionable, much that admits of physiological and psychological explanation. From their nature and the conditions under which they are produced, they are incapable of that demonstrative *proof* which Science demands. They require protracted and laborious examination before it would be possible to form a just judgment of them. My object in this inquiry being *purely scientific*, I have purposely limited it to *phenomena that are capable of demonstrative proof*; that may be sustained by the *evidence* of the senses; tested by the application of weights and measures; exhibited by *mechanism* that has no self-delusions; which are in no manner dependent upon merely mental impressions, always more or less subject to error. I

require such *proofs* as I could submit to a jury in a court of justice, and accept a verdict formed from them. Nothing less than this would satisfy me. There are no *such* proofs of the phenomena in question. But the *physical* phenomena of motion and sound are capable of positive proof or disproof. They would be evidence for a jury on any question whatever, even though life depended upon it. Therefore I limit the inquiry to that which is capable of *positive proof*, and accept only evidence that would be admitted in the witness box, and upon which a judicial judgment could be given. The evidence required to establish the existence of the so-called "higher phenomena," as compared with the evidence we have of the *physical* phenomena, appears to be but imperfectly understood by the Spiritualists.

The depositions of a thousand persons that each had separately seen a ghost would be no proof whatever of the existence of ghosts, because it is not only possible, but probable, that what each believed he beheld with his eyes was merely a mental impression. But if two persons of credit declare that they saw the same ghost at the same moment, the argument assumes another complexion, because of the improbability that a similar image should be self-formed in two minds at the same moment. The probability that it was something actually without them that made the impression upon the external senses of each at the same instant, and not a merely mental vision, is vastly increased by every addition to the number of spectators who depose to the same appearance at the same moment; until a number, not large, so agreeing in their assertion and being credible persons, and subjected to strict scrutiny by cross-examination, would constitute positive *proof* of the fact that such an object *did* present itself, whatever that object was or the manner of its production, which are the proper subjects for investigation by argument when the existence of the object itself is thus established. If twenty credible persons were to declare that they saw the same object at the same instant, although it would be sufficient proof that they saw *some* object, it would not prove that this object was a ghost, which would require to be established by a further inquiry into the nature and causes of the appearance they saw. So it is with what

are termed "the higher" phenomena of Spiritualism, which must be proved in a different manner, and by a much more elaborate chain of proofs, than is required for *physical* phenomena, that are measurable mechanically and do not depend upon mental impressions. Most of the other phenomena I have witnessed are open to objections which, though they do not disprove the asserted facts, cannot be answered by positive demonstration. Moreover, in a new field of scientific research, it is necessary to proceed with care and circumspection, step by step, making sure of the ground as we go, and advancing from one fact to another, as each is *proved*, by sufficient examination and test, *to be a fact*. The vast importance and interest attaching to the discovery of Psychic Force, if its existence should be confirmed by repeated experiment and test, does not in any manner depend on the extent of the power. If it be true that a heavy body can be moved, even the thousandth part of an inch, without material contact, the fact is quite as interesting and important scientifically as if it had been carried to the ceiling. All that we who desire to treat the question, and to have it treated, *scientifically*, is that the men of science should ascertain this *one* fact, *aye or nay*, *is there such a motion without contact?* If they find it to be, *then*, and not till then, will come the question, *what and whence is the Force that causes this motion?* That will be a proper subject for controversy, both by argument and experiment, when the one simple fact of the motion itself is accepted as proved.

Again, it has been said by the Spiritualists that, as one accustomed to look at things from a scientific point of view, and to treat evidence in a very strict and matter-of-fact manner, with a Lawyer's natural hostility to whatever is tinged with imagination or fancy, I have approached this question with an unfair prejudice against *any* explanation of the phenomena that savours of the supernatural.

In answer to this objection, I can say only that my *desire* would have been to have found their theory true. Excepting a few fanatical materialists, I cannot conceive of any human being who would not be rejoiced to be *assured*, by the same evidence of his senses as assures him of the existence of his body, that when the

body dies he will pass from it a conscious being, with a continuous existence, knowing in the new life the friends who had gone before him, and having ability to watch over and sometimes to communicate with the dear ones who are still in the flesh. There is not a human being, I presume, who would not look upon the attainment of a *perfect conviction* of this—not as the result of mere faith or hope, but as positive *knowledge of the fact* by demonstrative proof as certain as he possesses of his own existence in this world—as the happiest hour of his life; who would not thenceforth be conscious of a felicity such as he had never even dreamed of before, all dread of death destroyed, and life itself tinged with the hues of that immortality of which he *knows* it to be only the portal. If the calm judgment could have pronounced a verdict in favour of the creed of Spiritualism, it would have been most ready to do so. It is with profound regret and reluctance, and in opposition to the most eager desire, that the reason is compelled to say “Not Proven” to a theory so delightful as that which accounts for the phenomena of Psychism by the agency of spirits of the dead.

And now for the opposite class of objectors.

Dr. CARPENTER, in his lecture, has ventured to repeat the theory of unconscious muscular action as the easy explanation of all the motions and sounds which the scientific observers attribute to Psychic Force. Our answer is *conclusive*.

So long as actual contact, however slight, was deemed to be necessary to the production of the motions and sounds, it was impossible effectually to refute the theory of unconscious muscular pressure, which is so stoutly insisted on by the opposition as explaining the phenomena. But this solution is altogether worthless to account for MOTION WITHOUT CONTACT, which is THE FACT with which the irate Materialists have *now* to deal, but which, with the astuteness of a special pleader making a case, rather than with the honesty of a man of Science seeking to ascertain the very truth, Dr. CARPENTER has chosen to pass unnoticed. And wherefore? I fear because he felt that it annihilated his strongest argument, and because he can find no answer to it, even with the help of a little fancy and not a little fiction.

Again, it has been asked by men who ought to know better, how do we *explain* this Psychic Force? What is it? How does it operate? How can something we cannot see, touch, hear, and whose presence is imperceptible to the senses, impart motion to a heavy body, in opposition to the established law of gravitation? I answer, how many indisputable facts in Science are yet unexplained, though undenied. If nothing in Science is to be accepted as a fact unless Nature's *modus operandi* in producing it can be explained, three-fourths of our scientific treatises must be burned. The omniscient Dr. Carpenter himself cannot explain the process by which he thinks, sees, feels, how he lifts his hand, how a dose of medicine operates, the *modus operandi* by which mercury affects the liver and James's Powder the mucous membranes.

I answer one suggested difficulty by another. I call upon these scientific objectors to explain to *me* in their turn in what manner the *magnetic* Force operates? Science has been investigating that Force for more years than Psychic Force has been recognised in hours, and at *this moment she cannot tell us what it is that draws the steel to the magnet*. It is something that cannot be seen, felt, or heard; something that passes through solid bodies; something that, intangible as it is, overcomes the force of gravity and violates a known law of Nature. If the Magnetic Force had been now observed for the first time, the identical objections made to the existence of Psychic Force would be offered as a reason why it *could* not be, and the only possible answer would have been that which *we* make to your objections:

"But *it is*. See it; try it; satisfy your own eyes and ears. We do not ask you to credit us, but to assure yourselves. If it is a delusion, dissipate it; if it is an imposture, detect it; if it is a truth, proclaim it; but do not purposely shut your eyes because the thing asserted to be before you is improbable according to some pre-conceptions of your own. Psychic Force is not, and it cannot be, more impossible, more inexplicable, or more antagonistic to the known laws of Nature, than is the Magnetic Force, whose existence you admit, although you are entirely ignorant of the *modus operandi* by which the steel is moved by the magnet without

material contact or connection and in opposition to the law of gravitation.”

The similarity of Psychic Force and Magnetic Force in this respect is perfect and the same objections and the same answers to them are equally applicable to both.

Another objection is derived from the doctrine of the conservation of Force, which means simply that no Force is created and none extinguished, and that whenever a Force is exercised it is merely a change in its form. Whence, then, it is said, comes the Psychic Force? Where was it before it was seen in the motions of solid bodies subjected to its influence? To this three answers present themselves. First, Psychic Force is a nerve force, and comes from chemical changes in the organism. Second, the Soul, if we have one, is exempt from conditions that attach to matter only, and consequently is not subject to the law of Conservation of Forces, which is essentially a law governing matter. Third, every impression made upon the mind by the senses, and every act of thought, feeling, and will, is an exercise of Force; and whence does *that* come? for the theory that each mental operation uses up some particle of brain, whose destruction generates the Force, is too fanciful to be seriously entertained.

A frequent and favourite argument, if it deserves the name (employed of course by those only who have no knowledge of Science), is to this effect—the reader will have heard it and read it many a time: “If the Force exists, why is it not continually exhibiting itself? Why are our tables and chairs ever still? Why is not the Psychic blockaded by furniture wheresoever he moves? Why does he not attract a waggon as well as a chair, and substitute his Psychic Force for that of machinery? If a chair will come to him, why not a watch or a statue? If a table can be raised from the floor, why cannot the room itself be moved?”

The answer to this argument is that which was given when the same objection was offered by the opponents of electricity, galvanism and magnetism on their first discovery. The Force exists always, but it is perceptible to our senses only in certain conditions. The magnet does not attract wood or stone at all, and some only of the metals. We know not why it is, but only that

so it is. Precisely as magnetic force attracts certain things only, so Psychic Force seems to attract only certain things. As the magnet must be placed in a certain relationship to the iron with respect to distance, other conditions concurring, so the things attracted to the Psychic must be in certain conditions relative to him. As the magnet can move only a limited weight within a limited distance, so Psychic Force is limited in its powers ; and as dryness of atmosphere is one of the necessary conditions of the exhibition of electric force, so certain atmospheric and other conditions are requisite to the exhibition of Psychic Force.

Take in your hand a large magnet. It stirs in you no sense whatever of any active force contained in it ; there is no perceptible difference in form, colour, or otherwise, between it and any other mass of metal of equal weight. Yet we know that in fact there is in that metallic mass an active force which—when certain conditions co-exist—concentrated, directed, and sent forth from it, would destroy the hand that held it. A charged electric battery, to the eye, to the touch, and in the scales, presents nothing to distinguish it from so many harmless glass jars ; yet it has in it, as all know, a force that would instantaneously extinguish the lives of a hundred men. So the Force may be in the Psychic, unseen, unknown, undiscoverable, as it is in the magnet and in the electric jars, until the conditions exist for the giving forth of that Force, and then, like those other Forces, it may have a power to which it is impossible to assign a limit, and which only experiment can determine.

The Magnetic, Electric, and Galvanic Forces (whether they be one or many), exist potentially in matter. They are not perceptible to our senses except under certain conditions ; but *they are there*, nevertheless. So it is with the Psychic Force. There it is in the Psychic, but the presence of a combination of conditions is necessary to its development and exhibition. And this is true also of the Electric, Magnetic, Galvanic, and other Forces or forms of Force.

This, likewise, supplies the answer to another popular objection. If the Psychic Force moves one thing, why not another thing ? If at one time, why not at another time ? If in this place, why not in that place ? If under these circumstances, why not under

those? The answer is, that in this seeming capriciousness it resembles the other Forces of nature. Precisely the same objections are applicable to the Forces of Electricity and Magnetism. No single experiment with either can be performed—that is to say, the Force cannot be manifested—save under certain conditions, which are prescribed by the Force itself and cannot be imposed by the investigators.

I am almost ashamed to answer objections which could not have been made by any person having even an elementary acquaintance with practical science. But they have been so often preferred, with such apparent seriousness, by so many of the critics, that if I had passed them unnoticed, it might have been said that I did not answer them because I could not.

I hope I *have* answered them completely.

“It is impossible,” say some, “and *therefore* I will not inquire.” What an argument for Science to employ, whose whole business it has been to convert into facts what ignorance has pronounced to be impossibilities! “It is contrary to established laws of Nature.” What! are all Nature’s laws known to us, or are those we know perfectly understood? Is not one law controlled and often superseded by other laws? Do not the Organic laws suspend the operation of the Physical laws? Have we learned all the Psychological laws, and are we sure that they do not control the Organic laws, as the Organic laws control the Physical laws? Is it more impossible than the transmission of a message to America in one minute, or the impression of a picture in the snapping of a pistol, would have been declared to be thirty years ago?

Driven from this fallacy they say, “We dispute the competency of the witnesses to the asserted fact of motion without contact.” But this is a question simply for the *eye*. It needs not a special training to observe, like experiments in a laboratory. Any man in the enjoyment of his senses can attest the motion of a table, and if it is or is not touched when it moves. Even if his eye might fail him, the measuring tape is conclusive. The members of the Dialectical Sub-Committee were men of more than average intelligence and enjoying excellent vision. Their prejudices looked for a trick. They might have been mistaken about the motion of

furniture without contact once, twice, or even thrice; but they witnessed this motion without contact *no less than thirty-four times*, under all varieties of conditions, and subject to the severest tests, and were thus "convinced against their will," although the proverbial consequence did not follow. In addition to the evidence of these specially qualified witnesses, there are thousands of intelligent spectators of similar automatic motions, in various places and under divers test conditions that precluded the possibility of explanation by delusion, fraud, or accidental coincidence.

The latest objection is that made by *The Athenæum*. In its elaborate review of this essay, it says :

As to his statement of fact, we can have no doubt that, on the occasion when he believes himself to have seen furniture so affected, he was either the victim of imposture or visual illusion—that either the tables and chairs were moved by human agency, of which he was ignorant, or that from some one or several of the causes capable of producing optical derangement, he thought the pieces of furniture moved when, in fact, they stood still.

The answer to this shallow objection, which might equally be offered to all human testimony, and which, if sufficient, would summarily stay the progress of all knowledge, is that, although the senses might possibly be deceived once, twice, or even thrice, or of one, two, or three spectators only, it is an improbability amounting almost to impossibility that such an optical deception should occur to fourteen persons at the same moment or to the same persons a hundred different times in different places, and where the evidence of the senses was confirmed by actual measurements of the changed positions in the room of the things in which motion was perceived by the eye and the ear. The suggested explanation of the reviewer would be more marvellous, and more opposed to the common experience of mankind, than is the fact which he disputes. I say to him as to others, "Do not deny until you have tried; then say if *your* senses are deceived. Until *you* have used your own eyes you have no right to say that others did not see."

I repeat, that we who have *scientifically* examined these phenomena neither expect nor desire that any person, scientist or

otherwise, should accept the existence of Psychic Force *on our authority*. We utterly disbelieved it, as they do, before we investigated it. We did not take it on trust, and therefore do not ask others so to take it. All we ask is, that we may be credited with having instituted a protracted, laborious, and careful examination, with an honest desire to ascertain *the very truth*. Having against our will arrived at certain conclusions by certain processes of inquiry, which we detail minutely, we ask others to make a like trial in the same manner, and see if the same results are presented to them. Motion without contact is *a fact or a falsehood*. It is easily proved or disproved. We say to Dr. Carpenter and other dogmatists who substitute argument for fact, "*Try it before you deny it.*" If, having tried, you find it to be a fact, the world will be glad to hear what is *your* explanation of it—if *you* hold it, as we do, to be a Psychic Force—or if not that, what other solution you have to offer. You will not readily account for the exhibition of Psychic Force by that universal solvent of all Psychological problems, "Unconscious Cerebration." That mental condition will explain many of what the Spiritualists term the "higher" phenomena; but will not explain the one simple fact for which we, who have examined it with scientific care and caution, challenge investigation—**MOTION OF HEAVY BODIES WITHOUT MATERIAL CONTACT OR CONNECTION.**

I cannot close without briefly noticing a paper by Mr. E. H. TYLOR, the historian, entitled "Ethnology and Spiritualism," which appears in *Nature* of Feb. 29. It is a reply to Mr. ALFRED WALLACE, the distinguished naturalist, who, in a review of Mr. TYLOR's great work on "Primitive Culture," had suggested that the legend of the wehr-wolf, founded, as are all superstitions, on some facts, might be explained by reference to the now accepted influence which, in the state of artificial somnambulism, enables the operator to control the mind of the patient, so as to make him imagine that he sees what the operator wills him to see. Mr. TYLOR asks Mr. WALLACE if this might not explain also some of the more marvellous of the phenomena called Spiritualistic? The query is not new. Very early in our researches it was presented to myself and the other *scientific* investigators, and our

experiments and tests were specially directed to ascertain if such an influence could by any possibility prevail so as to produce such a deception. We were entirely satisfied that there was no ground whatever for the supposition. The conditions were altogether different. The somnambulist is in a state of trance; his eyes are closed and his senses sealed up. The spectators of the Psychic phenomena are wide awake. Only one in four or five is influenced in the electro-biologic experiments; but all present, without exception, always see the same things at the same moment in the Psychic experiments. In the former there is no memory whatever in the waking state of what has been done in the somnambulic state; but with Psychic trials all remember afterwards and could minutely record every incident. Finally, the condition in the former state is purely that of dream—a mental impression merely; in the latter there is always a change in the condition of the things about the spectators, which proves beyond possibility of doubt that motion, however caused, has actually taken place. At the close of the experiments a multitude of movable articles, furniture, books, ornaments, and such like, are in parts of the room other than those they had occupied at the commencement of the experiment. This cannot be a dream—a merely mental impression of things moved that are not moved in fact, as is the condition of the somnambulic state. The actual changes of position in the surrounding objects are visible to any stranger who comes into the room after the experiment is concluded, and who, therefore, could not have been subjected to any deceptive influence, if such there had been. The parlour maid, whose business it is to put the room in order and to restore the scattered articles to their proper places, would certainly give conclusive evidence that the motions alleged by the spectators were not imaginary but very real.

If motion without contact or material connection be a FACT, it is not to be answered by any argument, however able, or extinguished by any authority, however great. Abuse and ridicule are equally powerless to strangle it, although they may for a time delay its recognition. As it was, so it is, and perhaps ever will be. Priests are not the only persecutors. Even Modern

Science has its Inquisition, its excommunications, its moral tortures for Galileos who refuse to accept its dogmas and who dare to assert facts which seem to shake its creed. It may thus for awhile deter the timid from inquiry and tempt the time-serving to denial of the truth; *but it will not alter the FACT.* If all the Scientists in Europe were to argue that motion of heavy bodies by some unexplored Force without material contact is not a fact, because opposed to their pre-conceptions, and if they had the power, as they have the will, to compel its assertors to recantation or to silence, still the answer would be the same as of old—**BUT IT MOVES FOR ALL THAT.**

INTRODUCTORY.

SCIENCE is the natural enemy of Superstition.

A superstition is always founded on a fact. It is never wholly fanciful. Facts are observed which cannot be at once explained, and the ready resource of impatient ignorance is to attribute them to supernatural influences. These are the materials with which the imagination constructs the fabrics of which one part is real and nine parts are visionary.

But a superstition founded on facts can be overthrown only by recognising the realities on which it rests, dragging them into the domain of Nature and Science, tearing away the veil of mystery, and showing that the facts, about which so much of the marvellous has been attracted, are in strict accordance with natural laws.

This is the mission of SCIENCE.

But Science can successfully combat Superstition only by strict observance of the great principle whose enunciation by Bacon made her what she is—first, find *the fact*, then the *conditions* of its existence, and from this basis proceed to inquire into *causes*.

The fashion of too many of our modern Scientists, of whom Dr. Carpenter is an eminent example, is to reverse this process: to construct a theory, and then mould the facts to the theory by ignoring or denying all the facts that do not fit the theory.

The argument *à priori* is equally foolish and fallacious. Modern Science should have abjured it utterly. It was supposed to be her boast that she repudiated the old argument that a thing *cannot* be because it is apparently opposed to something she has already accepted as true; that she rejected it indignantly as an answer to averments of facts by credible persons which, according to the rules of evidence and the practice of mankind, would

be held by any judge or jury to be conclusive proof. But although Science is bound to inquire, she is not bound to *believe*, on the testimony of witnesses, however competent and credible. The duty that devolves upon her in such a case is to test by patient and careful examination the truth of the fact so asserted; if, upon fair and impartial trial it be found to be a fact, she is bound by her obligation to truth to proclaim it, and to show, as always may be shown, how that new fact accords with the other facts of nature.

If such is the profession of modern Science, such is not her practice. On the contrary, hers is one long history of practice in direct defiance of principle. She has met almost every new discovery by the old and, as it was supposed, exploded argument *à priori*, instead of by the Baconian rule of first finding the fact and then arguing upwards from it. As the necessary consequence she has been put to shame continually. The circulation of the blood, vaccination, express trains, Atlantic steaming, and a host of other novelties, were as vehemently opposed by the scientific authorities in their time as now is Mr. Crookes's announcement of certain new physiological facts observed by him,—and by the self-same argument *à priori*—that they are inconsistent with some laws assumed to be established, and that therefore they *cannot* be.

Mr. Crookes does not ask their *acceptance* on his own authority; he asks only that the experiments he has tried—and which, if proved, are of the highest interest and importance to Science—may be tried by others, and by them honestly reported. He describes them in plain words made more plain by engravings. He says:—

The answer to this, as to all other objections, is, prove it to be an error by showing where the error lies; or, if a trick, by showing how the trick is performed. Try the experiment fully and fairly. If then fraud be found, expose it; if it be a truth, proclaim it. This is the only scientific procedure, and this it is that I purpose steadily to pursue.

It is significant that none of the many objectors to his demonstration of the existence of a Psychic Force has ventured to answer him by saying "I have tried the experiments described by

Mr. Crookes, carefully and patiently, and the results he states did not appear." All have shrunk from this only philosophical treatment of the question. The warfare has been wholly by suppression of one half of the facts stated by him and misrepresentation of the other half; and some have even condescended to personal abuse and vilification, for the unworthy purpose of discrediting testimony they are unable to rebut.

The *Quarterly Review* answers a series of experiments made with instruments ingeniously constructed by a scientific man to secure delicate tests that should not be open to the objection that would have been made to any evidence of the senses alone, by the shabby process of attempting to discredit the experimentalist and observers. Mr. Crookes, F.R.S., the discoverer of the metal thallium, the Editor of the *Quarterly Journal of Science* and of the *Chemical News*, is declared to be incompetent to devise a simple test apparatus; Dr. Huggins, F.R.S., a Vice-President of the Royal Society, the foremost spectroscopist in the world and almost its greatest astronomer, is wanting in power of vision and capacity of judgment; (a) and my much humbler self, a Lawyer of some little experience in dealing with witnesses and evidence, am called "gullible." We are, in fact, according to the reviewer, three idiots. And all this dirt is thrown for the paltry purpose of discrediting our attestation to the *good faith* with which certain experiments were tried by Mr. Crookes, and to which Dr. Huggins, as a man peculiarly versed in the construction and use of scientific apparatus, and myself as a person experienced in the art of testing truth and detecting falsehood, were invited to be witnesses, merely to see that all was honestly done, and to attest whatever results might be exhibited by certain *machinery*. Surely this was not an offence calling for *personal* vilification. The Old Bailey practice, "If you cannot answer the facts, abuse the pro-

(a) Dr. Huggins is actually condemned by the *Quarterly Review* for having dared to be a witness to some mechanical experiments without having first studied Dr. Carpenter's theory of "Unconscious Cerebration." "To him," says the Reviewer, "seeing is believing; but to those who have qualified themselves for the study of Psychic Force by a previous course of investigation into the class of occult phenomena, of which this is the latest manifestation, seeing is anything but believing."

secutor and his witnesses," ought not to be admitted into scientific controversy. When Mr. Crookes announced his discovery of a new metal, when Dr. Huggins published his observations of the new lines in the spectrum, their assertions of what they had seen were not met by personal insult and vituperation, by declarations that they were incompetent or untrustworthy, their apparatus worthless, their eyes deceivers, and their senses and judgments befooled; but the men of science hastened to try the same experiments, and ascertain, by their own investigation, what truth there was in what Dr. Huggins and Mr. Crookes had asserted. Their assertions were found to be true, and the honours of discovery were awarded to them. Why, are these gentlemen to be maligned and vilified now, for asserting that other experiments had exhibited other new facts, and for asking that Science should deal with the alleged discovery of Psychic Force precisely as it had dealt with the discoveries of the spectroscope.

It was stated in some of the newspapers that Dr. Carpenter is the author of the article in the *Quarterly Review*. I was reluctant to believe it. He is reputed to be a gentleman, and certainly no person pretending to that title could, even in the conflict of rival theories, have forgotten that the intellectual reputation of scientific men is very dear to them, and have stooped to vilify them for so paltry an object as the discrediting of one of their experiments.

Dr. Carpenter, moreover, is, least of any man, entitled so to treat other propounders of new theories. If Dr. Carpenter rejects and ridicules Mr. Crookes's demonstrations of Psychic Force, at least an equal amount of ridicule is cast by other physiologists on Dr. Carpenter's conjectural theory of "*Unconscious Cerebration*." The evidence that supports the assertion of a Psychic Force by Mr. Crookes is vastly more trustworthy and demonstrative than that adduced by Dr. Carpenter in support of what so many of his brother Scientists call *his* hallucination. He forgets that in *their* estimation he is himself, if not the *most* gullible, the most gullible save one, for accepting as facts the wonderful stories on which he founds his much boasted theory

of "Unconscious Cerebration."^(a) For the honour of science, I am glad to see in the Postscript to the *Quarterly Review* an intimation that Dr. Carpenter was not the writer of the article in question. It would be, indeed, a sorry sight if such a man could have been guilty of a jealousy so pitiful and spiteful as that which prompted a personal attack upon brother Scientists, so ungenerous, so unjust, and so uncalled for.

I pass now to the question to which this little treatise is devoted.

Is there a Force which, in the presence of certain persons, without corporeal contact or connection, can cause motion in heavy bodies, and produce audible sounds, as by impact, which appear sometimes to be directed by intelligence?

If there be such a Force *in fact*, whence does it proceed?

Is it, as Spiritualism asserts, the operation of spirits of the dead?

Or is it, as contended by Mr. Crookes and other scientific experimentalists, a force emanating from, or in some manner directly dependent on, the human organisation?

The following pages propose, first, to state the proved phenomena, and then to set forth the argument that has conducted us to the conclusion that the force is a purely Psychic Force, and *not* the work of spirits of the dead.

It is objected to this inquiry that, if proved, the knowledge would be worthless. I answer by asking—*Is any knowledge of a new fact in nature without its use? Does any fact stand alone? Has not the discovery of one fact, however seemingly trivial and worthless, invariably led to the discovery of an endless series of other facts that have grown out of it? Are we so far advanced in our knowledge of Psychology, or even of Physiology, that it can be no help to those sciences to learn that there is a Force which probably performs all the functions of organization, but certainly operates in certain cases beyond the boundary of the living body, and then is capable of scientific*

(a) For my own part, I do not share the ridicule showered by physiologists on Dr. Carpenter and his discovery. I entirely accept his theory, and I think I see in it a solution of the problem how the Psychic Force demonstrated by Mr. Crookes is controlled and directed.

observation, experiment, and measurement? If this fact be established, it needs no stretch of the imagination to anticipate its multifold application to the solution of many of the now insoluble problems connected with the relationship of mind and body, the laws of life and health, and the science and practice of medicine.

It has been gravely asked by some of our critics, what right have I, a practical Lawyer, to concern myself about science? My authority even as a witness only to a simple mechanical experiment has been impugned on the plea of the incapacity of a Lawyer to observe the phenomena of science. I answer this objection by reference to Mr. Justice Grove, at once a great Lawyer and a great Scientist; to Mr. Gwyn Jeffrey, who has devoted his leisure to natural history; to Lord Brougham, who wrote on optics, and others whom it is not necessary to enumerate. It might surely be permitted to a very much humbler man than they to give some of his hours of leisure, as I have preferred to do, to the study of the sciences that relate to the mind—to Mental Philosophy and Psychology. However that may be, the practical knowledge of the principles of evidence, the daily habit of looking for the very truth, without prejudice, fear, or favour, combined with long practical experience in the art of sifting and weighing proofs before forming an opinion, might by some be deemed rather a qualification than otherwise for, at least, careful observation, and for arriving at a fair judgment of what fact is true, what false, what real, and what imagination or imposture.

I can only say, as an expert, that if the evidence of the existence of Psychic Force, produced under so many and various conditions, with such careful experiments and under tests so often repeated, is not to be deemed a sufficient proof of the fact that motions of heavy bodies and audible sounds of impact upon them are produced without contact or material connection with any person present (*for that is all we assert*), however that fact may be explained, the pursuit of truth must be abandoned as hopeless. If the senses of honest and intelligent observers are not to be trusted for a fact so obvious to the eye as that of

a table, a chair, a sofa, a book, a box, and a hundred other articles, being moved untouched over spaces of several feet, in a full blaze of light, how is the common business of life to be conducted? We must close our courts of justice, for upon evidence infinitely more disputable than that attested by the Scientific Experimentalists and the Investigation Committee, liberty and property are daily dealt with by all our tribunals. If the argument of the critics be right, we must henceforth banish the witnesses who depose to what they have seen and heard, and try men for life and liberty on *à priori* argument alone, ignoring the evidence of facts, and deciding according to the conjectures, the assumptions and the theories of Scientists as to what *can* or *cannot* be.

Much prejudice has been raised against the experiments that have demonstrated the existence of Psychic Force by a prevalent belief that the phenomena occur only in the presence of a few professional Psychics, and the suspicion of imposture thus suggested. This popular error will probably account for much of the unreasoning abuse that has been cast upon its assertors, such as has not been displayed towards the investigators of any other of the forces of nature, however strange and novel were the phenomena described and in their first aspect inexplicable. But, in fact, Psychics are frequent in private life. There are few family circles in which some of the phenomena of Psychism might not be exhibited on patient trial. All the forty experimental meetings of the sub-committee of the Dialectical Society, and almost all the further experiments here reported, were *conducted with Psychics found in private life*, among personal friends and acquaintances, and *not* with professional, paid, or public Psychics, as is wrongly assumed. Psychic Force is often developed to an extraordinary extent in children too young to be capable of contriving or conducting an elaborate fraud, and too weak to possess the requisite muscular power to move a heavy table. With *all* Psychics the phenomena simply occur in their presence, without effort of their own will to promote or check them, and, as all agree, without the slightest consciousness of any attendant sensation, bodily or mental.

And by whom are the facts thus powerfully attested denied? *By those only who have never tried and proved them.* If they are *not* facts, but delusions and impostures, how comes it that not a single investigator of repute, after patient and honest examination of the fact of motion and sound without muscular contact, has failed to be convinced that the phenomena are real, or ventured to assert that he has discovered a trick and shown how it was effected? Is it probable, nay, possible, that if these were really the feats of conjurers, the manner of performing them would not have been discovered by some one of the many witnesses eager to dissipate a delusion? Half-a-dozen visits suffice to enable even a stupid spectator to detect the *modus operandi* of the cleverest conjurers ever seen among us; and every trick they perform is to be found fully described in books; and may be successfully imitated by any person willing to take a little trouble in the learning. But Psychics of all classes, of both sexes, and of all ages, have been observed for *thirty years* by hundreds of thousands of persons, sitting at the same table with them and holding their hands and feet while the phenomena were proceeding, and *in no single instance* has ingenuity or accident discovered the contrivance (if it be one) by which what was seen and heard was performed. Has it never occurred to the critics that if Psychics can do by sleight of hand or mechanical agency the remarkable things that any person may daily witness if he pleases, they have no need to continue unknown and poor for a single week. The consummate skill requisite to the accomplishment by a trick of that which takes place in their presence, under the vigilant eyes with which they are encompassed, would speedily secure for them an enormous fortune as mechanics, or an unbounded popularity and profit as prestidigitateurs.

Not only is the evidence by which the phenomena of Psychic Force are established stronger than any upon which the criminal courts daily convict and punish even with death; it is at least equal to the evidence upon which most of the other sciences are founded. The experiments with Psychic Force are in all respects as perfect and trustworthy as those exhibited by Professor

Tyndall at the Royal Institution. They are as plain to the eye, as palpable to the touch, as audible to the ear, as any witnessed in that famous lecture room. If the senses can deceive in the one, so are they equally liable to be deceived in the other, and the argument of imposture would be found equally applicable to both. The experiments with Psychic Force require certain conditions for their production ; so do Dr. Tyndall's experiments. Those conditions failing, the experiment fails, alike with the Psychic and with the Professor. It is a favourite argument with opponents of Psychic Force, "If it can be done thus, why not *thus*?" Put the same question to Professor Tyndall ; he would confess that *his* experiments also are subject to conditions, and that *he* could not engage to perform one of them if conditions other than his own were imposed upon him. Occasional failure is a frequent objection to Psychic Force. But the Professor also fails often. Many a time I have heard him say to his audience, after a failure which opponents might call suspicious, "I tried this experiment in my laboratory just before the lecture and it succeeded admirably. It fails now, I know not why. There are some unfavourable conditions I cannot discover. These disappointments are frequent in science. Nature dictates her own conditions ; we cannot impose them upon her." But when the like failure occurs with an experiment in Psychism, and the same reason is assigned for it, opponents exclaim at once—"Manifest imposture ! It failed when we sceptics determined the conditions. If it could be done in one way, it could be done in another way." Yet in what single particular does the case of the Psychic differ from that of the Professor ? What better assurance have we of the genuineness of the experiments we behold with so much amazement from the distant benches of the Royal Institution than of those we witness sitting at the same table with the Psychic, who cannot stir even a finger unseen ? Nothing would be so easy as imposture *there*. With his attendant for a confederate, a little sleight of hand, and some ingenious mechanism, all that Professor Tyndall shows us might easily be imposed upon us, and a clever trick passed off as a new fact in nature. I have no such suspicion ; but if I had, I could urge an argument quite as powerful against

his experiments as are adduced against the experiments in Psychism.

It is not expected, it is not asked, of *any* person to accept the existence of Psychic Force on faith of the sufficiency of the experiments by which conviction of its reality was carried to those who witnessed them. We ask only that other competent observers should pursue a similar course of patient examination, and report if *they* also find the phenomena to be facts, and if the facts they find point to the like conclusion, or what other explanation of them suggests itself to their minds. The first step in science is to ascertain, without fear or favour, what are *the facts*, satisfied that, however strange or conflicting with established theories these facts may appear at first, they will assuredly be found, on further investigation, to be in strict accordance with every other fact, and to square with every truthful theory.

Who would have supposed that in these days of free inquiry such extreme irritability could be exhibited by the Professors of Physical Science at the bare suggestion of the possible existence of something in man that cannot be carved by the scalpel, seen by the microscope, and analysed in the laboratory? Who could have anticipated the virulence of hostility with which they pursue all who venture to assert that there may be psychological facts, dependent on psychological conditions and governed by psychological laws, distinct from, and but imperfectly controlled by, those material laws to which alone their useful labours are devoted? Unhappily there is a fanaticism of scepticism as well as a fanaticism of faith. Dogmatism is at least as rampant in science as in theology. A true Materialist would be sorely vexed if it could be demonstrated to him that he has an immortal soul. I cannot help suspecting that this endeavour to deter from inquiry by anticipatory denunciation as fools or rogues of all who dare to inquire, is prompted by a suspicion lurking in a corner of the minds of the Materialist Philosophers that there may be some truth after all in this evidence of a Psychic Force, and that, if a truth, it will go far to disturb their favourite dogma, that mind is a secretion of the body; that life is an arrangement of particles; that there

is nothing of us but doth perish and pass away ; that we are only animated machines that perform a prescribed task, fall to pieces, and there an end. I cannot disguise from them or from the reader that if the existence of a Psychic Force is the *fact* which, after most careful and anxious examination, we who have *scientifically* examined it are satisfied that *it is*, and of which I ask others to satisfy themselves by a like scientific investigation, it *does* go very far indeed to disturb the Philosophy of Materialism that has taken so strong a hold of the scientific world, and thence unhappily has spread throughout educated society, by the probability it raises that *there is a something in man, other than the visible material body*, from which that Force proceeds, or with which it is intimately associated.

But, however adverse may be the Materialists to investigations into facts in nature tending to prove that they and we have an *anima, soul* (whatever name be given to it), and the probability of a future existence which such a possession would undoubtedly go far to confirm, not merely as a dogma in theology but as a *fact in nature*, the question will be admitted to be of overwhelming interest. Apart from the new light which the existence of Psychic Force, if proved, must throw upon many of the obscurities of physiology and medicine, the establishment of its truth will open a new field to psychological science, give to religion a new strength, and encourage in millions hopes and aspirations which, reluctant though they may be to confess it even to themselves, have been painfully shaken by the materialism of modern science.

THE PHENOMENA OF PSYCHIC FORCE.

WHEN the London Dialectical Society resolved to appoint a Committee to examine and report upon the pretensions of Spiritualism, I entered upon its duties, in common with five-sixths of the members of that Committee, having the most firm conviction that we should detect a fraud or dissipate a delusion. I hoped that experience in the work of sifting and weighing evidence, and resolving what does or does not constitute proof of asserted facts, would enable me to do good service in detecting an imposture and discovering its contrivances. And such were the aims and the expectations of the great majority of my colleagues, comprising men of various pursuits and capacities, ingenious lawyers, practised scientists, skilful doctors, authors, artists, and shrewd men of business—all of them persons with keen senses, proved powers of observation, suspecting and looking for imposition, and therefore more than commonly vigilant with eye and ear and rigid in the application of tests.

Before we commenced to examine, it was *our confident belief* that the alleged phenomena were:—

1. Self-delusion by the spectator ; or,
2. Imposture by the Psychic ; or,
3. Involuntary and unconscious muscular action.

With our minds thus prejudiced against the reality of the phenomena we proceeded to their investigation.

INVESTIGATION BY THE SUB-COMMITTEE OF THE DIALECTICAL SOCIETY.

It was resolved that we should meet only at the private residences of members of the committee, so as to preclude all possible prearrangement of mechanism or other contrivances.

That no *professional* medium should be employed.

That careful notes should be taken of each experiment and signed for verification by all present.

A Psychic was found in the person of a Lady, the wife of one of the members of the general committee, of high professional position. In this we were pre-eminently fortunate, for the Lady in question had never witnessed any of the phenomena with others, and therefore could not have mastered the sleight of hand, requiring the practice of a life for its mastery, which would be necessary for the successful performance of a trick, if trick it was. In truth she had discovered their production in her own presence only by chance, a few weeks previously to acceding to the request of the sub-committee to assist them in their investigations.

All the experimental meetings of the committee were held at the houses of members of the committee and some of them at my own residence; so that I can affirm positively the absence of any mechanical or other prearranged contrivances by which the phenomena there witnessed could have been produced.

IS IT DELUSION OR FRAUD ?

We were speedily satisfied that it was not, as we had anticipated, a delusion of the senses. The sounds were distinctly audible to the ear, the vibrations palpable to the touch, the motions obvious to sight. It was not a question of doubtful mental impression only, but of actual measurement. The table and other pieces of furniture had changed their position by so many inches, feet, yards. There could be no possible mistake as to this *fact of motion*. We were compelled very early to dismiss our theory that it was a *self-delusion*.

“But the motions and sounds may have been produced by trickery and fraud.” That was our *second* theory. Accordingly, we assumed the office of detectives. We sat under the table while the motions and sounds were most vigorous. We held the hands and feet of the Psychic. Every hand in the circle was held by its neighbour; the gas was bright above us; not a finger could have stirred without being perceived by some of the many eyes that were keeping watch. Our ingenuity was exercised in the

invention and application of tests. *After trials often repeated, we were compelled to confess that imposture was out of the question.* The motions and sounds were undoubtedly real and were certainly *not* caused by any trickery.

IS IT UNCONSCIOUS MUSCULAR ACTION ?

We retreated then upon the third theory, boasting Faraday as its parent and repeated ever since by objectors, and notably by Dr. Carpenter, as the easy and sufficient explanation of the phenomena we were witnessing—namely, involuntary and unconscious action of the muscles of those by whom the heavy body was touched. “Here,” we said, as he says, “are eighty fingers upon the table. If each one exerts but a pressure so slight as to be imperceptible even to himself, the aggregate sum of pressure will be very considerable. Apply these multiplied pressures at the edge of the table, and every finger is converted into a lever of which the centre of the table is the fulcrum. Make trial of it and it will be found so to be. That the muscles will act unconsciously there can be no doubt; and after a lengthened resting of the hand in a constrained position there is an involuntary contraction of the muscles sufficient by the accumulated force to cause motion of the table, even though every person present should scrupulously endeavour to avoid pressure.”

Such was the reasonable argument that led us to look to involuntary muscular action as the sufficient explanation of the motions and sounds that were continually being made. To ascertain if this hypothesis was correct, we devised a series of tests that should place the matter beyond all possible doubt. First, all hands were laid upon the table; then one hand only of each person; then the table was touched by the tips only of all the fingers; then by the fingers of one hand alone; then with one finger only. Still the motions and sounds continued with but slightly diminished force. If our theory of involuntary pressure was correct, the force should have diminished in precise proportion to the lessened points of contact. Moreover, it did not explain the fact, continually before our eyes, of the table being raised several inches from the floor on one side only,

the muscular action of the fingers upon that side of the table being antagonistic, and not contributory, to such a motion! We continued our experiments with lessened faith in our foregone conclusion. First, one person withdrew from all contact; then a second, and a third, until one finger of one person only touched the table. Nevertheless it moved, the sounds continued to come from it, and a frequent motion was the *lifting up of the table at the side on which the finger was pressing down*, if exercising any pressure whatever. I should state that at all of these test experiments the tables employed were the large and heavy dining tables, some nine feet and some twelve feet long, with six legs, in common daily use in the dining-rooms of members of the committee, standing upon Turkey carpets, therefore not easily slid and difficult to move by the arm. We next tried a more decisive test. All hands were joined and held over the table at the height of three inches from it, no part of any hand touching it, the room being well lighted with gas, and all eyes keeping careful watch over the lifted hands. The sounds were heard and the motions produced as before. It was suggested that possibly the feet might be at work; so two of the members seated themselves under the table to observe. The motions and sounds continued, but not a foot stirred. Then all the persons present stood, so that *no foot* could touch the table unseen. Still it moved. Lastly, we devised a test that conclusively settled the question as to the possible agency of muscular action, conscious or unconscious. It was contrived thus: All present turned the backs of their chairs to the table, and, kneeling upon the chairs, placed their arms upon the backs of the chairs, their hands being extended above the table, but without possibility of contact with it. The chairs were first placed six inches from the table, with which, as the reader will readily understand, neither foot, nor hand, nor any part of the person of any of those present could possibly come into contact unseen. In this position the table moved *eight inches* over the carpet and tilted several times. The chairs were then withdrawn further from the table, on each trial to an increased distance, and with the same results. At the distance of *two feet*

from it the motions were continued, with but slightly diminished power. I must repeat that this was tried in the dining-rooms of members, some of them in my own house, with none present but the Committee and the Psychic. These experiments of motion without contact were repeated many times at different meetings in different houses, and the same results were witnessed no less than *thirty-four* times. Thus was our third and last explanatory conjecture, which we had eagerly accepted on the authority of Faraday, completely demolished by the facts, and we were compelled reluctantly to the conclusion that there is a Force apparently proceeding from the human organisation by which motion is produced in heavy substances without the employment of any muscular force, and without contact or material connection of any kind between such substances and the body of any person present. We agreed also that these sounds and motions were directed, frequently, by some intelligence; but as the duty of the committee was merely to ascertain the facts, and not to inquire into causes, with these conclusive proofs of the physical facts, we closed the investigation and reported accordingly.

As many of the reviewers have suppressed the most interesting and important part of the volume, the report of the sub-committee, No. 1, appointed to examine the phenomena experimentally and test it carefully, and *which held no less than forty meetings* for that purpose, of each of which meetings a report appears in the appendix, I introduce here the entire of that Report:—

Since their appointment on the 16th of February, 1869, your sub-committee have held *forty* meetings for the purpose of experiment and test.

All of these meetings were held at the private residences of members of the committee, purposely to preclude the possibility of pre-arranged mechanism or contrivance.

The furniture of the room in which the experiments were conducted was on every occasion its accustomed furniture.

The tables were in all cases heavy dining tables, requiring a strong effort to move them. The smallest of them was 5ft. 9in. long by 4ft. wide, and the largest, 9ft. 3in. long and 4½ft. wide, and of proportionate weight.

The rooms, tables, and furniture generally were repeatedly subjected to careful examination before, during, and after the experiments, to ascertain that no concealed machinery, instrument, or other contrivance existed by means of which the sounds or movements hereinafter mentioned could be caused.

The experiments were conducted in the light of gas, except on the few occasions specially noted in the minutes.

Your committee have avoided the employment of professional or paid mediums, the mediumship being that of members of your sub-committee, persons of good social position and of unimpeachable integrity, having no pecuniary object to serve, and nothing to gain by deception.

Your committee have held some meetings without the presence of a medium (it being understood that throughout this report the word "medium" is used simply to designate an individual without whose presence the phenomena described either do not occur at all, or with greatly diminished force and frequency), purposely to try if they could produce, by any efforts, effects similar to those witnessed when a medium was present. By no endeavours were they enabled to produce anything at all resembling the manifestations which took place in the presence of a medium.

Every test that the combined intelligence of your committee could devise has been tried with patience and perseverance. The experiments were conducted under a great variety of conditions, and ingenuity has been exerted in devising plans by which your committee might verify their observations and preclude the possibility of imposture or of delusion.

Your committee have confined their report to *facts* witnessed by them in their collective capacity, which facts were *palpable to the senses, and their reality capable of demonstrative proof.*

Of the members of your sub-committee about *four-fifths* entered upon the investigation wholly sceptical as to the reality of the alleged phenomena, firmly believing them to be the result either of *imposture* or of *delusion*, or of *involuntary muscular action*. It was only by irresistible evidence under conditions that precluded the possibility of either of these solutions, and after trial and test many times repeated, that the most sceptical of your sub-committee were slowly and reluctantly convinced that the phenomena exhibited in the course of their protracted inquiry were veritable facts.

The result of their long-continued and carefully-conducted experiments, after trial by every detective test they could devise, has been to establish conclusively :

First: That under certain bodily or mental conditions of one or more of the persons present, a force is exhibited sufficient to set in motion heavy substances, without the employment of any muscular force, without contact or material connection of any kind between such substances and the body of any person present.

Second: That this force can cause sounds to proceed, distinctly audible to all present, from solid substances not in contact with, nor having any visible or material connection with, the body of any person present, and which sounds are proved to proceed from such substances by the vibrations which are distinctly felt when they are touched.

Third: That this force is frequently directed by intelligence.

At *thirty-four* out of the forty meetings of your committee some of these phenomena occurred.

A description of one experiment, and the manner of conducting it, will best show the care and caution with which your committee have pursued their investigations.

So long as there was contact, or even the possibility of contact, by the hands or feet, or even by the clothes of any person in the room, with the substance moved or sounded, there could be no perfect assurance that the motions and sounds were not produced by the person so in contact. The following experiment was therefore tried:

On an occasion when eleven members of your sub-committee had been sitting round one of the dining-tables above described for forty minutes, and various motions and sounds had occurred, they, by way of test, turned the backs of their chairs to the table, at about nine inches from it. They all then knelt upon their chairs, placing their arms upon the backs thereof. In this position, their feet were of course turned away from the table, and by no possibility could be placed under it or touch the floor. The hands of each person were extended over the table at about four inches from the surface. Contact, therefore, with any part of the table could not take place without detection.

In less than a minute the table, untouched, moved *four* times; at first about *five* inches to one side, then about *twelve* inches to the opposite side, and then, in like manner, four inches and six inches respectively.

The hands of all present were next placed on the backs of their chairs, and about a foot from the table, which again moved, as before, *five* times, over spaces varying from four to six inches. Then all the chairs were removed twelve inches from the table, and each person knelt on his chair as before, this time however folding his hands behind his back, his body

being thus about eighteen inches from the table, and having the back of the chair between himself and the table. The table again moved four times, in various directions. In the course of this conclusive experiment, and in less than half-an-hour, the table thus moved, without contact or possibility of contact with any person present, thirteen times, the movements being in different directions, and some of them according to the request of various members of your sub-committee.

The table was then carefully examined, turned upside down and taken to pieces, but nothing was discovered to account for the phenomena. The experiment was conducted throughout in the full light of gas above the table.

Altogether, your sub-committee have witnessed upwards of *fifty* similar motions without contact on *eight* different evenings, in the houses of members of your sub-committee, the most careful tests being applied on each occasion.

In all similar experiments the possibility of mechanical or other contrivance was further negatived by the fact that the movements were in various directions, now to one side, then to the other; now up the room, now down the room—motions that would have required the co-operation of many hands or feet; and these, from the great size and weight of the tables, could not have been so used without the visible exercise of muscular force. Every hand and foot was plainly to be seen and could not have been moved without instant detection.

Delusion was out of the question. The motions were in various directions, and were witnessed simultaneously by all present. They were matters of measurement, and not of opinion or of fancy.

And they occurred so often, under so many and such various conditions, with such safeguards against error or deception, and with such invariable results, as to satisfy the members of your sub-committee by whom the experiments were tried, wholly sceptical as most of them were, when they entered upon the investigation, that *there is a force capable of moving heavy bodies without material contact, and which force is in some unknown manner dependent upon the presence of human beings.*

Your sub-committee have not, collectively, obtained any evidence as to the nature and source of this force, but simply as to *the fact of its existence.*

There appears to your committee to be no ground for the popular belief that the presence of a sceptic interferes in any manner with the production or action of the force.

In conclusion, your committee express their unanimous opinion that the one important physical fact thus proved to exist, that *motion may be produced in solid bodies without material contact, by some hitherto unrecognised force operating within an undefined distance from the human organism, and beyond the range of muscular action*, should be subjected to further scientific examination, with a view to ascertain its true source, nature, and power.

The notes of the experiments made at each meeting of your sub-committee are appended to this report.

ADDITIONAL EXPERIMENTS.

But although our work as a committee was ended, the phenomena we had witnessed, and of whose reality we were assured by the most conclusive evidence, could not but induce in the most thoughtful of the members various conjectures as to the nature and origin of the Force whose existence had thus been exhibited to them, and it is not surprising that wide differences of opinion should have prevailed as to its source. For my own part, I resolved to hold my judgment in suspense, and to continue the investigation with a view to the accumulation of the largest amount of facts from which alone could any insight be hoped for into the causes of the phenomena I had so unexpectedly witnessed. Accordingly, the experiments were resumed under new conditions and with further tests.

It would be tedious and needless to describe fully each of these experiments. Those of the sub-committee are fully set forth in the appendix to the published report^(a) of the Dialectical Society, to which the reader is referred. I will state briefly the most interesting results of these investigations, premising that all but three of them were made with *unpaid and unprofessional* Psychics.

1. The hand of the Psychic being held over it, a musical box upon the table untouched turned half round by four movements.
2. A sheet of paper was suspended at one corner from a long pin which was held at length between the thumb and finger of the Psychic, so that the hand could not touch the paper.

(a) Report of the Committee of the London Dialectical Society, on the asserted Phenomena of Spiritualism, p. 407 (Longman and Co.).

Many taps, as if made with the point of a needle, were distinctly heard upon the paper.

3. The sounds frequently seemed to be directed by intelligence. They were made often in pursuance of and in answer to requests—as that so many blows should be struck, that the tappings should beat time to music, that they should be loud or soft, quick or slow.

4. So also, in like manner, the motions of the table, when untouched as well as when touched, were in exact accordance with requests; such as that it should tilt on this side or on that so many times. This was so frequent an occurrence that it was impossible to attribute it to accidental coincidence. So far from obedience being rare, as some scientists have conjectured, failure was the rare exception.

5. Occasionally the phenomena continued after the departure of the Psychic from the room, but in such cases they gradually diminished in power until they ceased entirely.

All the above phenomena were witnessed by the Investigation Committee of the Dialectical Society in the course of their experiments. The following experiments were witnessed elsewhere by myself and other scientific investigators.

6. The next experiment was with the same Psychic, in the house of Dr. Edmunds, with a dining table of unusual weight and size. The same test, by turning the backs of the chairs to the table, and the experimentalists kneeling upon them, produced the same results, but to a much greater extent than we had before witnessed. In that position of the entire party, the heavy dining table moved six times—once over a space of eight inches at a swing. Then, all the party holding hands stood in a circle round the table, at the distance from it, first, of two feet, and then of three feet, *so that contact by any person present was physically impossible*. In this position, the table lurched four times, once over a space of *more than two feet*, and with great force. The extent of these movements without contact will be understood when I state that, in the course of them, *this ponderous table turned completely round*, that is to say, the end that was at the top of the room when the experiment began was at the bottom of the room when it concluded. The most remarkable part of the experiment

was the finale. The table had been turned to within about two feet of a complete reversal of its first position, and was standing out of square with the room. The party had broken up and were gathered in groups about the room. Suddenly the table was swung violently over the two feet of distance between its then position and its proper place, and set exactly square with the room, literally knocking down a lady who was standing in the way, in the act of putting on her shawl for departure. At that time *nobody was touching the table*, nor even within reach of it, except the young lady who was knocked down by it.

7. The next experiment was with another Psychic, in another place, but at the house of a personal friend, so that I have the best assurance that there could have been no such pre-arrangement of mechanism in the room as would have been necessary to produce the effects I describe.

It was a double drawing-room, in one of which was a loo table of considerable weight. The Psychic (a Lady who was *unpaid*, but known to be a Psychic), was taking tea in one room, and I had gone with three friends—one of whom had never before witnessed the phenomena—into the other room to look at some pictures. While we were thus engaged, very loud sounds, as of violent blows, came from the loo table, which stood alone in the centre of the room—*nobody being near it*. We turned to look at it, and *untouched* it tilted up almost to an angle of 45° , and remained in that position for nearly a minute. Then it fell back. Then it repeated the same movement on the other side. None of us were standing within five feet of it at that time. The room was well lighted with gas. There was no cloth upon the table, and all beneath it was distinctly visible. Only four persons were in the room, and neither of them touched the table, nor was near enough to touch it had he tried to do so. The Psychic was six feet from it.

8. Alterations in the weight of tables and other furniture are frequently exhibited. Bidding the table to be light, a finger lifts it; the next moment, bidding it to be heavy, the entire force of the body is required to raise it from the floor. It was, however, suggested by myself and others who were engaged in the *scientific* investigation of the phenomena of Psychic Force, that

possibly this change in the weight of the subject of the Force might be merely apparent, existing in our own sensations only, and not an actual change in the gravity of the wood or the operation of positive pressure. To test this conclusively, a machine was constructed with a hook to fix to the table, the index accurately marking the weight of whatever was attached to it. Applying this machine to the table and other bodies, we found that the change was a difference of actual weight, and not sensational merely, as we had suspected. This simple experiment was tried so often, and with so many precautions, as to establish it beyond doubt. The weights varied at every trial, but all proved equally the reality of the Force that was operating. One instance will suffice. Weighed by this machine, the normal weight of the table, raised from the floor 18in. on one side, was 8lb.; desired to be light, the index fell to 5lb.; desired to be heavy, it advanced to *eighty-two* pounds; and these changes were instantaneous and repeated many times.

9. Not only is motion communicated to the table or other articles of furniture in the room where the Psychic is, but everything within some definite, though as yet undefined, distance from the Psychic appears to be subjected to the Force. The smaller furniture of the room is frequently attracted to the place at which the Psychic sits. Chairs far out of reach and untouched may be seen moving along the floor in a manner singularly resembling the motion that may be observed in pieces of steel attracted by a magnet, which rise a little, fall, move on, stop, until fully within the influence of the magnetic force, and then jump to the magnet with a sudden spring. The chairs that are so often seen to come across a room to the Psychic usually approach by irregular motions, gliding for a short space, stopping, moving again, and so on, until fully within the influence, and then the last movement is by a rapid jump. Larger articles of furniture are attracted in like manner according to weight; chairs move easily the whole length of a large room, a sofa will advance 2ft. or 3ft. only. Plainly the Force is *limited* in power; it can move only a certain *weight*; bulk is no impediment to its exercise. Nor is this phenomenon

at all dubious to the spectator. It cannot be fanciful; it is not a delusion. However it may be done, *the fact* is indisputable that it *is* done. The chairs start from the wall against which they are placed; the sofa rolls forward; the smaller tables approach. This occurs in the light of gas, in the private room of any person who makes patient trial of it, and is seen by all. At one experiment six drawing-room chairs were attracted from the other side of the room over distances ranging from 6ft. to 10ft., and thrust themselves against the circle; two large easy chairs advanced 3ft.; a large settee advanced about 2ft. No person was within six feet of either of them. In another experiment, in my own lighted drawing-room, as the Psychic was entering the door with myself, *no other person being there*, an easy chair, of great weight, standing 14ft. from us, was suddenly lifted from the floor, and attracted to him with great rapidity, as if it had jumped to him, and precisely as a mass of iron jumps to a huge magnet.

Such were the phenomena witnessed by the investigators. Not once, but many times; and not passively, but subjecting them to the strictest examination and test that experience and practical Science could devise.

Nevertheless, there was a solution, often urged by opponents, that the senses of the experimentalists were deceived; that eye and ear were deluded; that what we supposed we saw and heard was a dream—in short, that we were biologised (whatever that may be); though no reason was advanced why all the experiments in electricity and magnetism, and, indeed, in all the sciences, should not be disputed on the same ground of deluded senses on the part of the operator and spectators.

Certainly such an objection would never be entertained by any person who had ever witnessed the experiments.

It is a peculiar feature of this controversy that none of its opponents have witnessed the phenomena they deny. They endeavour to answer a *fact* by an argument. But it was desired to leave no objection unanswered, however foolish and frivolous; and therefore some *mechanical* test was sought, by which the presence and power of the Force, if real and not ideal, would

be exhibited by metal and wood, which could be the subject of no self-delusion, and would register results truly, without prejudice, favour, or affection. Accordingly, an ingenious apparatus was devised by Mr. CROOKES, F.R.S., designed to exhibit the amount of any force exercised upon a board so placed that no muscular force, however great, applied to one end of it, could produce the slightest pressure on the other end. That it did not so, in fact, was proved by this, that when others than the Psychic threw into it the utmost power of their arms they produced not the slightest motion of the index that marked the degree of pressure upon the board.

Further, to make assurance doubly sure, it was tried in *five* ways:

First, the Psychic placed his finger on the end of the board, within the fulcrum, where no amount of pressure could affect the board or move the index.

Second, he placed one finger of each hand in a vessel of water standing upon the fulcrum, which made pressure on the board *scientifically* impracticable.

Third, he did not touch the apparatus at all, but sat at some distance from it, his hands and feet being held, which made muscular pressure upon any part of it *physically* impossible.

Fourth, the same experiments were tried with another Psychic, and with the same result.

Fifth, the same experiments were tried with other persons, not being Psychics, and no effect whatever was produced.

In these experiments the presence of the Psychic Force was distinctly proved, not by the fallible senses of the spectators, but by the infallible, because unimpassioned, evidence of wood and metal.

Dr. HUGGINS, F.R.S., and myself were requested to attend the trial of the experiments, as witnesses, merely to attest the honesty and accuracy of the proceedings.

Having witnessed them, we certified to Mr. CROOKES our own conviction that all had been fairly done, and that the results were shown as he had stated. Dr. HUGGINS reserved all opinion as to the causes of the phenomena, and I stated my conviction

that they were purely Psychic, and in no way produced by Spirits of the Dead.

By permission of Mr. CROOKES, I will here introduce a short abstract of his mechanical experiments, as many of my readers may not have seen them; they are extremely interesting, and being illustrated by engravings, they are easily intelligible to everybody, and will carry conviction with them.

THE MECHANICAL TESTS.

Fully to appreciate these experiments and their results, the reader should clearly understand with what object they were devised.

Mr. CROOKES, F.R.S., had witnessed many of the experiments detailed in the preceding pages, by which motion without material contact was demonstrated. He had examined them with the scepticism that is the proper attitude of Science towards new and strange facts, until they are established by repeated trials and demonstrative proofs. Having anxiously applied to them the same amount of cautious test as he would have required for a new fact in chemistry, he was satisfied that *motion without material contact* was not the unreality he had anticipated. But, although informed by all his senses that it was a truth, he knew that the senses were subject to delusion, and, therefore, he sought anxiously for some test incapable of self-deception. *Metal* and *wood*, he argued, have no emotions; *they* cannot be biologised; *they* have no imagination; *they* neither deceive themselves nor others; *they* will not only exhibit the presence of any Force that may exist, but measure the amount of it.

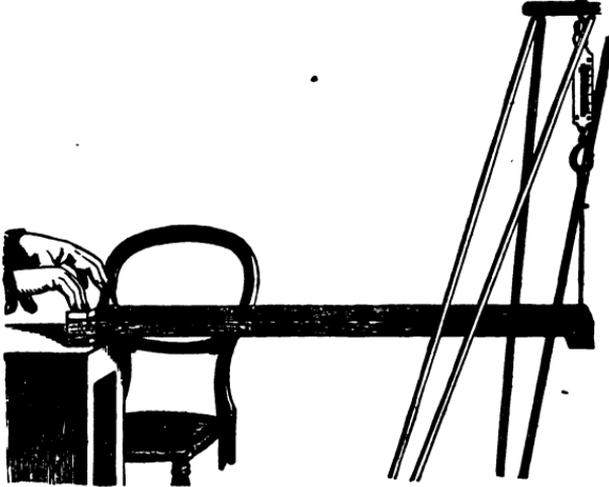
The instrument, of which the following is an accurate engraving, was the result of these reflections:—

I extract Mr. CROOKES' description of the apparatus:—

It consisted of a mahogany board, 36in. long by 9½in. wide and 1in. thick. At each end a strip of mahogany 1½in. wide was screwed on, forming feet. One end of the board rested on a firm table, whilst the other end was supported by a spring balance hanging from a substantial tripod stand. The balance was fitted with a self-registering index, in such a manner that it would record the maximum weight indicated by the

pointer. The apparatus was adjusted so that the mahogany board was horizontal, its foot resting flat on the support. In this position its weight was 3lb., as marked by the pointer of the balance.

Fig. 1.



Two knobs were screwed to the board on which the fingers were placed, and the foot or fulcrum of the board was immediately below them, so that no amount of pressure on the knobs could produce the slightest pressure on the board.

The Psychic with whom the first series of experiments was tried was Mr. HOME. The only persons present were Mr. CROOKES, F.R.S., Dr. HUGGINS, F.R.S., the brother and assistant of Mr. CROOKES, and myself; the place was a private room in Mr. CROOKES' residence. The apparatus was not seen by nor explained to the Psychic before the experiment was commenced. The room was well lighted with gas. I sat on one side of the Psychic, closely watching him. Dr. HUGGINS sat on the other side of him, keeping equally close watch upon the apparatus. Mr. CROOKES took notes of the motions of the index. The others stationed themselves near to us, as additional observers to secure the most entire accuracy. The Psychic could not possibly have moved a finger from the knob on which it was laid without being seen by

one of the three pairs of keen eyes which were purposely fixed upon them, watching.

Such being the position of the party, the experiment commenced, and I extract the result from the report of Mr. CROOKES.

Mr. HOME placed the tips of his fingers lightly on the extreme end of the mahogany board which was resting on the support, whilst Dr A. B. and myself sat, one on each side of it, watching for any effect which might be produced. Almost immediately the pointer of the balance was seen to descend. After a few seconds it rose again. This movement was repeated several times, as if by successive waves of the Psychic Force. The end of the board was observed to oscillate slowly up and down during the experiment.

Mr. HOME now of his own accord took a small hand-bell and a little card match-box, which happened to be near, and placed one under each hand, to satisfy us, as he said, that he was not producing the downward pressure (see Fig. 1). The very slow oscillation of the spring balance became more marked, and Dr. A. B., watching the index, said that he saw it descend to $6\frac{1}{2}$ lb. The normal weight of the board as so suspended being 3lb., the additional downward pull was therefore $3\frac{1}{2}$ lb. On looking immediately afterwards at the automatic register, we saw that the index had at one time descended as low as 9lb., showing a maximum pull of 6lb. upon a board whose normal weight was 3lb.

In order to see whether it was possible to produce much effect on the spring balance by pressure at the place where Mr. HOME's fingers had been, I stepped upon the table and stood on one foot at the end of the board. Dr. A. B., who was observing the index of the balance, said that the whole weight of my body (140lb.) so applied only sunk the index $1\frac{1}{2}$ lb., or 2lb. when I jerked up and down. Mr. HOME had been sitting in a low easy-chair, and could not, therefore, had he tried his utmost, have exerted any material influence on these results. I need scarcely add that his feet as well as his hands were closely guarded by all in the room.

As will be seen on referring to the cut (Fig. 1), the board was arranged perfectly horizontally, and it was particularly noticed that Mr. HOME's fingers were not at any time advanced more than $1\frac{1}{2}$ in. from the extreme end, as shown by a pencil-mark, which, with Dr. A. B.'s acquiescence, I made at the time. Now, the wooden foot being also $1\frac{1}{2}$ in. wide, and resting flat on the table, it is evident that no amount of pressure exerted within this space of $1\frac{1}{2}$ in. could produce any action on the balance. Again,

it is also evident that when the end furthest from Mr. HOME sank, the board would turn on the further edge of this foot as on a fulcrum. The arrangement was consequently that of a see-saw, 36in. in length, the fulcrum being $1\frac{1}{2}$ in. from one end; were he therefore to have exerted a downward pressure, it would have been in opposition to the force which was causing the other end of the board to move down.

The publication of these experiments in the *Quarterly Journal of Science* caused, as might have been expected, much excitement in the scientific world as well as among the general public, and many criticisms were made upon them. Some objections were offered to the sufficiency of the tests, and were thus answered by Mr. CROOKES.

The objection has been raised that announcements of such magnitude should not be made on the strength of one or two experiments hastily performed. I reply that the conclusions were not arrived at hastily, nor on the results of two or three experiments only. In my former paper (*Quarterly Journal of Science*, p. 340), I remarked:—"Not until I had witnessed these facts some half-dozen times, and scrutinised them with all the critical acumen I possess, did I become convinced of their objective reality." Before fitting up special apparatus for these experiments, I had seen on five separate occasions, objects, varying in weight from 25lb to 100 lb., temporarily influenced in such a manner, that I, and others present, could with difficulty lift them from the floor. Wishing to ascertain whether this was a physical fact, or merely due to a variation in the power of our own strength under the influence of imagination, I tested with a weighing-machine the phenomenon on two subsequent occasions when I had an opportunity of meeting Mr. HOME at the house of a friend. On the first occasion, the increase of weight was from 8lb. normally, to 36lb., 48lb., and 46lb., in three successive experiments tried under strict scrutiny. On the second occasion, tried about a fortnight after, in the presence of other observers, I found the increase of weight to be from 8lb. to 23lb., 43lb., and 27lb., in three successive trials, varying the conditions. As I had the entire management of the above-mentioned experimental trials, employed an instrument of great accuracy, and took every care to exclude the possibility of the results being influenced by trickery, I was not unprepared for a satisfactory result when the fact was properly tested in my own laboratory. The meeting on the occasion formerly described was, therefore, for the purpose of confirming my previous observations by

the application of crucial tests, with carefully-arranged apparatus of a still more delicate nature."

Mr. CROOKES modestly stated at the same time that, though new to this country, the existence of Psychic Force was not a new discovery of his own. Others had preceded him.

I am informed by my friend Professor BOUTLEW, that during the last winter he tried almost the same experiments as those here detailed, and with still more striking results. The normal tension on the dynamometer being 100lb., it was increased to about 150lb., Mr. HOME's hands being placed in contact with the apparatus in such a manner that any exertion of power on his part would diminish, instead of increase, the tension.

In 1854, COUNT AGENOR DE GASPABIN published a book, giving full details of a large series of physical experiments which he had tried with some private friends in whom this Force was found to be strongly developed. His experiments were very numerous, and were carried on under the strictest test conditions. The fact of motion of heavy bodies without mechanical contact was demonstrated over and over again. Careful experiments were made to measure the force both of gravitation and of levitation thus communicated to the substances under trial, and an ingenious plan was adopted by which COUNT DE GASPABIN was enabled to obtain a rough numerical estimate of the power of the Psychic Force in each individual. The author finally arrived at the conclusion that all these phenomena are to be accounted for by the action of natural causes, and do not require the supposition of miracles nor the intervention of spirits or diabolical influences. (He considers it as a fact fully established by his experiments, that the will, in certain states of the organism, can act at a distance on inert matter, and most of his work is devoted to ascertaining the laws and conditions under which this action manifests itself.)

In 1855, M. THURY, a Professor at the Academy of Geneva, published a work, in which he passed in review COUNT DE GASPABIN's experiments, and entered into full details of researches he had been simultaneously carrying on. Here, also, the trials were made with private friends, and were conducted with all the care which a scientific man could bring to bear on the subject.

The conclusions of M. THURY were very nearly those at which the *scientific* experimentalists in England have arrived. They are worth citing here.

1st Proposition : In the ordinary conditions of the body the will only acts directly within the sphere of the organism. 2nd Proposition : Within the organism itself there are a series of mediate acts. 3rd Proposition : The substance on which the mind acts directly—the *psychode*—is only susceptible of very simple modification under the influence of the mind ; explanations which are based on the Intervention of Spirits. M. THURY refutes all these explanations, and considers the effects due to a peculiar substance, fluid, or agent, pervading, in a manner similar to the luminiferous ether of the scientist, all matter, nervous, organic, or inorganic—which he terms *psychode*. He enters into full discussion as to the properties of this state or form of matter, and proposes the term *ectenice force* (*ixivina*, extension), for the power exerted when the mind acts at a distance through the influence of the psychode.

There is likewise another case on record in which similar test experiments were tried, with like results, by a thoroughly competent observer. The late Dr. ROBERT HARE, in one of his works, gives an engraving of an apparatus very similar to my own, by which the young man with whom he was experimenting was prevented from having any other communication with the apparatus except through water ; yet, under these circumstances the spring balance indicated the exertion of a force equal to 18lb. The details of this experiment were communicated by Dr. HARE to the American Association for the Advancement of Science, at the meeting in August, 1855.

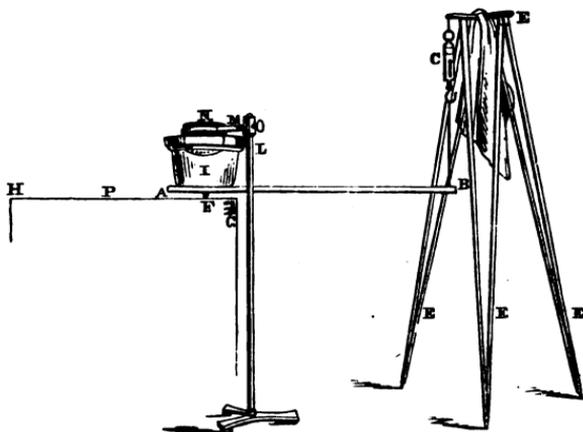
Objections having been made that Mr. HOME might possibly, unnoticed by us watchers, have slid his fingers beyond the fulcrum of the board upon the board itself, and so produced the Force whose pressure was marked by the index, Mr. CROOKES instituted a second series of experiments, with still more delicate instruments, and, as it will be seen presently, with still more decisive results. The Force was now exhibited *without contact by the Psychic*, thus effectually disposing of *that* doubt. At this trial Mr. HOME sat at a distance of *two feet* from the apparatus, his hands and feet being held by the persons present. This also was in full light of gas. The index marked a pressure of several pounds, though it was standing alone in the room, untouched by any person. In another experiment the fingers were placed in a glass of water set upon the fulcrum, which also would make access to the board by those fingers impossible. For the details of this

conclusive series of experiments I again cite Mr. CROOKES's report, to whom I am indebted also for the illustrations.

On trying these experiments for the first time, I thought that actual contact between Mr. HOME's hands and the suspended body whose weight was to be altered was essential to the exhibition of the Force; but I found afterwards that this was not a necessary condition, and I therefore arranged my apparatus in the following manner:—

The accompanying cuts (Figs. 2, 3, 4) explain the arrangement. Fig. 2 is a general view, and Figs. 3 and 4 show the essential parts more in detail. The reference letters are the same in each illustration. A B is a

Fig. 2.



mahogany board, 36in. long by 9½in. wide, and 1in. thick. It is suspended at the end, B by a spring balance, c, furnished with an automatic register, d. The balance is suspended from a very firm tripod support, e.

The following piece of apparatus is not shown in the figures. To the moving index, o, of the spring balance, a fine steel point is soldered, projecting horizontally outwards. In front of the balance, and firmly fastened to it, is a grooved frame carrying a flat box similar to the dark box of a photographic camera. This box is made to travel by clock-work horizontally in front of the moving index, and it contains a sheet of plate-glass which has been smoked over a flame. The projecting steel point impresses a mark on this smoked surface. If the balance is at rest, and the clock set going, the result is a perfectly straight horizontal line. If the clock is stopped and weights are placed on the end B of the board, the result is a vertical line, whose length depends on the weight applied. If, whilst the

clock draws the plate along, the weight of the board (or the tension on the balance) varies, the result is a curved line, from which the tension in

Fig. 3.

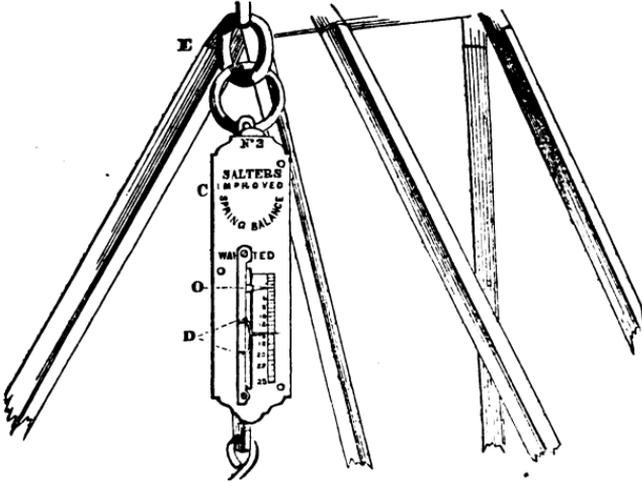
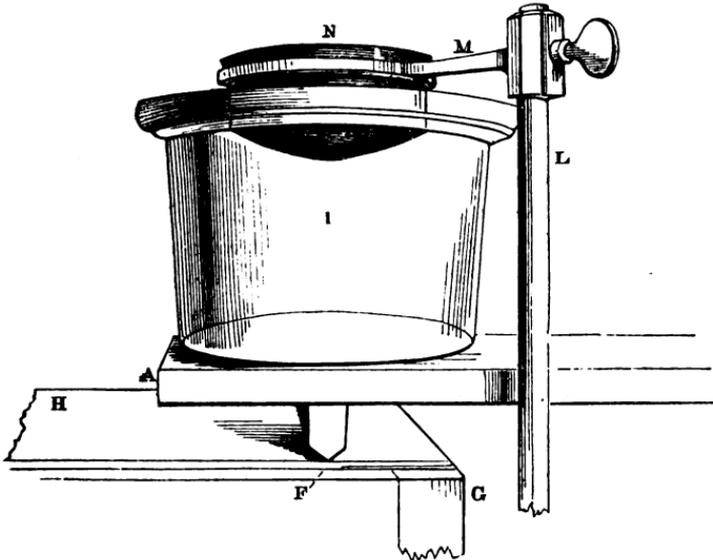


Fig. 4.



grains at any moment during the continuance of the experiments can be calculated.

The instrument was capable of registering a diminution of the force of gravitation as well as an increase; registrations of such a diminution were frequently obtained. To avoid complication, however, I will only here refer to results in which an increase of gravitation was experienced.

The end B of the board being supported by the spring balance, the end A is supported on a wooden strip, F, screwed across its lower side and cut to a knife edge (see Fig. 4). This fulcrum rests on a firm and heavy wooden stand G H. On the board, exactly over the fulcrum, is placed a large glass vessel filled with water, I. L is a massive iron stand, furnished with an arm and a ring, M N, in which rests a hemispherical copper vessel perforated with several holes at the bottom.

The iron stand is 2in. from the board A B, and the arm and copper vessel, M N, are so adjusted that the latter dips into the water $1\frac{1}{2}$ in., being $5\frac{1}{2}$ in. from the bottom of I, and 2in. from its circumference. Shaking or striking the arm M, or the vessel N, produces no appreciable mechanical effect on the board, A B, capable of affecting the balance. Dipping the hand to the fullest extent into the water in N does not produce the least appreciable action on the balance.

As the mechanical transmission of power is by this means entirely cut off between the copper vessel and the board A B, the power of muscular control is thereby completely eliminated.

For convenience I will divide the experiments into groups 1, 2, 3, &c., and I have selected one special instance in each to describe in detail. Nothing, however, is mentioned which has not been repeated more than once, and in some cases verified, in Mr. HOME's absence, with another person possessing similar powers.

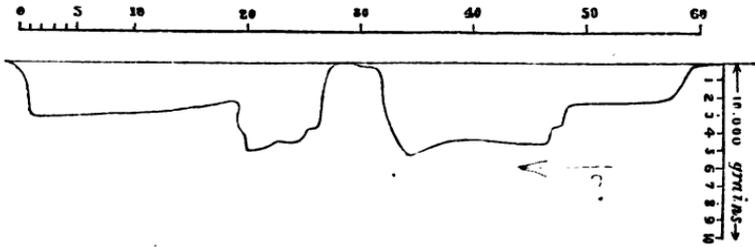
There was always ample light in the room where the experiments were conducted (my own dining-room) to see all that took place.

Experiment I.—The apparatus having been properly adjusted before Mr. HOME entered the room, he was brought in, and asked to place his fingers in the water in the copper vessel, N. He stood up and dipped the tips of the fingers of his right hand in the water, his other hand and his feet being held. When he said he felt a power, force, or influence, proceeding from his hand, I set the clock going, and almost immediately the end B of the board was seen to descend slowly and remain down for about 10 seconds; it then descended a little further, and afterwards rose to its normal height. It then descended again, rose suddenly, gradually sunk for 17 seconds, and finally rose to its normal height, where it remained till the experiment was concluded. The lowest point marked on the glass

was equivalent to a direct pull of about 5000 grains. The accompanying figure (5) is a copy of the curve traced on the glass.

Experiment II.—Contact through water having proved to be as effectual as actual mechanical contact, I wished to see if the power or force could

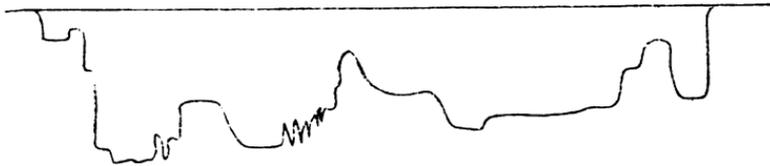
Fig. 5.
Scale of Seconds.



The horizontal scale of seconds shows the time occupied in the movements, the experiment lasting one minute. The vertical scale shows the tension in grains exerted on the balance at any moment.

affect the weight, either through other portions of the apparatus or through the air. The glass vessel and iron stand, &c., were therefore removed, as an unnecessary complication, and Mr. HOME's hands were placed on the stand of the apparatus at P (Fig. 2). A gentleman present put his hand on

Fig. 6.



In this and the two following figures the scales, both vertical and horizontal, are the same as in Fig. 5.

Mr. HOME's hands, and his foot on both Mr. HOME's feet, and I also watched him closely all the time. At the proper moment the clock was again set going; the board descended and rose in an irregular manner, the result being a curved tracing on the glass, of which Fig. 6 is a copy.

Fig. 7.



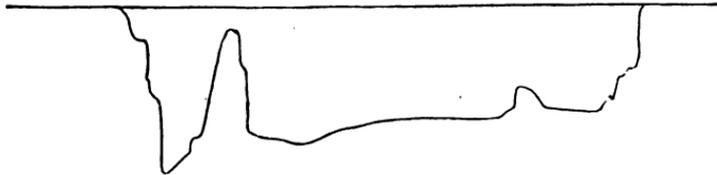
Experiment III.—Mr. HOME was now placed 1ft. from the board A B, on one side of it. His hands and feet were firmly grasped by a

bystander, and another tracing, of which Fig. 7 is a copy, was taken on the moving glass plate.

Experiment IV.—(Tried on an occasion when the power was stronger than on the previous occasions). Mr. HOME was now placed 3ft. from the apparatus, his hands and feet being tightly held. The clock was set going when he gave the word, and the end B of the board soon descended, and again rose in an irregular manner, as shown in Fig. 8.

The following series of experiments were tried with more delicate apparatus, and with another person, a lady, Mr. HOME being absent. As the lady is non-professional, I do not mention her name. She has, however,

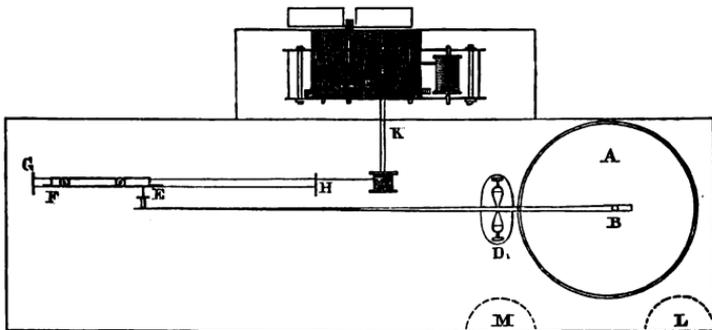
Fig. 8.



consented to meet any scientific men whom I may introduce for purposes of investigation.

A piece of thin parchment, A, Figs. 9 and 10, is stretched tightly across a circular hoop of wood. B C is a light lever turning on D. At the end B is a vertical needle point touching the membrane A, and at C is another needle point, projecting horizontally and touching a smoked glass plate,

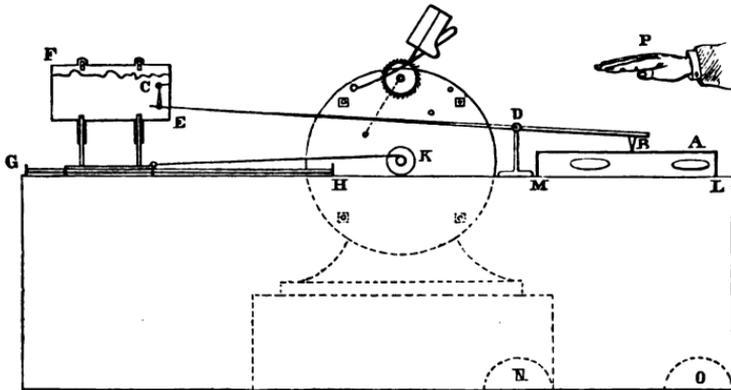
Fig. 9.



E F. This glass plate is drawn along in the direction H G by clockwork, K. The end B of the lever is weighted so that it shall quickly follow the movements of the centre of the disc, A. These movements are transmitted

and recorded on the glass plate *E F*, by means of the lever and needle point *c*. Holes are cut in the side of the hoop to allow a free passage of air to the under side of the membrane. The apparatus was well tested beforehand by myself and others, to see that no shaking or jar on the table or support would interfere with the results; the line traced by the point *c* on

Fig. 10. (Section.)



the smoked glass was perfectly straight in spite of all our attempts to influence the lever by shaking the stand or stamping on the floor.

Experiment V.—Without having the object of the instrument explained to her, the lady was brought into the room and asked to place her fingers on the wooden stand at the points *L M*, Fig. 9. I then placed my hands over hers to enable me to detect any conscious or unconscious movement on her part. Presently percussive noises were heard on the parchment resembling the dropping of grains of sand on its surface. At each percussion a fragment of graphite which I had placed on the membrane was seen to be projected upwards about 1-50 of an inch, and the end *c* of the lever moved slightly up and down. Sometimes the sounds were as rapid as those from an induction-coil, whilst at others they were more than a second apart. Five or six tracings were taken, and in all cases a movement of the end *c* of the lever was seen to have occurred with each vibration of the membrane.

In some cases the lady's hands were not so near the membrane as *L M*, but were at *N O*, Fig. 10.

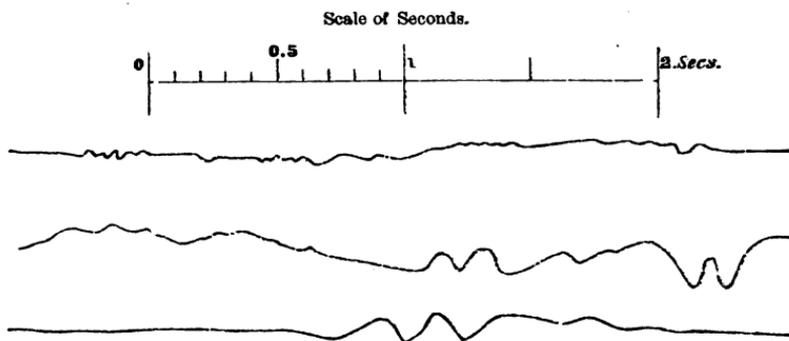
The accompanying Fig. 11 gives tracings taken from the plates used on these occasions.

Experiment VI.—Having met with these results in Mr. HOME's absence,

I was anxious to see what action would be produced on the instrument in his presence.

Accordingly I asked him to try, but without explaining the instrument to him.

Fig. 11.



I grasped Mr. HOME's right arm above the wrist and held his hand over the membrane, about 10in. from its surface, in the position shown at P, Fig. 10. His other hand was held by a friend. After remaining in this position for about half a minute, Mr. HOME said he felt some influence passing. I then set the clock going, and we all saw the index, c, moving up and down. The movements were much slower than in the former case, and were almost entirely unaccompanied by the percussive vibrations then noticed.

Figs. 12 and 13 show the curves produced on the glass on two of these occasions.

Figs. 11, 12, 13 are magnified.

These experiments *confirmed beyond doubt* the conclusions at which I arrived in my former paper, namely, the existence of a force associated, in some manner not yet explained, with the human organisation, by which force increased weight is capable of being imparted to solid bodies without physical contact. In the case of Mr. HOME, the development of this force varies enormously, not only from week to week, but from hour to hour; on some occasions the Force is inappreciable by my tests for an hour or more, and then suddenly reappears in great strength. It is capable of acting at a distance from Mr. HOME (not unfrequently as far as two or three feet), but is always strongest close to him.

Being firmly convinced that there could be no manifestation of one form of force without the corresponding expenditure of some other form of force,

I for a long time searched in vain for evidence of any force or power being used up in the production of these results.

Now, however, having seen more of Mr. HOME, I think I perceive what it is that this Psychic Force uses up for its development. In employing the terms *vital force* or *nervous energy*, I am aware that I am employing words which convey very different significations to many investigators; but after witnessing the painful state of nervous and bodily prostration in which some of these experiments have left Mr. HOME—after seeing him

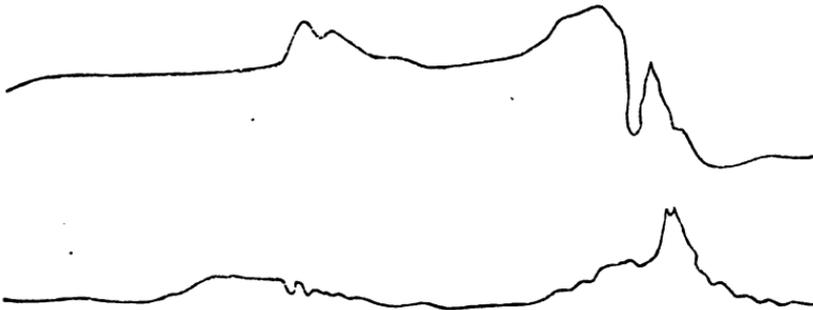
Fig. 12.



lying in an almost fainting condition on the floor, pale and speechless—I could scarcely doubt that the evolution of Psychic Force is accompanied by a corresponding drain on vital force.

I have ventured to give this new force the name of *Psychic Force*, because of its manifest relationship to certain psychological conditions, and because I was most desirous to avoid the foregone conclusions implied in the title under which it has hitherto been claimed as belonging to a

Fig. 13.



province beyond the range of experiment and argument. But having found that it is within the province of purely scientific research, it is entitled to be known by a scientific name, and I do not think a more appropriate one could have been selected.

To witness exhibitions of this force it is not necessary to have access to known psychics. The force itself is probably possessed by all human beings, although the individuals endowed with an extraordinary amount of it are doubtless few. Within the last twelve months I have met in private families five or six persons possessing a sufficiently vigorous development

to make me feel confident that similar results might be produced through their means to those here recorded, provided the experimentalist worked with more delicate apparatus, capable of indicating a fraction of a grain instead of recording pounds and ounces only.

Thus did passionless, mindless, unimaginative mechanism completely confirm the evidence of the senses.

It would be difficult to devise anything more simple in construction, more perfect in demonstration, more satisfactory to the reason and to the sight than—so little open to objection, so seemingly incapable of being misrepresented or misunderstood as—this apparatus. No experiments could be more carefully conducted, and it would be difficult to describe them in language more plain and precise than that employed by Mr. CROOKES. If words failed to convey a distinct conception of the apparatus employed, there were the engravings that make it plain to the understandings of those least accustomed to descriptions of mechanism. It would appear to be almost *impossible* that any *scientific* man could have really mistaken the true nature of the test, after viewing these engravings and reading the description of the experiment.

DR. CARPENTER ANSWERED.

Dr. CARPENTER certainly cannot plead such ignorance, for he *has* seen and read, and, as report still asserts, in spite of the disclaimer in the *Quarterly Review*, has actually reviewed the very articles in which those experiments are narrated, with the illustrations before his eyes. Nevertheless, with these engravings and descriptions before him, Dr. CARPENTER has dared, in a lecture to a public institution, (according to a report of it published in the *Daily Telegraph*), not merely to *misrepresent*, for that is too mild a term for an act of deliberate and conscious untruth, but to *falsify* that apparatus and that experiment, in manner following:

He is represented to have said in substance (for I have no report of his very words) "I will shew you the fallacy of Mr. CROOKES's experiment. Here is a pair of scales. I place in one a glass of water—in the other a weight. They are in perfect equipoise. I thrust my finger into the water. You see, the

scale descends. My finger being heavier than the water it displaced, it necessarily turns the scale. This is the famous crucial test by which Mr. CROOKES pretends to prove the existence of Psychic Force. Mr. HOME placed his finger in a cup of water set upon his test board, and the index marked an access of pressure. Of course it did, and I have shown you how?"

Dr. CARPENTER has displayed throughout this controversy so entire a disregard for truth and fair dealing, that the reader will not be surprised to learn that he cannot even describe an apparatus and an experiment without falsifying it. Mr. CROOKES tried *no* such experiment, and therefore drew from it *no* such conclusion. A glance at the engraving of his apparatus on page 32 will prove this. It will be seen there that the vessel of water was placed immediately *above the fulcrum* of the test board, *where no amount of pressure could affect the board*, the object of the experiment being to meet an objection that had been made to the previous experiment (in which the fingers had been placed upon the fulcrum), that the Psychic might have stealthily slipped his fingers beyond the edge of the fulcrum up to the board, and *so* have produced the exhibition of Force upon the board as shown by the index. The fingers in a glass of water *could* not be slid upon the test board in the manner suggested.

This disgraceful misrepresentation of an important experiment was challenged in the lecture room. But with the characteristic cowardice of conscious unfairness, Dr. CARPENTER would "stay no further question," but left the platform without explanation of error, or apology for having publicly accused a brother scientist of almost childish ignorance and imbecility. But he was not permitted to escape the censure he had provoked by his unscrupulous misconduct. In answer to a letter addressed to him, protesting against his deliberate falsification of Mr. CROOKES'S experiment, he endeavours to relieve himself from the odium due to such an act by shifting the responsibility upon others! He says, "What I stated as to Mr. CROOKES'S experiment was *on their authority* (*i.e.*, of Professor STOKES and Sir CHAS. WHEAT-

STONE), as I shall be prepared to prove if the correctness of that statement is impugned.”

But Dr. CARPENTER cannot thus wriggle out of it. He undoubtedly had before him and must have read the article in the *Quarterly Journal of Science*, in which the apparatus and experiment are fully described, both verbally and by illustration, so that it was impossible for him not to have known well that they in no manner resembled that pretended illustration which he adduced to prove the worthlessness of the evidence of a Psychic Force. And even if he had not this knowledge, all will agree that a man has no right to assail the reputation of another man on something told him by somebody, when he has within his reach the means of ascertaining beyond question what the truth and the fact were.

Now Dr. CARPENTER must have known that this was *not* Mr. CROOKES's experiment, nor anything at all resembling it, for he had that experiment before him fully described, and he practised a most unworthy trick upon his audience, presuming on their ignorance, by palming upon them an imposture of his own invention as the experiment of his adversary, for the paltry purpose of giving to himself a temporary triumph, by confuting that which he well knew had never been advanced.

The glance of a moment at the apparatus of Mr. CROOKES will satisfy the reader that the experiment with the finger in water placed on a fulcrum was not in any manner represented by water placed in a balance, for no amount of pressure on water standing on the fulcrum could affect the board above the fulcrum. The sole purpose of the experiment with the water was to meet the objection which had been made, that the Psychic might possibly have glided his hand unperceived from the space below the fulcrum to the board above it, and so to have produced the pressure that was exhibited.

Such perversions of truth, such resorts to dishonest and dishonourable falsifications of facts, are infinitely disgraceful, and Science herself is degraded and dishonoured in the persons of those who resort to them in scientific controversy.

WHAT IS THE PSYCHIC FORCE?

A FORCE is visibly, palpably, audibly operating before us. It is manifest to three of our senses. *Can* all of these be deceived? Is it possible that the three senses of ten persons, seeing, hearing, and feeling the same thing at the same moment in the same manner, can be the dupes of a mere imagination? Were the motions we witnessed real or fanciful; were the sounds we heard actual or ideal? If what we saw and heard was not sufficient proof of the *fact*, all evidence is worthless and truth is unattainable. On similar evidence a jury would instantly convict of murder, and a judge would hang without hesitation. All the business of life is conducted in reliance upon less evidence of the same senses. If we are to reject the testimony of such experiments as these, we must reject all testimony of the eye, the ear, and the touch. Three-fourths of the sciences are based upon experiments infinitely more open to doubt and question than those which establish the existence of the Force, whatever it may be, that moves and makes audible sounds on heavy bodies without physical contact or connection. Its existence is demonstrated by evidence as certain and perfect as that which proves the existence of electricity, magnetism, and other invisible and intangible forces of nature. It was impossible for the Dialectical subcommittee with such evidence of motion without contact, repeated *thirty-eight* times, under various tests and divers conditions, to do other than acknowledge *the existence* of the Force we had thought by our experiments to disprove, although we failed to come to any satisfactory conclusion with respect to the *source* and *nature* of that Force. Upon these points very wide differences of opinion prevailed, some deeming it to be a spiritual presence, others, and the scientific observers especially, coinciding with my

own conviction that it is a *purely physical force*, proceeding in some as yet untraced manner from the nerve organization—probably the nerve atmosphere which Dr. Richardson contends to be enveloping all of us,—extended in Psychics to an abnormal distance from the extremities of the nerves, and directed by the same intelligence that governs the action of the nerves themselves; the motive power being frequently that unconscious action of the brain which Dr. Carpenter has investigated with so much ability and success, to which he has given the name of “Unconscious Cerebration,” and for asserting which he has been so mercilessly accused of gullibility by his brother Scientists.

But it will be just to state fairly the contention on either side among those who acknowledge the existence of the Force but differ in opinion as to its origin.

The most numerous, though not the most scientific, section are they who, unable to explain the phenomena upon the instant, have adopted the time-honoured practice of solving a scientific problem by the easy process of assigning it to the convenient region of the supernatural. As it ever was, so it is now. Each one of Nature's Forces has in its turn been attributed to angels or demons, before Science condescended to recognise its facts and give them a place in its own domain. As soon as the fact is seized, stripped of all that fancy has thrown about it, investigated, measured, and found to fit, as all facts do, with the natural order of things, that fact has instantly ceased to be the subject of superstition.

So it will be with the Psychic Force. When recognised by Science as one of the natural forces, it will speedily cease to be a superstition itself or the parent of superstition. All honour to the man who has had the courage to grapple with it and drag it out of the possession of Superstition into the domain of Science.

Wherefore do we call it *Psychic Force*? To distinguish it from *Muscular Force*.

Distinctly associated with the human organisation, it may be, probably it is, that it exists in all human beings in greater or less degree; but so far the evidence is, that it is possessed to an

extraordinary extent by certain persons, to whom the appropriate name of *Psychics* is proposed to be given. It is not exhibited save within an undefined, but still limited, circle about a Psychic. It varies from day to day, from hour to hour, almost from minute to minute, according to the nervous condition of the Psychic. It issues in pulsations, as was plainly manifested in the experiments made with Mr. Crookes's mechanism. Whatever affects the Psychic instantly affects the Force. It comes with him and goes with him. All the conditions, more fully to be set out hereafter, point directly to the Psychic as the source of it.

And that is the conclusion of the *scientific* section of the investigators, with few exceptions.

On the other hand, the majority of the unscientific relieve their minds from the disagreeable condition of doubt by assuming the Force to be spiritual. This is so easy a solution of every problem in nature we are unable to solve at once, that it has ever been the favourite means of accounting for the unaccountable.

THE THEORY OF SPIRITUALISM.

The "Spiritualists" (for that is the name they have assumed in accordance with their theory), have exercised considerable ingenuity in moulding that theory to the facts. Their creed, as I gather it from the most intelligent of its votaries, may be thus briefly described :—

Man, they say, is composed of body, mind, and spirit. A blow will extinguish the mind, and the body inhabited by the spirit may continue to live. When the body dies, the spirit which occupied it in life passes into a new existence, in which, as it was here, it is surrounded by conditions adapted to its structure as a being which by earthly senses is deemed immaterial because impalpable to them, but which is really very refined matter. Into this new existence it passes precisely as it left the present life, taking with it the mental, but not the bodily, characteristics it had on earth, so far as these are adapted to the altered conditions of that new existence. The intellect is enlarged to the extent only of the increased power of obtaining intelligence

necessarily resulting from exemption from the laws of gravitation and the conditions of time and space that limit the powers of the spirit while it is in the flesh.

The reason, say the Spiritualists, why we are not always conscious of the presence of the spirits that are thronging everywhere about us is, that our senses are constructed to perceive only the coarse material of this earth, and therefore we cannot perceive the refined matter of which a spirit is composed. If a spirit touches us, we can no more feel the touch than we can *feel* the particles of musk that another sense tells us are filling the room. The disembodied spirit has no means of communication with us in ordinary circumstances, because its substance is not perceptible by our senses.

A Psychic (or Medium, as the Spiritualists call him) is a person possessing an abnormal amount of animal magnetism (which is the name *they* give to what *we* call the Psychic Force). This is something that proceeds from the human body—matter of some kind projected from the whole or part of the structure, and, like the other forces of nature, is perceptible to our senses only when it meets with some obstacle. All possess it more or less. The medium has it more, and thus attracts it from those with whom he is in communication. When this effluent substance is sufficiently abundant, the spirits, which are always about us, are enabled to use it as a medium for communication between themselves and human beings. They have power to seize and shape it into a substance palpable to our senses. Hence the need for the presence of a medium. Hence the uncertainty of the manifestations. Hence the continual fluctuations of the magnetic material, according to external conditions of health, atmosphere, temperature, and other influences.

A spirit, say the Spiritualists, of necessity can manifest itself to our senses only by assuming a substance sufficiently solid to make an impression upon some one of them. We might be surrounded by spirits and yet be utterly unconscious of their presence. The air may be so thronged with them that we could never lift an arm without touching or passing through a spirit, and yet we might live and die in perfect ignorance of their presence,

because our senses are incapable of perceiving the impressions made by matter more refined than that which they are constructed to perceive.

In this Spiritualist creed there is nothing absolutely *impossible*. It may be that, as Milton sings :

Millions of spiritual creatures walk the earth
Unseen, both when we wake and when we sleep.

As Lord Lytton says, seeing how life teems in all the visible creation, it may be a not unreasonable presumption that the vast interspaces between the worlds are not altogether void of life, and it is conceivable that spirit, in its infinite immateriality, may find there a dwelling-place.

But, however ingenious this creed may be, the question is, if it be not purely speculative—a merely fanciful creation, unsupported by any solid *facts*? True, that it explains all the phenomena of Psychism, but so it would explain every other problem in science—and it has, in fact, been invoked for that purpose in all ages and countries. All of the many marvels of science were sought to be explained at first by the easy process of referring them to supernatural (or spirit) power, until sober-minded men investigated them, and proved them to be purely natural, and then they ceased to be the subjects of wonder and the basis of superstition.

So it will be with the speculations of Spiritualism. Touched by Science its visions will vanish, and the facts that lie at the bottom of it will become a solid and invaluable addition to our knowledge of the physiology and psychology of Man.

THE SCIENTIFIC THEORY OF PSYCHIC FORCE.

On the other hand, the scientific theory of the Psychic Force, whose existence may now be deemed to be demonstrated, may be shortly stated thus :—

There is a Force proceeding from, or directly associated with, the human organisation, which, in certain persons and under certain conditions, can cause motion in heavy bodies, and produce audible and palpable sounds in such bodies, without muscular contact or any material connection between any person present and the heavy body so moved or on which the sounds are produced.

This Force appears to be frequently directed by some intelligence.

For the reasons presently to be specified, we conclude that this Force is generated in certain persons of peculiar nervous organisation in sufficient power to operate beyond bodily contact. To these persons the Spiritualists have given the name of "mediums," on the assumption that they are the means of communication between disembodied spirits and the living; but they who, with myself, dispute the theory of Spiritualism, have given to those persons the more appropriate name of *Psychics*.

There can be little doubt that the Force is possessed by every human being,—that it is a necessary condition of the living nerve, if, indeed, it be not the vital force itself; but that it is possessed by Psychics in an extraordinary degree. In ordinary persons it ceases to operate at or near the extremities of the nerves; in Psychics it flows beyond them in waves of varying volume and power. Mr. Crookes, indeed, has recently constructed an instrument of extreme delicacy, which seems to indicate the existence of the Psychic Force, more or less, in every person with whom he has made trial of it.

The existence of such a Force is asserted by Dr. Richardson, in a recent article in the *Popular Science Review*, in which he contends that there is a nerve fluid (or ether), with which the nerves are enveloped, and by whose help it is that the motion of their molecules communicates sensations and transmits the commands of the will. This nerve ether is, he thinks, no other than the vital force. It extends with all of us somewhat beyond the extremities of the nerve structure, and even beyond the surface of the body, encompassing us wholly with an envelope of nerve atmosphere, which varies in its depth and intensity in various persons. This, he contends, will solve many difficult problems in Physiology and throw a new light on many obscurities in Psychology and Mental Philosophy.

If Dr. Richardson be confirmed in this discovery, there can be little doubt that the Psychic Force is that nerve ether or nerve atmosphere.

But, say the Spiritualists, your Psychic Force is directed by some intelligence. How is *that* to be accounted for? Whence and what is that intelligence? Unless you can show that it proceeds from the Psychic, or from some person present, you *must* conclude that it is the intelligence of some other being, and as no other being is *visibly* present that being must be a *spirit*.

To this argument of the Spiritualists, urged in a tone of triumph, the advocates of a Psychic Force have an answer which appears to be complete.

THE ANSWER OF SCIENCE.

WE contend that the intelligence that directs the Psychic Force is the intelligence of the Psychic, and no other. The reasons for such a conclusion will be set forth presently, and will be admitted by the impartial to be overwhelming. All the conditions requisite to the production and exercise of the Force are consistent with its origin in and direction by the Psychic and *inconsistent* with any conceivable action of the disembodied spirits of the dead.

But for the manner in which the Force *may be* governed I must turn to Dr. CARPENTER; as for its *possible* source I have referred to the authority of Dr. RICHARDSON. These must be taken for suggestions merely, for in truth nothing is yet positively *known* beyond the fact that such a Force exists. How it is produced, how it operates, how it is directed, are subjects for future inquiry by experiment and argument. We can as yet affirm only that *it is*.

A possible explanation may be found in Dr. CARPENTER's theory of "Unconscious Cerebration," or, in less learned language, the capacity of the brain, under certain conditions, to work, not only without the will, but without the consciousness, of the individual. A familiar instance of this is seen in the case of a person stunned. He will walk, talk, return to his home, undress, go to bed, although consciousness is annihilated, and when he "recovers his senses" as it is called, he has no memory of anything, not even of time, from the moment when the blow was received to the moment of consciousness revived. Another instance is the frequent one of somnambulism, natural and artificial, in both of which states the brain acts perfectly and often more powerfully than in the normal state, although consciousness is suspended.

Numerous instances are collected by Dr. CARPENTER, who attributes to this curious condition (rightly, as I believe) most of the phenomena of mesmerism, electro-biology, and other hitherto mysterious mental states which scientific men, unable to explain upon the instant, have disposed of by easy process of denying or ignoring them, and which unreflecting persons have attributed to supernatural influences as the solution nearest at hand. But if "Unconscious Cerebration" be a fact, nothing is more simple and obvious than the application of it to a multitude of facts that have long perplexed physiologists and mental philosophers, and for accepting which as *facts* (though they could not explain them) so many honest observers have been called dupes or knaves.

This, then, is probably the Intelligence that directs the Psychic Force. It is the brain of the Psychic in that condition of "Unconscious Cerebration" of which Dr. CARPENTER has demonstrated the existence; a theory which he has maintained in defiance of the laugh against him as gullible, raised by his scientific brethren, always jealous of those who claim the honour of a new discovery.

The Scientific theory, then, which I venture to oppose to the Spiritualist theory of the phenomena, whose existence is demonstrated by evidence as conclusive as any that establishes the other facts of Science, is that *the Force whose operations are seen in the motion of heavy bodies when untouched and heard in the audible and palpable sounds that come from them is the Force which Dr. Richardson contends to be always existing in the nerve system, and that the Intelligence which as certainly often directs that Force is the "Unconscious Cerebration" of Dr. Carpenter.*

THE ARGUMENT FOR THE PSYCHIC THEORY.

I now propose to set forth the *facts* that appear to me to give consistent support to the *Scientific* theory thus stated, and to be entirely *inconsistent* with the Spiritualist theory. These are—

I. The necessity for the presence of a human being having some unascertained peculiarity of constitution, whom the Spiritualists

call a "Medium," but to whom we have preferred to give the more scientific title of "a Psychic."

II. A Psychic is a person possessing no known superiority of mind or body. He differs in no perceptible manner from other persons. The faculty is not associated with any special intelligence or virtue, nor with any condition of health or of disease, nor with any sex, age, complexion, or form. A child is usually a more powerful Psychic than a man. The possessor of the Psychic Force has no consciousness of its existence in himself until accident discovers it.

III. The Psychic is an *unconscious* agent. He can neither command nor control the Force. It does not come nor depart at his will. He has no more knowledge of its presence than has any of the spectators.

IV. Psychic Force is always exhibited within a limited range from the person of the Psychic. Its power appears to decline according to distance, but at what ratio remains to be determined. It is, however, certain that usually, if not always, it operates far beyond the reach of his muscular powers.

V. It is sometimes, but rarely, exhibited when the Psychic is alone. As a rule, the presence of other persons promotes the operation of the Force.

VI. For this purpose such other persons must be within the range of the Force proceeding from the Psychic.

VII. It is found to be advantageous, though by no means necessary, that the persons present with the Psychic should form a chain after the manner of the electric chain. The Force is promoted by the joining of hands; but almost the same effect is produced by laying the hands on a table or on any other solid body, such body appearing to act in the nature of a *conductor*, and possibly of a *collector*, of the Force.

VIII. The persons forming the chain may be of any age, sex, intelligence, or virtue. Scepticism *in no way* impedes the manifestation of the Force. But there are certain persons whose presence, from some *physical* cause not yet ascertained, operates precisely as does the interposition of a non-conducting substance in the electric chain. They impede the flow of the Force, but

how or why we are wholly ignorant. This, however, is of infrequent occurrence, and is in no way connected with belief or disbelief. Believers are non-conductors equally with others.

IX. It is not known how the Psychic Force is affected by the presence of other persons. One probable conjecture is that all human beings possess Psychic Force in a greater or less degree, and that the greater Force of the Psychic attracts to itself the lesser Psychic Forces of the persons with whom he is sitting, the use of the circle or chain being to collect and convey to him the Psychic Force of the whole party.

X. The Force is materially affected by the conditions attendant on the formation of the circle. Whatever tends to bring all the brains present into harmonious action obviously promotes the flow of the Force. General conversation on a common topic, prayer, recitation, and, above all, music, are marked and universal in their effect of increasing the flow and power of the Force. On the contrary, whatever directs the various brains in the circle into diverse action, as talking on different matters, or on themes creating discordant opinion or exciting rival emotions, operates invariably to weaken, and often to extinguish, the Force during the continuance of such diversity of mental action: and it is revived on recourse to music, or whatever has the effect of restoring harmonious brain action.

Note.—If there be, as many physiologists contend, a stream of waves of vital force incessantly thrown off by the nerve centres, and to which the name of “brain wave” has been given, it is readily intelligible how discordant discussion should dissipate the Psychic Force and music promote it. When all the brains present are working in harmony, the waves thrown off are *synchronous*, and swell the flow of the stream through the conductor to the attracting Force of the Psychic. But if the actions of the brains are discordant, the brain waves, by a well known law, fall foul of each other, and being thus partially neutralized, the flow of the stream is diminished, and even destroyed.

XI. The condition of the Psychic is found largely to affect the exhibition of the Force. Its presence and power are dependent upon the state of mind and of body in the Psychic, and vary from time to time with that state. Often a headache will destroy it; a

cup of tea, that revives the nerve energy, revives also the Psychic Force. The state of the atmosphere visibly influences it. Accordingly as it is wet or dry, cold or hot, so is the power lesser or greater. But the state of the weather does not affect all Psychics alike. That which gives power to some takes it away from others. I know two powerful Psychics in private life, in one of whom the Force is at zero in hot and moist weather, vigorous in cold and dry weather; in the other, it is powerful in the former, almost powerless in the latter. But in both, the weather that thus differently affects their Psychic Force affects also their general health. As a rule, however, a dry atmosphere favours the Force, a moist atmosphere weakens it; in this having a singular resemblance to the Forces of Magnetism and Electricity. All Psychics are observed to be highly electrical. In countries where the atmosphere is dry, as in the United States and Australia, the Psychic Force is very much more powerfully developed than in our own moist climate.

XII. The degree of the Force varies continually during the experiments, not merely from hour to hour, but almost from minute to minute. The opening of a door will sometimes produce an immediate flow of it; the change of two or three degrees of temperature will raise or depress it. In fact, whatever affects the Psychic personally, and to a less extent the persons with him, affects the power of the Force.

XIII. The communications made by the intelligence that undoubtedly often directs the Force are characteristic of the Psychic; as he is so they are. The language, and even spelling, are such as he uses; the ideas are such as he would be likely to possess—neither better nor worse. If he were to communicate avowedly with his own bodily organs, it would be done in precisely the same manner. Thus, the communications in the presence of an English Psychic are in English phrase, of a Scotch Psychic in Scotticisms, of a provincial in his own provincialisms, of a Frenchman in French. The *ideas* conveyed resemble those of the Psychic. If he is intellectual, so are the communications. If he is vulgar or uneducated, so are they. Their religious tone varies with the faith of the Psychic. In the presence of a Methodist

Psychic, the communications are Methodistical; in that of a Roman Catholic, decidedly Papistical; with a Unitarian, free-thinking views prevail. If the Psychic cannot spell, the communications are faulty in the spelling. If the Psychic is ignorant of grammar, the like defect is seen in the sentences spelled by the Force. If the Psychic is ill-informed on matters of fact, as in science, and such like, the alleged spirit messages exhibit the same errors; and if the communication has relation to a future state, the descriptions given of that sphere of existence are in strict accordance with the notions which such a person as the Psychic might be expected to entertain of it.

Note.—I am aware that the answer of the Spiritualists to this patent objection to their theory is the ingenious one, that when the spirit quits its mortal tenement, it carries with it all the mental qualities and faculties it possessed here—the same knowledge and no other—and that in its new sphere of existence it can obtain further intelligence only by the same process of instruction as in this world. Hence its inability to give any new knowledge. It is further asserted that we who are in the flesh are attended only by spirits who sympathise with our own mental condition, and hence the resemblances I have stated between their communications and the mental condition of the Psychic. But the reader will say if this is not more like a clever theory, invented to explain the facts, than the natural deduction from the facts themselves. It appears to me to be incredible that the soul, having passed from this world into a new stage of existence, with powers enlarged to, at least, the extent necessarily consequent upon the condition of immateriality, and its resulting exemption from the laws of gravitation and from time and space as conceived by the material brain, should not be better informed than we who are in the flesh can be as to which of many religions is the true one. Yet do we find different communications, equally alleged to be spiritual, differing essentially as to what is the truth, each declaring with the same positiveness that its own creed is the only true one, and that creed being always the creed of the Psychic!

XIV. The Force exhibits itself in pulsations or undulations. It is never steadily continuous. Moreover, it is rhythmical in its exhibitions, coming at equal intervals. The rappings are very regular; the motions of heavy bodies observe perfect time. The tremors of the table, of the chair, of the floor of the room, are as

rapid and as regular as the waves of light or sound. When a table or a chair rises from the floor, it does not ascend with a jerk, as if pushed up, nor descend with a thump, as if a sustaining hand had been removed from it. It soars and sinks like a balloon, precisely as if it had been released from the force of gravity, and was going upward by its own levity. The difference to the touch between the operation of the Psychic Force and of muscular force is in this particular so manifest as to be palpable instantly to all who felt it. When solid bodies are seen to rise without contact, the motion is very peculiar and always the same. They do not dart straight up, like a balloon, but with a swinging motion, much like that of a pendulum. They do not remain still when at the highest ascent, but quiver with immense rapidity, continue the pendulous motion, and return with an irregular hesitating descent, after the manner of a parachute. In Mr. CROOKES'S experiments with the mechanical board described in a previous page, this pulsatory motion was very distinctly marked, the indicator attached to the weighing machine showing an incessant tremulous up-and-down movement throughout the operation of the Force, such movement being manifestly the flow of the Force in synchronous waves varying in intensity.

XV. The Force is materially influenced by the electric and magnetic conditions of the atmosphere and of surrounding bodies; by heat and cold, by moisture and dryness, and still more by the nervous condition of the persons present, and especially of the Psychic.

Note.—These conditions are precisely such as would be likely to affect the flow of the Force from the Psychic, but difficult to assert as being likely to affect disembodied spirits. It cannot be said to be impossible, *but it is certainly highly improbable*, that spirits, according to any reasonable conception of their nature, could be impeded in their action by a shower of rain, a close room, the order in which people sit, the headache of one person and the toothache of another. But these incidents would necessarily affect a Psychic Force, and do *in fact* manifestly disturb it.

XVI. The Force is not exhibited immediately, save in rare instances. It grows by degrees. There is an interval of more or less duration, frequently above half an hour, before any

symptoms of its presence are shown. Let a stethoscope be applied to the table. At first faint creakings are audible *in the body* (not at the surface) of the wood, as if the point of a pin was striking its *fibres*. The sounds grow louder by degrees, and occasionally are so loud as to be audible in distant rooms, and after a time they proceed from the wall, the ceiling, and furniture far beyond the reach of the Psychic. Wherever heard, they appear to come from *within*, rather than from the surface of, the body struck. The vibrations are distinctly *felt* by the hand, insomuch that a deaf person can usually discover the blows as readily as they who have the use of their ears. The motions also grow in vigour as the Force accumulates. They begin with a faint tremor of the solid body charged with the Force. Then there is usually a violent shaking of the entire fabric. Then come tiltings, now on this side, now on that. These actions of the Force certainly indicate the operation of a purely mundane power. The process is precisely similar to that necessary for the gathering of the Electric Force, which must be accumulated before it becomes powerful, or even sensible to us. So with the Psychic Force. There is waiting for an indefinite time, and then a slow but steady growth of the Force; then it gradually becomes exhausted, and, after a while, fails altogether.

XVII. Anything that strongly diverts the mind of the Psychic or the thoughts of the persons present *invariably* diminishes the Force.

XVIII. The presence of *sceptics* is *no* obstacle to the exhibition of the Force. It is otherwise with positive *antagonism*, which, by disturbing the mind of the Psychic, and perhaps of others, probably destroys that harmonious action of the brain, which appears to be essential to the exhibition of the Psychic Force.

Note.—All of the above conditions are wholly *inconsistent* with the *spiritual* theory, and entirely consistent with the *physical* theory, of the origin of this Force.

XIX. So far as I have found in my own experiments, and by the reported experience of others, it appears that the intelligence of the communications is measured by the intelligence of

the Psychic. Nothing is conveyed by the communications that is not in the *mind* of the Psychic or of some person present. It may not be in their *recollection*, but the impression has been at some past time made upon the mind.

XX. There is nothing in the character or substance of the communications indicating an intelligence higher than our own, or a larger knowledge. They are often useless and purposeless. They are rarely absolute nonsense; but as rarely do they exhibit anything beyond ordinary intelligence. They consist mainly of moral platitudes; both thought and language reflect precisely the thoughts and language of the Psychic.

XXI. Not unfrequently the communications are *false* in point of fact. They are often *tentative*, as if the directing intelligence had an imperfect perception of the object or subject, or as if it were *guessing* rather than *knowing* the answer to be given. This is precisely what would occur if the communication came from the brain of the Psychic; but wholly inconsistent with supra-mundane intelligence.

XXII. The descriptions of a future life are precisely such as the fancy of the Psychic would form. By a child Psychic they are painted according to a child's notion of heaven. When the Psychic is a man or a woman, they are described in accordance with the particular conceptions of a heaven entertained by that Psychic.

Note.—These differences as to the process of death and the conditions of a future life prove that the descriptions do not proceed from any intelligence actually acquainted with them, and therefore *not* from the spirits of the dead. For instance, Mrs. De Morgan, in her very able and interesting work entitled "From Matter to Spirit," narrates, with evident truthfulness, the description given by a child Psychic of her sister's death; how she saw two spirits waiting by her bedside; how her spirit rose from the breathless body, and, having joined the other twain, the three walked together out of the room, and up towards the sky until they were lost to sight in a cloud, their destination being one of the planets. Now this is manifestly a child's conception of angels, of heaven, and of distance. She supposed the planets to be within an easy walk! And this is a fair specimen of all of such communications as I have heard or read. All are obviously the notions of the Psychic.

XXIII. The movements of solid bodies, as previously described, when made without contact, are, if not always, almost always *towards* the Psychic. As if by some attractive force in him, the chairs and other furniture, when moving spontaneously from their places, at whatever distance from the Psychic, *usually advance towards him in a direct line*, if some obstacle is not interposed. When a chair, for instance, comes to the side of the table that is opposite to him, it is because the table stands in the path of a straight line from the spot whence it started to the Psychic.

Note.—I am informed that this attraction *to* the Psychic is not always seen, but that sometimes, though rarely, solid bodies appear to be repelled, as it were, and to move *from* him. I am narrating only my own experiments, and I have never witnessed an instance of a repulsive motion. Every spontaneous movement of furniture, within my own observation, has been in a direction *towards* the Psychic. What can raise a stronger presumption than this that the attractive force is in the Psychic? Indeed, the Spiritualists find themselves compelled to admit the existence of a Psychic Force (calling it magnetic), but they account for the facts stated above by the ingenious but wholly conjectural explanation that the disembodied Spirits, by whom the motions, sounds, and communications are believed by them to be made, gather up and employ the magnetism of the Psychic as the material by which they are enabled to manifest themselves to mortal senses, and that thence arises the remarkable similarity which the acts done, and the communications made, invariably bear to the mental character and intelligence of the Psychic.

Such being some of the principal conditions that I have noted as attending the manifestations of the Psychic Force, what are the conclusions to which they point?

First, that the Psychic Force itself proceeds from, or in some unknown manner is associated with the *human organisation*.

Second, that it is controlled and directed *by the intelligence of the Psychic*.

The manner in which this is effected is unknown because as yet it has not been examined scientifically.

That it is often, if not always, the result of an *unconscious* action of the brain, or of the nerves, will probably be deemed by those who have closely noted the phenomena to be sufficiently

established. The attention of the Psychic does not require to be fixed upon what is going on. Answers are given to questions while the Psychic is conversing on other subjects, and even when the questions are put so faintly that he could not hear them had he been listening instead of talking.

And not only are all of these ascertained conditions consistent with the *scientific* conclusion, that the Force both proceeds from, and is directed by, the intelligence of the Psychic, but they are *inconsistent* with the Spiritualist theory, that they are the doings of the disembodied spirits of the dead. All is precisely as might be anticipated of the Psychic that *he* would act and speak in such case. Nothing is done or communicated in such fashion or of such character as might be reasonably expected of a disembodied spirit.

In such circumstances, the course prescribed alike by Science and common sense is to accept the near and natural solution in preference to the distant and the supernatural. There is a Force visibly, audibly, and palpably at work, and it is undoubtedly directed by intelligence. Whence does it come? Either from one, or more, or all, of the persons present, or from some invisible being. If all the conditions attending the operations of the Force are consistent with the former, and inconsistent with the latter, hypothesis, science, reason, and common sense direct us to prefer the former and to accept the *scientific theory* of Psychism in preference to the *supernatural theory* of Spiritualism.

CHARACTERISTICS OF PSYCHIC FORCE.

THE term *Psychic Force* has been employed to describe the power or influence that either proceeds from or is intimately associated with the human organisation, not as being a perfect name for it, but for want of a fitter one. We call it *a Force* because many of the phenomena present the results of force. But it must not therefore be taken as an affirmation on the part of those who, with myself, assert the theory of its human origin, and contend that it falls within the proper domain of Science, that it necessarily resembles the other powers in nature to which science has given the name of "forces." The notion of the forces of heat, light, magnetism, electricity, galvanism (be they the same or many), is that of particles in motion, making themselves perceptible to our senses when they strike against some opposing matter; though that is very difficult to comprehend, seeing that Magnetism, like Psychic Force, operates although a solid body is interposed between the magnet and the object it attracts. But it does not follow that in this particular Psychic Force should resemble those other forces. We call it a Force for convenience, and for lack of a better term; but it appears in its operation to be more in the nature of an *influence* than a motion of particles projected from the Psychic, and impinging on solid bodies and by the impact causing motions and sounds in the bodies struck. The subject is extremely obscure, very little endeavour having been made as yet to examine it patiently, with experiments and tests guided by sagacity, as Science has investigated other phenomena.

With this protest against a possible misunderstanding of our meaning when we talk of Psychic Force, I ask a short consideration of its foremost characteristics.

I. The Force, or influence, comes in waves that are in rapid

motion. They are generally synchronous, but of uneven magnitude and power. They are more or less tremulous to the perceptive sense. The things moved by it, whatever they may be, with rare exceptions *quiver* incessantly, in this particular differing in a very marked manner from the exhibition of muscular force, which is exercised either by sudden impact in the shape of a push or a blow or by steady pressure. This difference in the character of Psychic Force at once distinguishes it from muscular force, and is of itself satisfactory proof that the phenomena are not the result of muscular action, either designed or unconscious.

II. In another particular the Psychic Force operates upon the bodies subjected to it in a manner altogether unlike muscular force. It is neither a blow, a push, nor a pressure. If the subject of the experiment be a table, for instance, the sounds are not upon the surface, as if something had struck the face of the wood, but as if they were produced in the fibrous centre of the slab. The vibration is more palpable to the touch than when a blow of equal loudness is made *upon* the surface. The sound differs much from that produced by the finger or by any instrument of wood or metal, insomuch that a very brief experience suffices to enable the ear instantly to discover the difference between artificial sounds purposely or accidentally made and the true sound of the Psychic Force.

So it is with the motions of solid bodies caused by the Psychic Force. They have a special character. In addition to the curious tremulousness, or quivering, that attends these motions, they appear to be caused by power exercised in a manner differing widely from that of muscular action. An arm, for instance, applies its force to one part of the subject only, and by no contrivance can extend that force equally over the whole body. To refer to the familiar instance of a table. Muscular force, as of an arm, might raise or depress the table on the side at which it is applied; by application of the muscles above the table it is depressed; by application of them below, it is raised—and this effect is produced only at the point of contact. So the foot applied to the leg of the table might lift it on one side, but could not possibly depress it. A dining table could not be raised

entirely from the floor by any one or more persons applying muscular force on one side of it only, because of the inability to diffuse that force equally throughout the entire body to be moved. It could be raised from the floor, preserving its horizontal position, only by the application of the equal muscular force of two persons, at the least, standing on opposite sides of it. This is another conclusive proof that Psychic Force is *not* muscular force, for scarcely an experiment can be tried with a Psychic without motions of the table being produced on the side of the table *opposite* to that at which he is seated, and in a position which makes the application of muscular force by him to that part of the table a sheer impossibility.

III. So the Psychic Force appears to diffuse itself over the entire of the body to which it is applied, and to exercise itself in any part of that body with equal power and facility. The sides of the table *opposite to the Psychic*, far out of reach of muscular contact by him, are raised or depressed, and the sounds proceed from those parts quite as frequently and as vigorously as at the side of the table at which he is sitting, or within the reach of his muscular powers. And when the table rises from the floor it always preserves its perfect level, a position in which no exhibition of human force could lift it without the active muscular exertion of two persons at the least raising the opposite sides.

IV. The Psychic Force, unlike muscular force, does not appear to operate by pressure; it is more in the nature of diffusion and inflation; it is apparently a Force, the material of which is wholly unknown to us. The bodies moved by it are not moved by a jerk, or by upward or downward continuous pressure applied to one portion of the subject only; the Psychic Force seems to diffuse itself through the whole substance of the thing moved. Thus, if it be a table, it is raised, not as by a force applied below, but as if by the levitation of the material of which it is composed. It rises from the floor as a balloon rises. If the hand is pressed upon it in its ascent, the sensation to the touch is that of a floating body rising because it is lighter than the air: a sensation that will be at once recognised by those who have ever amused themselves with toy balloons. It hovers in the air like a *floating*, not

like a *lifted*, body, and it descends generally with more or less of a pendulous motion, as seen with a descending balloon, or a parachute. It never *falls* down, like a solid mass.

V. From these characteristics of the action of Psychic Force, I am inclined to the *conjecture* (for as yet it is little more), that it is a Force antagonistic to gravitation, or in some unknown manner exempt from the influence of gravitation, or at least that it operates to counteract the force of gravitation on the bodies in which it is diffused, and to produce positive levitation.

VI. This conjecture as to the nature of the Psychic Force appears to derive some confirmation from the process required for its exhibition. Muscular force needs no preparation for its exercise. An arm or a foot will apply the same amount of force in an instant as in an hour. It cannot be accumulated in any body. The continued pressure of the hands upon a table does not increase the amount of muscular force applied to the table. That which enters at the point of contact is absorbed by the force of gravitation as fast as it is evolved, and at the end of half-an-hour the table cannot be moved more easily than at the end of a minute.

But the Psychic Force is evidently capable of *accumulation*. It grows by slow degrees. A lapse of time, varying according to many conditions not yet examined, is requisite before a sufficiency of it is infused into the subject to produce any perceptible effect. First come delicate sounds, audible only by help of a stethoscope; then these grow louder, and can be heard by the ear and felt by the hand; and then come the motions that no person who has once witnessed them can either imagine or mistake. But all this is manifestly the evidence of an accumulation of force, as electricity is accumulated in a battery, or magnetism in a coil; and the sitting with the hands upon the table seems to be the process of *charging it* (if I may use the term) with the Psychic Force, which all human beings probably possess in a greater or lesser degree, but which the Psychic possesses in an abnormal degree, combined with the power of directing it, when so accumulated, in some manner as yet unknown, but which it should be the business of Science to discover.

CONCLUSIONS.

FROM the above experiments it is not unreasonable that they who witnessed them should have concluded—

I. That there is a Force other than the Forces of Nature hitherto recognised. But whether it is the one Force which is said to change merely its form according to the substance in which it is exhibited; or a Force entirely distinct from the known Physical Forces, and subject to other laws associated with vitality; or the Force which is Electric, or Galvanic, or Light, or Heat, according to the material through which it is exhibited, and which, passing through metal, is Magnetic Force, and passing through nerve structure is Psychic Force, there is not as yet sufficient evidence to determine.

II. That this Force produces positive sounds and motions in solid bodies brought within the radius of its influence. <

III. That this Force is found to operate at an undefined, but not indefinite, distance from the human body.

IV. That it is developed (so as to be perceptible to the senses by its effects) in certain persons only, to whom the name of Psychics has been given.

V. That Psychics are not distinguished from other persons by any perceptible peculiarity of mental or bodily organisation. They are of either sex; of all ages, of all degrees of intelligence, of varying physical powers, of all degrees of bodily health, of all countries and races.

VI. That there is some, but not sufficient, evidence that the power of a Psychic is a *special faculty* (such as is a genius for music, poetry, &c.) and that it is often inherited.

VII. That it is probable (but not yet proved), that this Force proceeds from, or is intimately associated with, the nerve organization, and is possessed by all human beings in a greater or less

degree, but in their ordinary conditions producing no external effects perceptible by the senses; that when possessed to an extraordinary extent, this Force is projected beyond the body, and causes motions and sounds in the objects permeated by it, or upon which it impinges.

VIII. That there is some, but not yet sufficient, evidence that Psychic Force, and what physiologists have termed "vital force," and Dr. Richardson the "nerve ether," are identical.

IX. That in some manner, as yet not investigated and therefore not ascertained, a concurrence of the Psychic Forces of several persons promotes the activity of the Force exhibited by the Psychic.

X. That the Psychic Force is controlled and directed by the intelligence of the Psychic. That this intelligence frequently acts without consciousness by the Psychic. But if such action is that of the brain, or of an individuality distinct from the brain and incorporeal, there is as yet no sufficient proof; but the evidence points to the latter conclusion.

XI. That the condition of the Psychic during such unconscious direction of the Force is generally similar to, if not identical with, that of the somnambulist, whose intelligent acts are the result of unconscious action of the brain, which not only dreams, but causes the patient to act the dream.

These are the facts, concisely stated, which may be asserted to be established to this time by the *scientific* investigation of Psychic Force. It will be seen that they are, as from the recency of the procurement of *proofs* of the existence of the Force might have been surmised, as yet very imperfect. The facts positively ascertained are few, but many more are still in the dubious stage, requiring further examination. The conditions under which the Psychic Force exists and is evolved and directed have been as yet insufficiently examined, and there are numerous points in the wide field thus open to investigators to which their attention may be advantageously directed. I venture to state a few of these, in the hope that some readers may be stimulated to a course of experiment and test, with a view to obtain satisfactory solutions.

I. What are the precise measured distances from the various Psychics to which the Psychic Force is found to extend?

II. Does the Force diminish according to distance from the Psychic, and if so, in what ratio?

III. What relationship have heat, moisture, electricity, and terrestrial magnetism severally to the amount of the Force exhibited?

IV. To what extent is the Force affected by the number of persons forming the chain?

V. Is there any, and how much, increase in the Force by the formation of a chain of nerve organizations, and in what degree by extension of the chain? Is the effect the same if the same persons are merely grouped together near to the Psychic, without forming a circle or in any manner uniting the Psychic Force possessed by each person, except by the common link of the floor on which they stand?

VI. Is the concentration or direction of the Force affected to any extent by the material forming the table or other body used as a conductor or collector of the Force? Is metal more or less favourable to the collection or exhibition of the Force than wood; and is one kind of wood more favourable than another kind?

VII. Does any advantage accrue in fact from actual contact with each other of the persons present: and does not the table or other conductor employed equally serve for conducting or collecting the Force?

VIII. Is the unconscious action of the brain, as asserted by Dr. Carpenter, the intelligence that directs the Psychic Force.

I shall esteem it an obligation if any reader pursuing this interesting and most important investigation into the nature and operations of Psychic Force will communicate to me the results of his experiments; for it is only by a large accumulation of facts, and a multitude of observations, made under a variety of conditions, that this branch of the science of Psychology can be advanced. Careful note should be taken of all experiments made, and whatever is capable of actual measurement should be determined by rule or by scales.

If this be recognised as a subject for Science, and not a mere structure of imagination, nor a superstition erected upon a basis of fact, there will be at once an end to the strange aversion now felt to the examination of phenomena which, if established, must throw a blaze of light on many of the obscurities of Physiology and Psychology, and remove much of the uncertainty that now surrounds the Science of Medicine.

Brought thus within the domain of Science, the facts recognized, examined, and traced to their sources, so much as is true will be added to the store of knowledge; so much as is false, or which fancy may have erected upon the facts, will be dissipated. It is thus, and only thus, that Science can effectually combat Superstition.

HOW TO INVESTIGATE.

To those who may be desirous to aid the investigation now in progress, a few suggestions of the best means of doing so will doubtless be welcome.

There is an erroneous impression that none but professional Psychics are to be found. In truth, Psychics are frequent in private life, and especially among children. There are few family circles in which they may not be discovered by patient experiment. As there is nothing in mind, person, or manner to indicate an organization having such an excess of Psychic Force as to produce the phenomena of Psychism, its existence can only be discovered by trials repeatedly made with the same circle. The process is very simple. Not less than five nor more than nine should form a party, who should meet twice or thrice a week (the more frequently the better). Instead of lounging before the fire, they should seat themselves at a table, lay their hands upon it, and in that position continue their chat, mingled with music and song. It is as easy to enjoy a social gathering seated thus as in any other grouping. If there is neither sound nor motion in the table in an hour, break up the circle, take tea, talk, and in half an hour re-form it—that is, if none are weary, for in such case the trial should end at once. There should be no disappointment if nothing comes, but it should be tried again and again, *always preserving the same circle*. If one of the party is a Psychic, signs of it will probably appear by the sixth sitting, and then it can be readily ascertained who the Psychic is by each one in turn quitting the circle, and thus discovering whose presence is necessary to the action of the Force. As soon as sounds and motions are presented, careful note should be taken of the phenomena occurring at every future meeting, and experiments

and tests devised and tried for the purpose of ascertaining the conditions under which the phenomena appear, and thus to aid the inquiry into their cause which is now being so extensively and actively pursued in all parts of the country.

It has been calculated that about one person in thirty is a Psychic in England, and about one person in twenty in Scotland and America, the faculty being obviously much more powerfully developed in certain races of men than in others. As I have stated above, it is very frequent with children, and often disappears from them entirely at puberty. Infants in arms are sometimes Psychics, and there is said to be an instant and marked increase of the Force when they are taken into the circle or even brought into the room. In one instance within my own observation the entry of a servant with a message was instantly followed by a manifest access of the Force, shown as the door opened, continuing while she was in the room, and declining when she left it. Where a child is a Psychic, it will be desirable to ascertain the nature of the intelligence that then directs the Force—if it is that of a child—and in the case of an infant Psychic if any intelligence whatever is exhibited by the Force—and I shall be greatly obliged by information of actual experiences on these points, whose importance will be obvious at a glance.

A table is not necessary to the operation of the Force. Any solid body that connects the persons forming the chain is equally efficient. But a table is found to be the most convenient subject for experiment, as it enables the party to be comfortably seated and to converse at ease.

A CONJECTURAL THEORY OF PSYCHIC FORCE.

- I HAVE been asked, "How do you *account* for Psychic Force? What is your explanation of it?" And this with an air of triumph, as if the questioner supposed that, if it cannot be explained, its source shown and its *modus operandi* instantly revealed, it cannot be true.

I am almost ashamed to answer so foolish an argument. The sole question reason and science can recognize is, if it be *a fact*? The first step in all science is to ascertain what are the *facts*. Experience has sufficiently proved the folly of theorising before a large mass of facts has been accumulated. Science made slow progress so long as philosophers preferred the easy process of theorising to the laborious process of experiment, and she advanced with rapid strides when philosophers learned first to accumulate the facts, and then to indulge in theory.

In the preceding pages I have contented myself with simply reporting facts and experiments, carefully abstaining from conjectures as to causes, and from hazarding theories based on foundations which new discoveries might at any moment destroy. The time has not yet come for framing hypotheses which may be advanced with confidence. More *facts* are wanted; and I ask the reader to assist in supplying them, by carrying on the experiments of which those here recorded are but the first essays.

But it was impossible for a thinking mind to be engaged in an investigation so profoundly interesting and of such transcendent importance to science, without speculating upon the causes of the phenomena it was testing. I could not help constructing something like a theory out of such facts as I had gathered. I have been requested to state my own view of the subject, insufficiently founded

though it is. I comply with that request; but I do so only with the explicit declaration that it is a purely *conjectural* theory; a *speculation* merely that may or may not be found to have a solid basis in the facts. I publish it only that the reader who pursues the experiments may direct his attention to certain points which the theory will suggest, in order to learn how far the facts he may note are found to square with these conjectures as to their causes.

To be intelligible, it is necessary to state that I fully subscribe the doctrine of the correlation of the Physical Forces taught by Mr. Justice GROVE, and illustrated by Professor TYNDALL in the splendid series of experiments by which he has successively converted each of the Forces of Nature into the others; thus proving demonstratively what Mr. Justice GROVE taught theoretically, that electricity, magnetism, light, heat, and the other natural forces, are one and the same Force, exhibiting itself to us in certain varying modes of motion—that is to say, making itself perceptible to our senses in different forms according to the material through which it passes and the varied conditions under which it presents itself to our senses.

Accepting this doctrine of the correlation of the Physical Forces, do I look upon the Psychic Force as coming within it?

I do so. I *suspect*, though it is not *proved*, that Psychic Force is the same Force which passing through the magnet we call magnetism, and passing through the conductor of an electric machine we call electricity, and so forth, but which, when passing through the nerve organisation or possibly through organic matter generally, exhibits itself in a special form, differing from its exhibitions in the magnet and the electrical machine, in heat, and in the rays of light, as any one of these forms of it differs from the others. Psychic Force *may* be identical with vital force; probably it is so. In using the term Vital Force I intend the Force that sets and keeps in motion the machinery of the body and enables it to perform the functions of organic life. It is to the corporeal structure what the steam engine is to the machine; it is not the machine, but the machine would be an inert mass without the force which the steam power imparts to it.

The Psychic Force itself appears to me to be purely corporeal—by which I mean that it is wholly dependent upon the animal structure, and is the Force by which all the operations of animal life are conducted—ever streaming through the nervous system from the nerve centres, possibly circulating after the manner of the blood, and acting, like magnetism, by induction. It is in fact what we call **THE LIFE**. That it is a Force of enormous power may be concluded from a calculation of the number of pounds of Force which the heart alone employs in twenty-four hours. If that Force, which undoubtedly flows through every one of us in twenty-four hours could be collected, compressed, and directed, it would be capable of effects that would astonish us.

In the normal condition, that Force (call it vital or Psychic at pleasure) is limited to its proper duty of maintaining the vital functions of the body, and its visible operation is confined within the bodily structure; that is to say, there is no proof that with ordinary persons it has any influence beyond the extremities of the nerve system.

A Psychic is a person who, as proved by the experiments previously described, exercises a Force of some kind upon solid bodies beyond the reach of his muscular power. That Force is, as I surmise, the same Force which is ever at work in all of us, but within a limited range. In the Psychic that Force, possessed to an abnormal degree, passes beyond the limit of the nervous system, and, under certain unascertained conditions, operates *as a force*, and produces the effects of force, upon substances at undefined but limited distances from the nerve centres from which it is projected.

To this it is objected "that there is no connection between the nerve organization and the distant solid body that is moved untouched by the muscles; how then is it possible for a mere force to operate in the manner described? We can understand how a force flowing from the nerve centres could act upon the nerve system, and all that is materially connected with it; but we cannot understand an intangible force exercising mechanical power over matter without the intervention of matter both to conduct and to apply it."

Our answer is, that this objection is not limited to Psychic Force ; it occurs in the operations of the other natural forces. To refer again to magnetism. Here we see a force working in precisely the same manner. There is no material connection between the magnet and the steel, but an invisible and impalpable Force passes from one to the other, and the heavy solid body is moved, although there is no material connection, either to convey the force, or so to apply it as to cause motion in direct opposition to the law of gravity. We know nothing more of the *modus operandi* of the magnetic force than we know of that of the Psychic Force. But inasmuch as the one is plainly possible, seeing that it is a *fact*, the Psychic Force cannot be pronounced impossible, because it acts in precisely the same manner as the unquestionable, though unexplained and inexplicable, magnetic force.

But assuming the existence of a Psychic Force proceeding from the nerve organization, and acting upon distant solid bodies without material connection, as is the case also with the magnetic force, there remains the far more difficult problem—that Force being undoubtedly governed by intelligence, how does the intelligence of the Psychic direct it ?

Again, I offer *speculation* merely. I do not pretend to *know*. It scarcely amounts to an opinion. It is an explanation of the mysterious phenomena which has *merely floated through my mind* as being possible, perhaps probable. I throw it out for the consideration of others, rather with hope to make *them* think by indicating a path for inquiry to pursue than as pretending to assert anything like definite conclusions. At the best, in the present imperfect acquaintance with the facts, all theory must be very vague, and to make that vague theory intelligible, I must ask the reader to accompany me into an obscure region of the strangely-neglected science of Psychology.

We know that we are composed of *body* and of what we call *mind*. The materialists say that these are identical, and that what we call mind is only a function of the brain, as digestion is a function of the stomach. Nevertheless, our consciousness is of an essential difference between the acts of thinking and of digesting, and we

have a definite notion of something different from the *body* when we contemplate the *mind*.

But if mind is not a function of the body, it is undoubtedly very closely allied to the body, for all injuries to the brain affect the mind to the same degree, and whatever paralyses the action of the brain destroys the action of the mind. Therefore, the conclusion is almost inevitable that the brain is either the organ by which mind is produced, or the mind is an entity distinct from the body, and the brain is the organ through which the mind communicates with the body and with the external world.

But there are difficulties in the way of this conclusion. It is an ascertained and now an acknowledged fact that the mind can work, and work well, without consciousness. This phenomenon, observed long ago as it presented itself in the familiar form of somnambulism, natural and artificial, has been but lately received by physiologists as a fact, and it has taken a definite form under the title of "Unconscious Cerebration," which has been given to it by Dr. CARPENTER. By this appropriate name he signifies a capacity of the brain to work automatically without consciousness by the individual, and without any exercise of will or effort of his own. Not merely does the brain in certain imperfectly studied abnormal conditions so exercise itself, but it works always with its wonted intelligence, and often with more than the intelligence exhibited in its normal condition. Somnambulism is the most frequent form in which this phenomenon is exhibited, and it appears especially in that artificially produced form of somnambulism to which the misleading name of "mesmerism" has been given.

Up to this point Dr. CARPENTER and the Materialists will probably be accepted as having truly traced the relationship of mind and body; but at this point they halt and say, "There is nothing more. The microscope reveals to us nothing cognisable to eye or touch beyond the brain that perishes. The mind decays and dies with the brain. We will not waste our time and thoughts in inquiring if there is anything besides the brain and the mind that is a product of the brain."

This is the extreme limit of Physiology, and rightly so, for Physiology deals only with the structure and functions of the body. The complaint against the Physiologists is that they assert so positively that there is nothing beyond the machine it is *their* business to examine; that they not only refuse to inquire for themselves if there is something other than body and mind, but denounce as a fool or a rogue every person who asserts that there *is* something more, and who offers to produce evidence in proof of the assertion. The bigoted materialists content themselves with saying, "It is impossible. It *cannot* be. Therefore we will not trouble ourselves even to look at it. Psychology is nonsense. Soul is a myth."

We, who maintain the existence of Soul as a positive *fact*, to be proved *scientifically*, and not merely as a *faith* taught theologically, go with you Materialists to the point at which you end your researches, admitting substantially your facts and your arguments. But we Psychologists begin precisely where you Physiologists end. *You* will acknowledge nothing beyond brain. *We* assert the existence of something more than brain—a something invisible, impalpable, it is true, but not the less *real*. It is the province of Psychology to investigate this imperceptible thing, as it is yours to examine the material structure with which it is allied.

You say there is a body and a mind, but that the mind is a function of the body.

We say there is a body, and a mind that may or may not be a function of the body; but that, in addition to the body and the mind, there is a SOUL.

We say there is *scientific* evidence of this. It is in our consciousness. All recognise their own individuality. Every man feels that HE is something other than his body. If a limb be lost, he knows that he is not the less himself; he is not conscious that a part of himself is lost. Mutilate the body to any extent and the man remains a whole man, and feels that he is a whole man. The very hypothesis by which Dr. CARPENTER endeavours to account for so many strange psychological phenomena—"Unconscious Cerebration,"—almost implies the existence of something

other than brain. It is a condition in which the brain and body act together, the intelligence of the one controlling the actions of the other, but without consciousness. That is the definition. But I ask Dr. CARPENTER and the Materialists—*whose* consciousness they refer to? The brain cannot be unconscious of itself. They can only intend by it that the action of the brain must be cut off from the consciousness of something else. The brain and body working together are, according to them, the whole man. But according to the theory of "Unconscious Cerebration," this whole man is performing all its functions without consciousness—not by itself, for that is an absurdity,—but by something else. Now that something else is precisely what we asserters of a Soul say is the thing that exists *plus* body and mind; the thing that is "the man." This *is* the conscious being whose connecting link with the body is more or less severed in the condition which Dr. CARPENTER has termed "Unconscious Cerebration," and which is so frequently exhibited to observers in the more familiar forms of somnambulism, trance, and Dream.

There are other *scientific* proofs of the existence of a Soul which it would be impossible to enter upon here. To us they present themselves as conclusive, and the phenomena of Psychic Force confirm the conviction. But for the present I assume that we have a Soul, or Spirit, *in addition* to Mind and Body. It is the foundation of the solution which has suggested itself to me of the manner in which the Psychic Force that proceeds from the nerve organization is directed by the intelligence of the Psychic.

In their normal condition, the soul, the mind, and the body are in perfect unison. The nerves convey to the brain the impressions made upon them and the soul (the conscious *I*) receives the impression from the brain. Again, the soul wills, and through the brain, which is its organ for communication with the external world, that will is transmitted to the various organs of the brain, if mind is to be moved, or to the nerves, if action of the body is desired. In health we are not conscious of this process, performed without effort and with inconceivable

rapidity, and therefore it is that it has been so imperfectly examined. But there are abnormal conditions in which the connection between the soul, the mind, and the body, is wholly or partially severed, and then it is that we discover their relationship. "Unconscious Cerebration" is one of these abnormal conditions. By some unknown process the link between the soul and the brain is wholly or partially severed for a time. Nevertheless the brain continues to work rationally and intelligently; to receive communications from the nerves; to form ideas, and to send messages to the external world—in fact, the mind preserves its powers, but no intimation of its action is received by the Soul. Somnambulism, natural and artificial, is the most remarkable instance of this temporary severance between the Soul and the brain; for the mind is thus *seen* to act without consciousness by the individual, and there are facts which seem to point to the suggestion that, in this condition of severance from the mind, the soul has powers of perception of its own, and is independent for the time of the machinery of brain and nerves through which alone in its normal state can impressions of external things come to it. Trance is another familiar instance of this condition, and it is as yet by no means certain that some of the unexplained phenomena of dreaming may not be accounted for in like manner.

The Soul is the controlling will, the Ego that commands the brain, and through the brain the nerves, and through the nerves the actions of the body. When all are in a state of health there is a perfect balance of power in the human organization. The Soul, through the medium of the brain centre, directs the nerve force to the limit of its powers, which, in the normal state, is the extremity of the nerve threads. But, when the nerve force is generated in an extraordinary degree, it is not confined to the limit of the nerves, but passes beyond them, and exhibits itself in the phenomena to which the name of Psychic Force has been given. In itself it is a blind Force, like that of electricity or magnetism, but, like them, it is capable of being directed by intelligence to intelligent purposes. As the intelligence of Mr. VARLEY, F.R.S., directs the electric force that flows

blindly from the electrode to an intelligent conversation with persons distant thousands of miles, so does the Psychic Force, directed by the brain of the Psychic, exhibit itself in intelligent results. If the Soul and the Brain are acting together normally, then it is done with the consciousness of the Psychic. If they are in the condition of "unconscious cerebration," then the intelligence of the brain acts without the consciousness of such action by the Soul. In such condition there is reason to suspect that the Soul can directly control the actions of the Psychic Force without the interposition of the brain.

If the Soul governs the nerve force up to the point of its extension within the body, it is not difficult to understand how it might direct that Force when it flows beyond the body. Precisely as the Soul orders the arm to be raised three times, by influencing the nerves to contract the muscles, so it directs the Psychic Force to flow in three irregular waves through the fibres of the wood, producing three sounds like blows on the table or floor, and so to express words and sentences by audible signs.

I have thus endeavoured to describe, as clearly as the abstruse nature of the subject would permit, a *possible* means by which the phenomena of Psychic Force *might* be produced. I repeat that I am far from affirming that it is so produced; indeed, these suggestions are little more than a floating conjecture, which will require a great deal more of experiment and of reflection before it can take the shape even of a formal hypothesis. I throw it out now suggestively to others for consideration and test by them, if they should think that there is something in it.

And I ask them also to consider this further question. If Unconscious Cerebration is a fact, and there is, in certain undiscovered conditions of the human structure, a temporary severance of the connection between the Soul and its organ, the brain, insomuch that the brain can and does carry on an independent action without consciousness of that action by the Soul, is it not *possible* that the Soul might, in such case, depart wholly or partially from the body, or at least be so far divorced from its alliance with the grosser elements of the body, that it can exercise some of the functions of Soul, so far at least as to

have perceptions of things beyond the range and capacity of the senses through which alone, in the normal state of being, perceptions are enabled to come to it ?

If this be possible, it would solve many problems in Psychology now wrapt in profoundest mystery, and therefore I ask my thoughtful readers to give it thought, and to watch the experiments they may make in Psychic Force with an eye to this as a possible solution of many of them.

CORRESPONDENCE

UPON

DR. CARPENTER'S ASSERTED REFUTATION

OF

MR. CROOKES'S EXPERIMENTAL PROOF OF THE EXISTENCE
OF A HITHERTO UNDETECTED FORCE.

DR. W. B. CARPENTER, F.R.S., introduced into a Public Lecture an experiment which he alleged to be that upon which I had relied for proof of the existence of a hitherto undetected force. It was not my experiment, but an unjustifiable misrepresentation of it. Called upon to apologise for the wrong he had thus publicly done to me, Dr. Carpenter threw the responsibility from himself upon others whom he stated to have been his informants. I print the Correspondence, and leave it to the judgment of the scientific world.

WILLIAM CROOKES.

20, MORNINGTON ROAD, N.W.
February 21st, 1872.

PROFESSOR G. G. STOKES, SEC. R.S.

DEAR SIR,

My attention has been called to some statements publicly made by Dr. W. B. Carpenter, F.R.S., who gives you as the authority for some serious misrepresentations respecting myself.

On Friday, 19th January, 1872, Dr. Carpenter in a Lecture at the Vestry Hall, Chelsea, said:—

“There was one fact of this kind in connection with Psychic Force which he would grapple with. Mr. William Crookes had sent a paper to the Royal Society last summer, containing investigations into what he called a new force. It was returned to him by the Secretary, with a letter telling him that the Society would not refuse to receive papers upon the subject, but that some kind of scientific evidence ought to be given. Mr. Crookes afterwards sent in a second series of experiments. The Secretary did not like to refuse this paper on his own responsibility, so it came before the Council of the Royal Society; it was a most unusual thing for the Council to refuse a paper sent in by a member. Mr. Crookes's second paper came before the Council a month ago, and a Committee of two was appointed to examine it. They gave in their Report to the Council yesterday, and it was unanimously resolved that the paper be returned to him, as in the opinion of the Royal Society it was good for nothing. Anybody who had a pair of scales in the house could make an experiment to prove the fallacy of one of the points in Mr. Crookes's paper.”

Dr. Carpenter here exhibited an experiment intended to show (and which some of his audience must have believed really did show) that I was ignorant of the merest rudiments of mechanics, and was deluded by an experiment the fallacy of which an intelligent schoolboy could have pointed out. He exhibited a glass of water poised against an equal weight upon a balance, and showed that by dipping a finger in water—that is, by *pressing* with a force exactly equal to the weight of the water displaced by the immersed finger—he increased the weight on that side of the balance. Now, unless the audience were intended to believe that I was ignorant of this childishly simple fact, and, further, that it completely accounted for the result of my experiment, for what purpose was this experiment shown?

A gentleman present who had read an account of my researches subsequently wrote to Dr. Carpenter, protesting against this misleading experiment being put forward as fairly representing what I had tried. In his reply to this protest, Dr. Carpenter says:—

“So far from having been labouring to prejudice Mr. Crookes at the Royal Society, I did not even know of his having sent in a second paper until after it had been rejected by the Council. This rejection took place on Thursday afternoon, and I heard of it and the grounds of it from Professor Stokes and Sir Charles Wheatstone at the evening meeting. What I stated as to Mr. Crookes's experiment with the balance was *on*

their authority,* as I shall be prepared to prove if the correctness of that statement is impugned."

Now, as a member of that Committee which decided on the rejection of my papers, you, of course, are aware that Dr. Carpenter's balance experiment wholly misrepresents my experiment. My illustrations showed you that the vessel of water was placed over the centre of the fulcrum. You had likewise read what I wrote in my last paper, that "immersing the hand to the utmost in the water, does not raise the level of the water sufficient to produce any movement whatever of the index of the balance."

From the construction of the instrument, as shown by the several drawings and photographs, and fully described in words, you would also have seen that not only was it impossible for any such effect to have taken place, but that the single experiment in which I employed water contact was one I had specially devised for the purpose of getting over some untenable objections raised by yourself against one of my early experiments.

My papers, as well as the illustrations accompanying them, therefore distinctly prove that I could not have made the blunder which Dr. Carpenter told a public audience I had committed; and as Dr. Carpenter, being pressed on the subject, now endeavours to shift the burden of misrepresentation on to your shoulders, I shall feel obliged by your informing me if you really did make the statement which he attributes to you.

I remain,

Truly yours,

(Signed) WILLIAM CROOKES.

A similar letter was sent to Sir Charles Wheatstone. In due time I received the following replies:—

ATHENÆUM CLUB, PALL MALL.

February 28th, 1872.

DEAR SIR,

The conversation between Sir Charles Wheatstone, Dr. Carpenter, and myself, to which you allude in your letter of the 21st inst., has wholly passed out of my memory. It attracted no particular attention on my part, as I had no conception that a mere casual conversation in the tea-room of the Royal Society was going to be reproduced, with greater or less accuracy, at a public meeting. I can only speak with confidence of what I could or could not have said from the clear recollection I have of what I then knew.

You may recollect that in writing to you on the subject of your first paper, I stated as my own opinion, that the mere fact that a paper professed to establish the existence of a hitherto unrecognised force was no reason why a scientific Society should refuse to accept it, but *was* a reason why the experiments should be subjected to the most rigorous scrutiny. This position you accepted as perfectly fair and reasonable. I also pointed out conceivable modes of explaining the results of some of the experiments you described, by referring them to the action of perfectly well known causes. I did not maintain that the

* The italics are Dr. Carpenter's.

results were *actually produced* in the particular way I suggested, but only that they might reasonably be *conceived to have been so produced*, so that a person professing to establish the existence of a new force was bound to make his demonstration free from such objections.

Among other things, I pointed out that the glass vessel of water which you employed in one of your experiments rested on the board at some distance from the fulcrum; and that, consequently, when the hand was dipped into the water contained in the copper basin which, resting on a firm independent support, dipped into the water contained in the glass vessel, with which its interior was in communication by a hole, if time were given for the water to run through, the pressure on the base of the glass vessel would be increased by the weight of the water displaced by the hand, and consequently the spring balance would be affected.

Whether in the letter you wrote me in reply this particular point was noticed I do not at the moment recollect, nor does it signify, for in your second and third papers, one or both, I noticed particularly that you modified your experiment by placing the glass vessel with its middle over the fulcrum, and tested by direct experiment whether the insertion of the hand in the water in the copper vessel had any sensible effect on the balance.

These modifications I noticed particularly, as they had been made, as I presumed, expressly to meet certain objections which I had raised. It is quite impossible, therefore, that in my conversation with Dr. CARPENTER, after your papers were ordered to be returned to you, I could have represented them to him as open to this objection. I *may* have talked to him on this subject (I don't know that I *did*), when your first paper alone had appeared; and, if so, it is conceivable that he may have confounded two conversations held, one several months ago, the other quite recently.

I wish to make one remark before I conclude. The question brought before the Committee of Papers of the Royal Society with reference to your papers was simply whether they should be accepted or declined. The decision of the Committee, as entered on the Minutes, was simply "declined." What estimate of the value of your papers each individual voter may have formed—what considerations mainly may have influenced him in giving his vote—are questions which he alone can answer; so that no one, as I conceive, has a right to add to the formal decision his notion of the grounds of it.

I am, Dear Sir,

Yours sincerely,

G. G. STOKES.

WILLIAM CROOKES, Esq., F.R.S.

19, PARK CRESCENT,
PORTLAND PLACE, N.W.
March 14, 1872.

DEAR SIR,

I did not state to Dr. Carpenter that the water experiment *disproved* the existence of your hypothetical psychic force; what I did say was to the effect that no argument in its favour could be deduced from the experiment which you put forward so prominently.

You say, page 20 of your first pamphlet, "I am now fitting up an apparatus in which contact is made through water in such way that transmission of mechanical movement to the board is impossible;" and

again, at page 28, "As the mechanical transmission of power is by this means entirely cut off between the copper vessel and the board, the power of muscular control is thereby completely eliminated." In both these sentences you explain why you employed the interposition of water, and you state nothing from which I can infer that you had any other reason for doing so. It is further evident that in the experiments first communicated to Professor Stokes, the vessel of water was not placed directly over the fulcrum of the lever; for you say (page 28) "In my first experiments with this apparatus, referred to in Professor Stokes's letter and my answer, the glass vessel was not over the fulcrum, but nearer B." That under such circumstances a mechanical pressure is exerted on the lever when the hand is dipped in the water is an undoubted fact; whether it produces the effect in question or not depends on the sensibility of the apparatus and the placing of the vessel. A displacement of 3 cubic inches of water would exert a pressure which, if directly applied to your machine, would be equal to 6816 grains; the extreme pressure of your imaginary psychic force being, according to your own statement, 5000 grains. The fluctuation of the pressure in your experiment would naturally follow from the varying quantity of water displaced owing to the unsteadiness of the hand in the liquid.

From the above it appears to me that your experiment with the water vessel does not offer an iota of proof in favour of your doctrine of psychic force, or any disproof of the effect not being mechanical; though it might easily lead persons unacquainted with hydrostatic laws to infer that no mechanical pressure could be communicated under such circumstances.

I cannot see what part you intended the water to play when you subsequently placed the vessel over the dead point, and it appears to me contrary to all analogy that a force acting according to physical laws should produce the motion of a lever by acting on its fulcrum.

Yours faithfully,

C. WHEATSTONE.

W. CROOKES, Esq.

PS.—I enclose a note which I have received from Dr. Carpenter.

UNIVERSITY OF LONDON,
BURLINGTON GARDENS, W.
Feb. 28, 1872.

DEAR SIR CHARLES,

If you should be communicating with Mr. Crookes on the subject as to which you spoke to me, it may be as well that you should let him know what was *my* understanding of the matter, as derived from yourself and Professor Stokes, and what was the account I gave of it in my Lecture.

I understood from you that Mr. Crookes had adduced the descent of a balanced vessel of water, on the immersion of Mr. Home's fingers into it, as a proof of the exertion of some force which could not be mechanical, and which must therefore be a *new* force, call it psychic, spiritual, or what you please. And I showed my audience that the immersion of the fingers into a tumbler of water so balanced would produce its descent simply by hydrostatic pressure; from which I drew the inference that Mr. Crookes's experiment gave no proof whatever of the existence of any force not known to us.

If I have in any way misunderstood your account of Mr. C.'s experiment, and have thereby done him injustice in my representation of it, I shall be quite ready to make any correction that you (as a mutual friend) may consider to be called for.

Believe me,

Yours faithfully,

WILLIAM B. CARPENTER.

Sir CHAS. WHEATSTONE.

20, MORNINGTON ROAD, N.W.
March 27th, 1872.

DEAR SIR CHARLES,

You must allow me to protest against the experiments given in my Royal Society paper of September 27th, 1871, being ignored and the discussion being made to turn on a less decisive experiment referred to in an earlier paper. The experiments of September 27th, 1871, are those referred to by Dr. Carpenter, and reported on by Professor Stokes and by yourself. That there is no doubt of this being the case is evident from Dr. Carpenter's language at Chelsea and elsewhere :—

“Mr. William Crookes had sent a paper to the Royal Society last summer [June 14th and June 28th, 1871] containing investigations into what he called a new force. It was returned to him by the Secretary. Mr. Crookes afterwards sent in a second series of experiments [September 27th, 1871.] The Secretary did not like to refuse this paper on his own responsibility, so it came before the Council of the Royal Society. . . . Mr. Crookes's second paper came before the Council a month ago, and a Committee of two was appointed to examine it. They gave in their Report to the Council yesterday [January, 18th, 1872], and it was unanimously resolved that the paper be returned to him, as in the opinion of the Royal Society it was good for nothing.”

“This rejection took place on Thursday afternoon [January 18th, 1872], and I heard of it and the grounds of it from Professor Stokes and Sir Charles Wheatstone at the evening meeting. What I stated as to Mr. Crookes's experiment with the balance was *on their authority*.”

Dr. Carpenter here explicitly refers to the experiments given in my paper of September 27th, 1871, and not only says that you mentioned to him the grounds of the rejection of that paper on the very day it occurred, but that you described to him one of the experiments given in it.

I must therefore object to having the discussion drawn from the point at issue, from the testing experiment in question presented to the Royal Society, to an imperfect form of the same experiment which was merely referred to in a paper published elsewhere.

From my pamphlet reprinted from the “Quarterly Journal of Science” for October 1st, 1871 (page 28), you quote the following words :—

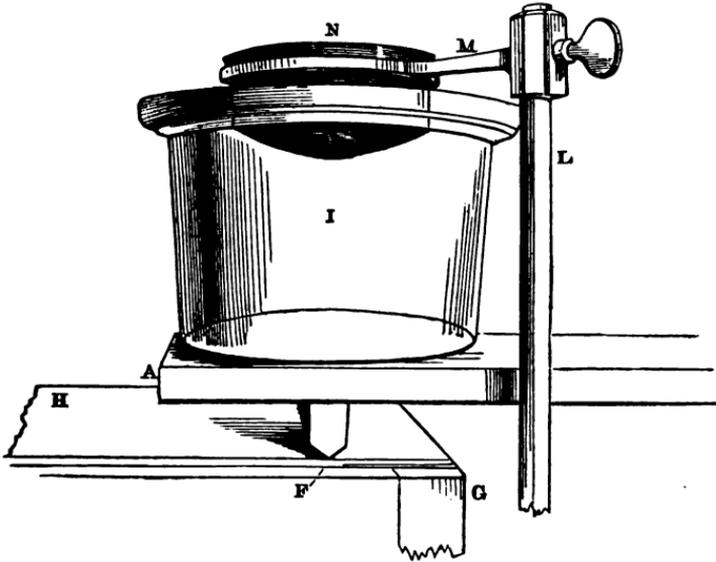
“As the mechanical transmission of power is by this means entirely cut off between the copper vessel and the board, the power of muscular control is thereby completely eliminated.”

You also quote a foot-note in which I refer to an early and imperfect form of the experiment, and you thereupon comment on these passages, speak of well-known hydrostatic laws, and give calculations, as if my

published experiments in question really afforded any grounds for severe remarks.

It is much to be regretted that you should have selected from my pamphlet two passages occurring on page 28, and should have omitted to read the few lines which connect these passages ; otherwise it must have been apparent to you that your self-evident exposition of a well-known hydrostatic law had no bearing on the case in point.

Let me supply the deficiency. The following paragraph, from page 28 of my pamphlet, fills up the gap between the two passages you quote :—



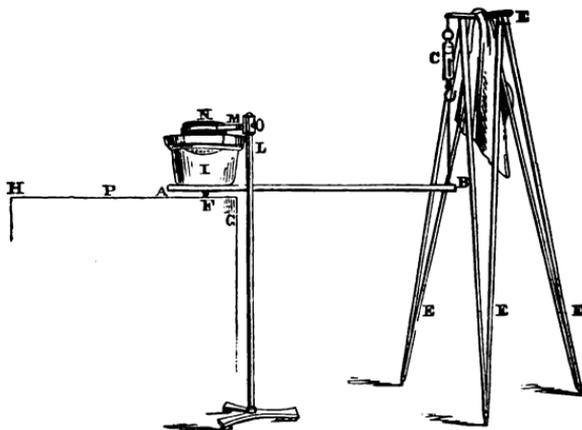
“ On the board, exactly over the fulcrum, is placed a large glass vessel filled with water, I. L is a massive iron stand furnished with an arm and a ring, M N, in which rests a hemispherical copper vessel, perforated with several holes in the bottom. The iron stand is 2 inches from the board, A B, and the arm and copper vessel, M N, are so adjusted that the latter dips into the water 1½ inches, being 5½ inches from the bottom of I, and 2 inches from its circumference. Shaking or striking the arm M or the vessel N produces no appreciable mechanical effect on the board A B capable of affecting the balance. Dipping the hand to the fullest extent into the water in N does not produce the least appreciable action on the balance. As the mechanical transmission of power is by this means entirely cut off between the copper vessel and the board A B, the power of muscular control is thereby eliminated.”

I venture to think that had you read the above connecting link between your two quotations from my pamphlet, or had even noticed the parts I have italicised, you would not have written,—

“ That under such circumstances a mechanical pressure is exerted on the lever when the hand is dipped in the water is an undoubted fact ; whether it produces the effect in question or not

depends on the sensibility of the apparatus and the placing of the vessel. A displacement of 3 cubic inches of water would exert a pressure which, if directly applied to your machine, would be equal to 6816 grains; the extreme pressure of your imaginary psychic force being, according to your own statement, 5000 grains."

I have preferred to quote from the reprint of my paper in the "Quarterly Journal of Science" for October 1st, 1871, as your citations appear to show that you have derived your information from it; but in my Royal Society communication of September 27th, 1871—the paper to which Dr. Carpenter and yourself referred—the same experiment is described in almost identical words, and is, moreover, illustrated with photographs of the apparatus.



But why refer only to the water-contact experiment? The true explanation is the one which will reconcile all the indisputable facts. How does the well-known hydrostatic law account for Experiment 2 on p. 29, in which the vessel of water was removed? Or Experiment 3, in which the force acted through a space of of 1 foot? Or Experiment 4, in which the force acted at a distance of 3 feet? Or Experiments 5 and 6, in which another kind of apparatus was used, and the force likewise acted at a distance?

The only sentence in your letter bearing in any way on my actual experiment is the last one, in which you say:—

"I cannot see what part you intended the water to play when you subsequently placed the vessel over the dead point, and it appears to me contrary to all analogy that a force acting according to physical laws should produce the motion of a lever by acting on its fulcrum."

In this I entirely agree. I too cannot see the part the water played; nor can I trace the analogy between the psychic force and a force acting according to known physical laws. Yet the facts recorded in my papers are true for all that.

I remain,

Truly yours,

WILLIAM CROOKES.

Sir CHARLES WHEATSTONE, F.R.S., &c.

TO THE PRESIDENT AND COUNCIL OF THE ROYAL
SOCIETY.

20, MORNINGTON ROAD, N.W.,
March 30th, 1872.

GENTLEMEN,

I beg to bring to your notice the fact that on two recent occasions the secret proceedings of your Council have been made public, contrary to the honourable and salutary practice which has hitherto prevailed.

In an article in the "Quarterly Review" (No. 262, p. 343), understood to be written by Dr. W. B. Carpenter, F.R.S., the reviewer says:—

"For this discovery he [*i.e.*, myself] was rewarded by the Fellowship of the Royal Society; but we speak advisedly when we say that this distinction was conferred on him with considerable hesitation, the ability he displayed in the investigation being purely technical."

No one, it is clear, has a right to reveal what takes place in the private deliberations of the Council. In the discussions about the eligibility of the various candidates for the Fellowship, there must necessarily be a comparison of claims, a full consideration of the merits of each individual; not only must a man's intellectual powers be canvassed, but his moral and social character must be discussed. If, however, these discussions are afterwards to be revealed and *published*, no man's character, after his name has been put in nomination for the Royal Society, will be safe from charges founded on hearsay and imperfect evidence.

Again, on Friday, January 19th, 1872, Dr. Carpenter, in a Lecture at the Vestry Hall, Chelsea, speaking of a paper which has recently come before you, stated that—

"Mr. Crookes's second paper came before the Council [of the Royal Society] a month ago, and a committee of two was appointed to examine it. They gave in their report yesterday [Jan. 18th, 1872], and it was unanimously resolved that the paper be returned to him, as, in the opinion of the Royal Society, it was good for nothing."

Dr. Carpenter is not a member of your Council; what he states must, therefore, if true, be the result of hearsay; and when the rejected paper was returned to me on January 18th, it was unaccompanied by any remarks tending to confirm the opinion attributed by Dr. Carpenter to the Royal Society.

I repeat, that if the private deliberations of the Council of the Royal Society are to be made public in this informal and irresponsible manner, the character and scientific *status* of every member of the Society will be at the mercy of any lecturer who may proclaim that he is in the secret of your deliberations.

That the worth of each paper treating of new and exciting topics should be the subject of minute and even personal discussion is from the nature of the case inevitable; but if portions of those discussions separated from the accompanying and modifying circumstances are to be published on no better authority than the perverted statement of one who pretends he has had reported to him the substance of the controversy, members of the Council will either withhold the free

expression of their opinions, or their deliberations will go forth to the world distorted with the prejudices of invidious talkers.

Therefore, I respectfully beg the Council of the Royal Society will so deal with this matter as to deter, for the future, any Fellow from betraying and publishing deliberations which ought to be held inviolate.

I am, Gentlemen,
Your obedient Servant,
WILLIAM CROOKES.

THE ROYAL SOCIETY,
BURLINGTON HOUSE, LONDON, W.
18th April, 1872.

DEAR SIR,

Your letter of March 30th to the President and Council of the Royal Society was laid before them at their meeting held to-day. They passed the following Resolutions:—

- Resolved*—(1). That the President and Council regret that the statements in question should have been published, both because they are incorrect in point of fact, and because the unauthorised publication of the deliberations of the Council is contrary to the usage of the Society.
- (2). That the above Resolution be communicated to Mr. Crookes.

I am, Dear Sir,
Yours faithfully,
G. G. STOKES, Sec. R.S.

Wm. Crookes, Esq., F.R.S.