

SCIENCE AND PSYCHICAL RESEARCH.

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IT is not my purpose in this paper to discuss the potential value to the race of a general acceptance of the major claims advanced by those who, through long and patient investigation, have come to accept the reality of phenomena of a supernormal character, nor yet to examine the various elaborate, ingenious, and in some instances commanding theories and philosophies advanced to explain or complement these alleged manifestations, but rather to notice the contested premise in this battle of giants over what hundreds of thousands, if not millions, of people have come to regard as a new continent of knowledge, a further extension of the evolutionary theory as it relates to man's advance.*

The student of psychical phenomena is met at the very threshold of his research with a perplexing array of contradictory testimony relating to matters of evidence, and tenaciously held by leading scientists and those accustomed to modern critical methods. In other fields of inquiry one frequently encounters numerous theories, but they are based on some generally accepted facts. Here, however, the conflict among scientific thinkers is most pronounced over the *verity* of

*The Rev. Minot J. Savage, of the church of the Messiah, New York, a critical and scientific student of great ability, and now recognized as the foremost Unitarian clergyman in America, makes the following interesting observations in his valuable work entitled "Psychics: Fact and Theories" (preface, page 9): "People often ask why, if there is anything in these so-called manifestations, they have waited all the ages and have not appeared before. There are stories of similar happenings as marking every age of history, but, as reported, they have been only occasional, and they have not attracted any serious study. Let us notice the stages of evolution as having a possible bearing on this point: first, muscle ruled the world; then came cunning, the lower form of brain power; next the intellect became recognized as king; after that the moral ideal showed itself mightier than muscle or brain; to-day it is the strongest force on earth; no king dare go to war without claiming, at least, that his cause is a righteous one. Now, it is not meant that either of these has ruled the world alone, for they have overlapped each other, as have the advancing forms of life; and as heralding the advent of each new stage of life, these have been tentative and sporadic manifestations of the next higher, while still the lower was dominant. Is it not then in line with all that has gone before that the next step should be a larger and higher manifestation of the spiritual; and, in this case, are not the tentative and sporadic manifestations reported from the past just what might have been expected? 'That was not first which is spiritual, but which is natural, and afterwards that which is spiritual.'"

alleged phenomena; and this conflict, and other perplexing facts, lead many earnest truth-seekers to abandon investigation before they have proceeded far enough to be competent to form an intelligent conclusion relating even to the reality of supernormal manifestations. This difference of opinion among men thoroughly competent to investigate most phenomena, though unfortunate, is not surprising when we bear in mind the many obstacles which necessarily beset the path of the pioneer in an unknown realm of investigation. It is only during the past half-century that psychical phenomena have received anything like rational consideration from leading thinkers of Western civilization; and less than a generation has passed since a body of scientists and scholars trained in modern critical methods of research have undertaken the investigation of psychical problems with the desire, not to further any special philosophy or to make facts and results fit some preconceived theory, but simply to arrive at the truth by methods which would appeal to the candid judgment of nineteenth-century critical thought, and if possible to discover the underlying laws governing these phenomena. Moreover, there is no field of scientific research where there are so many obstacles to overcome or where prejudice from so many different classes has to be met as in the domain of psychical science.

This becomes apparent when we remember: (1) That in this department of research we are as yet ignorant of the very laws governing the phenomena, and that therefore there must necessarily be much patient and painstaking experimental work, collecting data, and sifting evidence before we can hope to arrive at the fundamental laws under which this class of phenomena takes place. Investigators here are much like the colonist who confronts an untrod forest and finds it necessary to cut his way through the jungle to the highlands beyond, from which he can survey the surrounding country. No path is beaten, no trees are blazed, and but little light from the past falls through the tanglewood before him. He must be a pioneer, a pathfinder for future generations. (2) Another very real difficulty which students of supernormal phenomena encounter is found in the peculiar organization of the sensitives, or psychics. They are necessarily negative, or passive

at least, when the alleged phenomena are taking place, and thus are liable to come under the subtle and little-understood influences which so largely affect and mould the thought world and its manifestations. Moreover, it does not appear that moral rectitude on the part of the psychic is necessary for the manifestation of at least some phases of psychical phenomena. (3) Perhaps nothing has occasioned so much perplexity, doubt, and suspicion, and consequently so wide a diversity of opinion among honest investigators as the conditions which are frequently claimed to be essential to the manifestation of many phases of psychical phenomena. The unfortunate fact that these conditions have afforded a possibility for unprincipled charlatans and frauds to resort to deception and trickery has resulted in awakening suspicion in the minds of those unacquainted with the subject on all such manifestations, and has led many well-meaning persons to become so unreasonably skeptical as to lead them to take positions so extreme as to be unscientific. Many persons claim that unless they are allowed to prescribe the conditions they will not investigate; and they seemingly imagine that this attitude is praiseworthy. They would hardly, however, applaud the man who refused to believe the fact of telegraphy because he could not transmit messages over rope instead of wire; nor would they consider the farmer a wise man who should insist on putting his corn and potatoes on the surface of the earth instead of in the ground, on the theory that he had a right to make the conditions of growth, and that the corn and potatoes ought to do as well out of the soil and in the light as under the sod and in the dark. In this connection Dr. Alfred Russel Wallace makes the following thoughtful observations:

"Scientific men almost invariably assume that in this inquiry they should be permitted at the very outset to impose conditions, and if under such conditions nothing happens, they consider it proof of imposture or delusion. But they well know, in all other branches of research, Nature, not they, determines the essential conditions, without a compliance with which no experiment will succeed. These conditions have to be learned by patient questioning of Nature, and they are

different for each branch of science. How much more must they be expected to differ in an inquiry which deals with subtle forces of nature of which the physicist is wholly and absolutely ignorant. To ask to be allowed to deal with these unknown phenomena as he has hitherto dealt with known phenomena is practically to prejudge the question, since it assumes that both are governed by the same laws."*

To the peculiar difficulties, such as we have mentioned, which beset the patient and sincere student of psychical phenomena, must be added the hostile and intolerant attitude of conventional thought, of creedal theology, and of materialistic physical science. At first sight it seems strange that this formidable trinity should offer united opposition to anything which hinted at a future life and an extension of man knowledge; and yet when we remember that conservatism is accustomed to ridicule all that is new, bold, and out of the accepted order, the seeming strangeness disappears. Theology is often more jealous of its dogmas than solicitous for the spread of the noble ethics which more or less leavens all earth's great religions, and it resolutely opposes any theory of another life which cannot be fitted to the Procrustean bed of religious dogma. Physical science, on the other hand, largely represents the reactionary spirit which, from the open-mouthed credulity of the Middle Ages and the subserviency of reason and judgment to blind faith, has swept to the extreme of materialism, and frequently manifests an intolerance to all suggestion of a future life which is altogether foreign to the true scientific spirit. In its narrowness this opposition of physical scientists has often resembled the unreasoning and unphilosophical attitude which these same thinkers have so bitterly denounced in clergymen when the latter have attacked the evolutionary theory. Thus, these powerful influences—an alarmed theology, an arrogant materialism, and the unreasoning prejudice of conventionalism—have sought to discredit psychical science and place under the ban even pro-

* From "A Defence of Modern Spiritualism," published originally in the *Fortnightly Review*, and republished in "Miracles and Modern Spiritualism," by Dr. Alfred Russel Wallace. D. C. L., LL. D., F. R. S. London, 1896, George Redway, publisher.

found philosophers and critical scientists who, after years of exhaustive study, have become convinced of the truth of supernormal phenomena.

The prominence given to real or alleged exposés of fraudulent manifestations and the confessions of discredited tricksters, by religious periodicals and sensational newspapers which find it more profitable to cater to popular prejudice than to earnestly attempt to arrive at the truth, has led tens of thousands of people to hastily and inconsiderately reach conclusions without any real evidential foundation on which to base their opinions. In the past, a veritable tyro found no difficulty in securing admission into the columns of conservative journals and gaining notoriety by an alleged exposure of psychical phenomena or a pretended explanation of manifestations which relegated them to the domain of fraud on the part of the psychic and delusion on the part of investigators. Persons whose investigations, when they have made any, have been very slight and of so superficial a character as to show that the investigators were absolutely incompetent to speak intelligently on this subject, and who were unknown to the scientific or intellectual world, have frequently appeared in print sneering at the patient labor and assured results of some of the earth's greatest scientists and most careful investigators—men like Camille Flammarion, Professor Oliver Lodge, Sir William Crookes, and Dr. Wallace—and these shallow and superficial critics are elevated to pedestals of authority merely because they speak in a strain pleasing to that conventionalism which has ever opposed the real leaders of the world's thought—the advance guard of truth and progress. Athens applauded the pressing of the hemlock to the lips of her greatest and noblest philosopher; popular prejudice sanctioned the burning of Bruno and the imprisonment of Galileo; the medical profession ridiculed Harvey and Braid; yet the apostles of truth live in the eternal galaxy of civilization's chosen sons, while the detractors and the multitude who assisted in the effort to discredit or destroy them are forgotten. If what has been true of progress in the thought world in all past ages shall prove true in this latest field of research, the future will place in the constellation of the immortals such patient sci-

tists and careful investigators as Wallace, Crookes, Varley, Lodge, Sedgwick, Myers, Flammarion, James, and Hodgson, all of whom have brought to their work, together with honesty of purpose and a passion for truth, the modern critical and scientific methods, such as are used in unravelling the mysteries of physical science; while the shallow and flippant critics who airily dismiss facts as fiction and thereby win the applause of popular prejudice, will be remembered, if at all, only with pity and compassion.

He who seeks the applause of to-day and cares little for the truth is quite safe in ridiculing those things which are so little understood as to be popularly disbelieved; but such a course is impossible for the conscientious truth-seeker, as it is also unscientific. To the philosopher, no truth is insignificant, no fact is trivial. Especially is this the case when the fact relates to a subject about which little is known. Just as a seemingly inconsequential happening connected with a crime frequently proves to be the clue that leads to the detection of the criminal, so a simple rapping on a table or the moving of a heavy body, if such a thing actually takes place without physical agency or control, may in the hands of patient, tireless investigators unlock unsuspected mysteries and reveal new laws, or lead to an extension of known truth that will be of inestimable value to science. Victor Hugo has expressed this thought admirably:

"Table turning or talking has been much laughed at; to speak plainly, this raillery is out of place. To replace inquiry by mockery is convenient but not scientific. For our part, we think it is the strict duty of science to test all phenomena; science is ignorant and has no right to laugh. A savant who laughs at the possible is very near being an idiot. The unexpected ought always to be expected by science; her duty is to stop it in its flight and examine it, rejecting the chimerical and establishing the real. All human knowledge is but picking and culling, the circumstance that the false is mingled with the true furnishing no excuse for rejecting the whole mass. When was the tare an excuse for refusing the corn? Hoe out the weed error, but reap the fact and place it beside the others. Science is a sheaf of facts! The mission of science

is to study and sound everything. All of us according to our degree are creditors of investigation; we are its debtors also. To evade a phenomenon, to show it the door, to turn our backs on it laughing, is to make truth a bankrupt and to leave the signature of science to be protested. The phenomenon of the table is entitled, like anything else, to investigation. Psychical science will gain by it without doubt. Let us add, that to abandon phenomena to credulity is to commit treason against human reason."*

Perhaps, in no field of investigation has the power of pre-conceived ideas or deep-rooted prejudice so obscured reason and judgment as in this department of research. Indeed, here, men who claim to rigidly employ modern critical or scientific methods in other lines of investigation, and who, we should suppose, would feel in honor bound to exhaustively investigate a great problem about which there is so much diversity of opinion, come before the world after a most superficial investigation and put their opinion, colored by prejudice, against the assured results obtained after a quarter of a century of tireless experimenting by those who are their peers or superiors in the departments of physical science in which they have already won laurels. I cannot better illustrate this point than by citing the cases of some eminent men of science—the late Prof. Huxley, for example. After Dr. Wallace had exhaustively investigated psychical phenomena during a period of many years, and had become profoundly convinced of the truth of these supernormal manifestations, he induced Prof. Huxley to attend a séance. From the outset, however, Prof. Huxley displayed that prejudice and intolerance which he so often charged the clergy as manifesting against the theory of evolution. He even went so far as to make the following astounding declaration: "Supposing the phenomena to be genuine, they do not interest me."†

Dr. Wallace, however, succeeded in getting the Professor to attend one or two séances, at which the results were not

* "William Shakespere," by Victor Hugo, Book 2, "Men of Genius."

† Letter by Prof. Huxley to the committee of the London Dialectical Society, quoted by Dr. Alfred Russel Wallace in "Miracles and Modern Spiritualism," p. 221.

satisfactory or conclusive, whereupon Prof. Huxley refused to further pursue his investigations, and later sneeringly referred to table-rappings as being the result of the snapping of toe-joints; and conventionalism, the pulpit, and the sensational press heralded this dictum as expert scientific opinion on the non-reality of phenomena about the verity of which the scientists had practically no knowledge. Prof. Tyndall furnished other illustrations where a scientist disregarded the fundamental principle of modern critical methods, and ventured into print as opposing the reality of phenomena which he had never investigated in such a way as would render him competent to express an opinion. Dr. Wallace sought here, as he did with Prof. Huxley and Dr. Carpenter, to enable these scientists to pursue the critical method. He was not only convinced that, by having a thorough or truly scientific investigation, they would be equipped for rendering an intelligent conclusion, worthy of a student of science, but he was also persuaded that they would soon observe facts which would lead them to alter their opinions. In this hope, however, the great naturalist was disappointed. He says:

"I invited Dr. Carpenter to attend some sittings, with every probability of being able to show the phenomena. He came once. The sitting was not very successful, raps and taps of varying character being alone produced. Although strongly pressed to do so, he never came again. With Prof. Tyndall exactly the same thing occurred. He came once, and declined to come again, although informed of phenomena which had repeatedly occurred in my own house which he could not explain, and which I had every reason to believe would occur in his presence if he would only give three or four short sittings to these investigations."*

Now, what would Professors Huxley and Tyndall have said of anyone who attempted to explode the theory of evolution after spending a few hours on the subject, especially if the critic had refused to embrace opportunities to fully acquaint himself with the truths involved? What would they have said as to the relative values of the opinions of such uninformed persons, compared with the conclusions of Darwin

* Appendix to "A Defence of Modern Spiritualism."

and Dr. Wallace, who had spent many years in carefully experimenting, and in verifying the truth of their propositions? And yet we find these gentlemen pretending to explain away supernormal phenomena about which they were not only comparatively ignorant, but which they refused to investigate in the manner which they held all persons should follow before attempting to question the conclusions of physical science. Not only this, but they also opposed their views, based on practically no experimental knowledge, and strongly biased by preconceived ideas and deep-rooted prejudice, against the quarter-of-a-century investigations of such world-famed scientists as Dr. Wallace, Sir William Crookes, and Camille Flammarion. With possibly one exception, I have yet to hear of any scientist or careful and critical investigator who has given, in patient and honest investigation of this subject, anything like the time he would give to any other great problem in which new truths were to be verified or disproved, who has not been forced through his research to the acceptance of the truth of these phenomena.

This, of course, is not saying that competent investigators of psychical phenomena accept any special theory put forth to explain the manifestations. On the contrary, they entertain many views and theories to account for them. For example: (1) Some, as for instance Dr. Wallace and Sir William Crookes, have been led to the positive conclusion of the truth of the central claim of modern spiritualism. (2) The attitude of many is substantially that of the Rev. M. J. Savage, who, after eighteen years of careful investigation and wide reading of all literature bearing on the subject, expresses his opinion in favor of the spiritualistic hypothesis, with this qualification: "I hesitate as yet to say there can be no other explanation, but I frankly admit that I can now see no other which seems to me adequate to account for all the facts."* (3) Still others hold to the theory advanced by certain philosophers of the Orient, which attributes the phenomena either to elementary beings or an order of beings other than the spirits of the dead, or to an extension of the psychic or mind power potentially present in each one. (4) Others, as Dr.

Carpenter, hold to the theory of unconscious cerebration, or believe that the solution is found in the theory of dual or multiple personalities. While some hold to other more or less well-digested theories which have been advanced as explanations of the phenomena.

It matters not, however, what the explanation is, as our present inquiry concerns the fundamental proposition that these supernormal phenomena do occur, apart from fraud, deception, or trickery. So far as I have known or heard, I repeat that, with one possible exception, all thoughtful and scientific investigators who have desired the truth earnestly enough to patiently and determinedly seek it in this field as they are expected to do in other realms of research have been forced to the conclusion that, apart from fraud and deception and from the perplexities and disappointments which all investigators meet in their search for new truths and wider knowledge, there is here a vast continent of truth which calls for further investigation. Dr. Wallace, who has, perhaps, caused more leading and thoughtful men to seriously look into psychic problems than any other living thinker, is probably more competent than anyone else to speak intelligently on this point. He says:

"I feel myself so confident of the truth and objective reality of many of the facts here narrated that I would stake the whole question on the opinion of any man of science desirous of arriving at the truth, if he only would devote two or three hours a week for a few months to an examination of the phenomena, before pronouncing an opinion, for I again repeat, not a single individual that I have heard of has done this without becoming convinced of the truth of these phenomena."*

Another thing pointed out by Dr. Wallace is very important in this connection, that is, the longer earnest men and women investigate these supernormal phenomena in a scientific manner, the more profoundly do they become convinced that the alleged phenomena do take place under certain conditions in a manner such as to preclude all possibility of fraud

* Chapter on "Scientific Aspects of Spiritualism," in "Miracles and Modern Spiritualism," p. 125.

on the part of the psychic or hallucination on the part of the investigator. In illustration of this fact Dr. Wallace cites a circumstance connected with the investigations of the London Dialectical Committee. This body consisted of thirty well-known men, whose qualifications and positions were such as to command the respect of all thoughtful people; of these only eight, or less than one-fourth the number, entertained the slightest belief that the alleged phenomena were produced by any other means than by fraud and imposition. Several members were hostile or at least so indifferent as to give little time to the subject, seldom attending the séances. Yet during the investigations twelve of the complete skeptics became convinced of the genuineness of the phenomena. After narrating these facts, the veteran scientist observes—and this is the fact I wish to emphasize:

"My own observation as a member of the committee and of the largest and most active sub-committee enables me to state that the degree of conviction produced in the minds of various members was, allowing for marked differences of character, approximately proportionate to the amount of time and care bestowed on the investigation. This fact, which is what occurred in all investigations into these phenomena, is a characteristic result of the examination of any natural phenomena. The examination into an imposture or delusion has invariably exactly opposite results; those who have slender experience being deceived, while those who perseveringly continue the inquiry inevitably find out the source of the deception or delusion. If this were not so, the discovery of truth and the detection of error would alike be impossible."*

These statements of Dr. Wallace's will be borne out, I believe, by every thinker who has for years investigated psychical phenomena. When, more than sixteen years ago, I began my investigations into this subject, I entered upon the work believing that the alleged phenomena were entirely the work of fraud, imposition, or self-delusion. My early experiences all tended to confirm this opinion, yet I determined to persevere until my experience would warrant my speaking intelligently as to, and explaining conclusively, the methods

by which the frauds were perpetrated. At length, however, I encountered phenomena that were of no doubtful character; phenomena which were not produced in the dark or under circumstances which made fraud possible, and which also bore such internal evidence of genuineness that I was compelled to revise my opinion. I pursued my investigation with renewed zeal, and, I believed, with double watchfulness, because before I had investigated these problems I had myself come to the conclusion, with others, that the almost inexplicable fact, that many of the world's most illustrious thinkers believed in the genuineness of psychical phenomena, must be due to their having encountered some apparently remarkable happenings which had carried the conviction of genuineness to their minds, after which they had been less watchful for fraud. The longer I investigated, however, the more the conviction was forced upon me that a large proportion of these phenomena were due to supernormal influences, and were not the result of imposture or deception.

For more than sixteen years I have pursued these investigations as opportunity offered, while acquainting myself as thoroughly as I was able with all literature bearing on the subject, especially that which assailed the genuineness of the phenomena, and I have at no time been more profoundly convinced of the genuineness of a large proportion of the alleged psychical phenomena than I am to-day. This, of course, by no means implies that I have not encountered fraud and deception. Doubtless all who have long investigated this problem, especially where their investigations have been largely with psychics who depended on their alleged power for a livelihood, will frankly admit that they have encountered a large amount of what to them appeared to be and doubtless was more or less clumsy fraud; while a still larger proportion of their investigations have been of no evidential value because they were not under test conditions or took place where the results might have been due to mechanical devices or to confederates. There is no desire on the part of scientific investigators of psychical phenomena to deny the existence of fraud, or to condone, excuse, or in any way palliate the offence, but they hold with Victor Hugo, that the presence of

the false is no ground for rejecting the true; that it is unreasonable to reject the wheat because tares are present. They hold that it is unscientific and unphilosophical to hastily assume, when we encounter fraud, that *all* is fraud, especially when many of the world's greatest scientists, whose habits of thought and investigation have made their opinions of greater value than those of the general investigator, boldly affirm, after more than a quarter of a century of research, that these phenomena do take place in a supernormal manner.*

In the course of my researches I have necessarily met a number of very intelligent and thoughtful investigators, and their experience, with one exception, has been uniformly in line with Dr. Wallace's observation touching the growth of conviction. It will be understood that I am speaking not of belief in any theory as to the cause of these phenomena, but merely of the fact that the hypotheses of fraud on the one hand and self-deception or illusion on the other are inadequate to explain many of the manifestations. It would be difficult to conceive of anything more absurd than the spectacle constantly presented of persons unknown in any field of scientific research, and without any extended experience in the critical examination of psychical manifestations, describing at length just how all these alleged phenomena are produced, and ridiculing the conclusions of many of the greatest scientific investigators of our age. Among these investigators have been men of world-wide reputation for careful and critical work in various fields of research, who have hard-earned reputations at stake, and who have not only investigated with a view to finding out whether the phenomena could be pro-

* Recently a leading scientist has modestly suggested, in substance, that he believed scientific men were not so well qualified to judge psychical phenomena as others, because experiments and observations by them are always honest, and they never find it necessary to guard against fraud in nature. There might be some force in this observation if scientific men went into the investigation ignorant of the allegations of imposture and the popular cry of fraud connected with all these phenomena. This not being the case, however, the scientific man is doubly armed; he is forewarned, while he also brings into the research the habit of critical observation acquired after years of the most unremitting and exacting experiment and observation. He is nothing if not judicial and critical; and, as a rule, he has entered upon the investigation, if not prejudiced against the claim of supernormal manifestations by his preconceived views and by public report, at least as a complete skeptic, such as were Sir William Crookes and Dr. Wallace. It is evident, therefore, that no class of investigators are better qualified to detect fraud or deception; and though, owing to the materialistic bias so often acquired from popular theories of physical science, they may not be so sympathetic as other intelligent students, they are more judicial.

duced under the conditions in which they have observed them by the most clever tricks or any possible fraudulent methods known to them, but who have also investigated all theories which seek to explain these manifestations by means of imposture, and, with these supposed explanations in mind, have investigated patiently and tirelessly for years, some for more than a quarter of a century. In order to expose the unreasonableness of the position of the novices in psychical investigation who flippantly assume that they can explain all the manifestations by fraud or delusion, I wish to call attention to the character and qualifications of a few of the eminent men who, after long research, unhesitatingly declare that psychical phenomena are genuine; that they do take place under conditions which preclude all possibility of fraud or deception.

Alfred Russel Wallace, F. R. S., D. C. L., LL. D., who, next to Charles Darwin, has done more as a working naturalist to establish the theory of natural selection than any other investigator, who is to-day the most eminent living naturalist in England, and one of the most profound thinkers, careful reasoners, and critical observers, has spent thirty years in patient and exhaustive investigations of these phenomena. Like Sir William Crookes, he long since became thoroughly convinced of the truth of these phenomena. He has carefully examined the attempted explanations of all the more prominent writers who have endeavored to explain away or to give a narrow scope to the range of psychical phenomena, and has ably answered their arguments. It is often urged by persons unacquainted with the mental attitude of the great scientists who have become convinced of the genuineness of these manifestations, that their great desire for immortality has biased their judgment. Nothing could be farther from the truth, if we are to take the almost universal testimony of these investigators. Many of them have entered upon their investigations into the alleged phenomena for the avowed purpose of exposing their unreality, but, finding truth where they expected fraud, they have yielded to evidence from which there was no escape for an honest truth-seeker. Others have been pronounced skeptics, but have investigated simply because of a passion for knowledge and a desire to acquire all possible

truth. Dr. Wallace is an example of this class. In describing his mental attitude he says:

"For twenty-five years I had been an utter skeptic as to the existence of any preterhuman or superhuman intelligence, and I never for a moment contemplated the possibility that the marvels related by spiritualists could be literally true. If I have now changed my opinion, it is simply by the force of evidence. It is from no dread of annihilation that I have gone into this subject; it is from no inordinate longing for eternal existence that I have come to believe in facts which render this highly probable, if they do not actually prove it. At least three times during my travels I had to face death, imminent or probable within a few hours, and what I felt on those occasions was at most a gentle melancholy at the thought of quitting this wonderful and beautiful earth to enter on a sleep which might know no waking. In a state of ordinary health I did not feel even this. I came to the inquiry, therefore, utterly unbiased by hopes or fears, because I knew that my belief could not affect the reality, and with an ingrained prejudice against even such a word as spirit, which I have hardly yet overcome."*

In Sir William Crookes, F. R. S., we have one of the foremost physicists of the world. His life has been given to careful experimentation and original research. Next to Herbert Spencer, Lord Kelvin, and Dr. Wallace, he is probably the best known among the great scientists of England who are still living. In 1870, or twenty-eight years ago, he began the investigation of psychical phenomena. His investigations were conducted with the greatest care and in a rigid and critical manner. After four years of exhaustive investigation he became so convinced of the truth that he published the results of his researches. Subsequent investigation and verification of phenomena have only confirmed his faith. Some years ago he republished an account of his more extensive investigations of earlier years, and on that occasion reasserted his conviction in the most positive way, declaring that he had not changed his views, and that, after a careful review of his former report, he could not find anything to retract or alter. Sir William

Crookes is at present President of the English Society for Psychical Research.

Camille Flammarion enjoys a world-wide reputation as one of the most eminent astronomers of our time. His investigations into psychic phenomena, as he has recently informed us, have extended over thirty years, and, without committing himself to any special theory to explain the phenomena, he unequivocally holds that the hypotheses of fraud and deception cannot explain some of the manifestations which he has personally witnessed.

Prof. Oliver J. Lodge, F. R. S., LL. D., professor of physics at Liverpool University College, after a long and careful series of experiments with Mrs. Piper, declared in 1890, "that there is more than can be explained by any amount of conscious or unconscious fraud; that the phenomenon is a genuine one, however it is to be explained."* And in a public address delivered in St. James Hall, London, on March 29, 1897, Prof. Lodge thus summed up the result of his investigation:

"A conviction of the certainty of the future existence has to me personally been brought home on entirely scientific grounds, though in such form that I cannot as yet formulate them distinctly so as to convince others, but amply sufficient for my own life. As sure as I am that other persons exist at all, so sure am I that the decease of the body does not mean cessation of intelligence."

Among other English scientists who during comparatively recent years and after careful and painstaking investigation have affirmed their belief in the genuineness of psychical phenomena may be mentioned Prof. W. F. Barrett of the Royal College of Science, Dublin; the Earl of Crawford and Balcarres, F. R. S., a past president of the Royal Astronomical Society of England, and the late Prof. Balfour Stewart, F. R. S. But space forbids a more extended notice of eminent scientists who, through exhaustive and critical investigation, have come to believe in the reality of supernormal phenomena. It is evident, however, that during recent years a decided change has taken place in the attitude of men of science touching this field of research, especially in England and America.

* "Proceedings of Society for Psychical Research," December, 1890.

Many factors have been working this change, not the least important of which has been the valuable work carried on by the English Society for Psychical Research and the American branch of the same society; the success of the latter being very largely due to the indefatigable work of Dr. Richard Hodgson, LL. D., ably seconded by the learned psychologist, Prof. William James, of Harvard University.

The English Society for Psychical Research was organized in 1882 for the scientific investigation of psychical phenomena. Slowly and with great care the working members have investigated various groups of phenomena, sifting, classifying, and examining in a truly judicial manner. They have given some time to the consideration of the various hypotheses offered to explain the manifestations, but have wisely confined most of their attention to the accumulation of authentic data. Among the members who in an official capacity have materially aided in this great and difficult task are Prof. Henry Sedgwick, Cambridge, England; Right Hon. Arthur J. Balfour, F. R. S.; Prof. W. F. Barrett, Royal College, Dublin; the Marquis of Bute; the Bishop of Ripon; the Earl of Crawford and Balcarres, F. R. S., K. T.; Sir William Crookes, F. R. S.; Prof. Oliver J. Lodge, F. R. S.; Prof. Macalister, F. R. S., M. D.; Prof. W. Ramsay, F. R. S.; Lord Rayleigh, F. R. S.; Prof. J. J. Thompson, F. R. S.; Frederick W. H. Myers; Prof. William James, Harvard University; Dr. Richard Hodgson, LL. D.; J. Venn, F. R. S.; and G. P. Bidder, Q. C. The membership of the Society has grown very large and embraces numbers of the most eminent men of science the world over. The amount of data that has been carefully sifted and compiled forms one of the most valuable acquisitions to the scientific literature of the closing quarter of the nineteenth century. The work of this Society, however, is but one of several factors which are rapidly working a change in public opinion. Space forbids my noticing the others except to refer to the great service rendered the cause of psychical science by Mr. William T. Stead by the publication of *Borderland* and through giving some prominence to the subject in the English *Review of Reviews*. Mr. Stead, like Mrs. Sara A. Underwood, the late Prof. Stainton Moses, and

other prominent thinkers, came to take a special interest in these phenomena through experiencing automatic writing through their own hands, becoming instruments for messages which were written apart from any conscious volition of the brain. Rational investigation of psychical phenomena has now been carried to a point which insures for it an honest, scientific, and sympathetic hearing, and this is all that any truth asks.

It is the high and holy duty of man to seek the truth; and what highway of knowledge can be so alluring to the aspiring soul as that which holds the promise of broadening our apprehension of life and giving to man an affirmative answer to the soul's cry which has rung down the ages, "If a man die, shall he live again?"