

room, entirely out of reach of the child, whose hands and feet I was watching closely. A dozen times have I tested the phenomena in every way that the ingenuity of sceptical friends could suggest, and the result was that I could come to no other conclusion but that the sounds were real *objective* raps, displaying intelligence, and yet certainly not produced by any visible cause. I have often had the sounds occurring on a small table, above and below the surface of which my hands were placed, and have felt the jarring of the taps on that part of the table enclosed between my hands.

I have taken sceptical friends to witness these phenomena, and their testimony agrees with mine. It must be borne in mind that the conditions of the experiment are singularly unfavourable either for fraud or hallucination. To avoid the possibility of the former I have held the hands and feet of the child, and still obtained the knockings; they have occurred on the lawn, on an umbrella, far removed from the possibility of deception by servants. Then, again, the impressions made on the senses by the bright sunlight, conversation, and movement, were perpetually correcting any tendency to fall into a state of reverie, even had I not specially guarded myself against this danger. I can give no explanation of the occurrence, but it is a curious fact that these manifestations, after rising to a maximum, in the case of this child, gradually faded away, and now have entirely ceased. All that can be said concerning the child is that her health is stronger now than when subject to this curious malady. Were it imposture on her part, she would be more likely now to produce these manifestations, as the interest of friends having been excited, temptations to deceit through desire for notoriety are stronger now than during the time of my investigation, when scarcely any one outside her family circle knew of the facts. I think it is my duty to put on record the facts I have narrated. Within the last month I have had the opportunity of examining another so-called medium, who also obtains physical action, such as writing on a slate at a distance from him, or under such circumstances that the most careful examination could not detect imposture.

Is it not possible that there may be some foundation for the stories of occasional supernatural irruptions into the present visible universe? I do not here refer to the great mysteries of religion, but to the numberless cases which float in families wherever you go; many, no doubt, are sheer hallucination, but still a formidable residuum exists that cannot be so explained. The manly, straightforward course seems to be to appoint a committee to inquire into the matter leisurely and systematically, and not to allow thousands of people to be deluded by the matter, if a scientific explanation is possible. Dr. Carpenter, it is true, has expressed the reason for the rejection of these phenomena by scientific men in the following words:—"If either our own senses or the testimony of others inform us of something that is entirely inconsistent with inherent possibility, we refuse to accept the information, feeling assured that a fallacy must lurk somewhere" (p. 631). Let us test this reasoning by a supposition. Suppose the sense of sight was given to only one individual, and he were to assert that he could perceive objects a mile distant, this would be inherently impossible to everyone but himself, but not necessarily untrue because of this. Again, suppose no meteorites had ever fallen to the earth's surface till last year, and some one or more were to assert that such a fall had then occurred; this would be inherently impossible, but in time would be accepted by the multiplication of testimony of similar falls. Now, as regards the extraordinary phenomena that I have just described, testimony to their reality is multiplying so rapidly that those who have never witnessed the phenomena will find it extremely difficult to withhold their belief that there is a foundation for this abundant and consubstantaneous testimony.

Nevertheless, Dr. Carpenter assures us that "every one who accepts as facts merely on the evidence of his own senses, or on the testimony of others what common sense tells him to be much more probably the fiction of his own imagination, even though confirmed by the testimony of hundreds affected with the same epidemic delusion, must be regarded as the subject of a diluted insanity." This is certainly the most astounding reasoning. "Common

sense" is set up as the tribunal before which every fact must pass muster before it can be accepted. It so happens that our knowledge of molecular physics is more advanced than mental physics, and so—thanks to Mr. Johnstone Stoney—the radiometer has received a solution, whilst these knockings have not; but is our ignorance, the limited range of experience that we call common sense, to be set up as a reason for rejecting everything that transcends our experience? Dr. Carpenter replies "certainly," and thus closes the door upon every new fact that common sense may reject. But let us be careful lest in a too hasty rejection of phenomena that seem incredible and inexplicable, according to received opinions, we are not laying ourselves open to that same spirit of bigotry that persecuted Galileo. Surely the motto of every man of science ought to be found in Sir John Herschel's words, "The natural philosopher should believe all things not improbable; hope all things not impossible."

THE BRITISH ASSOCIATION AT GLASGOW.

THE following is a full and special report of the discussion on Professor Barrett's paper on Psychological Phenomena, read on Tuesday, last week, at the Anthropological Department of the British Association at Glasgow, under the presidency of Mr. A. R. Wallace. More than 1,000 members were present, and about 200 were unable to obtain seats:—

THE CHAIRMAN—Ladies and Gentlemen, I think you must all agree with me I have hardly heard in this room a paper which, whatever you may think of its subject matter, has been treated in a more careful, and a more truly scientific manner, than this paper of Professor Barrett's—(applause)—and we need hardly wonder at this when we consider that he is a thoroughly trained man of science; in fact, as I understand, he has been trained under the eye of one of the most distinguished physicists of the present day—Professor Tyndall. As this subject is one which will naturally excite a considerable amount of discussion, and perhaps some feeling, I hope you will support me in my endeavours to restrict the discussion of it within certain limited bounds. I think it is absolutely necessary, as this paper is a record of facts solely, that we should not allow persons to speak who know nothing whatever of the facts. (Applause.) We shall be happy to hear any facts bearing upon the subject, with any connected explanation, that any person may give of those facts, but I beg no person to get up merely for the sake of telling us that he does not believe them on *a priori* grounds. I shall reserve to myself the right to make a few concluding remarks, and perhaps give a few experiences of my own; in the meantime I will call upon those gentlemen who, I believe, are prepared to add something to our knowledge on this interesting though mysterious subject.

COLONEL LAUS FOX ON PSYCHOLOGICAL PHENOMENA.

Colonel Laus Fox, Guildford, read a letter which he had written to the author of the paper, in which he stated, respecting a visit paid to a well-known professional medium, that he did not go so far as to say that he was convinced of the genuineness of everything he saw there, although the writing was very puzzling to him. Nothing that he had seen done by professional mediums convinced him in the slightest degree, and he would discard the whole thing as legendary, were it not for certain phenomena that he had witnessed in his own family during the last four years, in connection with the use of the planchette, which answered questions which were put by members of his family. The *séances* had been confined to himself and his children, and he had observed their surprise as, one after another, they witnessed the appearance of the writing on the paper. His eldest daughter, seventeen years old, was evidently the one whose presence was chiefly necessary for the success of the *séances*; and she disliked them, because they gave her a headache. She was not particularly imaginative, nor excitable, and had no particular views on the subject, beyond expressing the opinion that it was rather a bore. She was not in the least degree in any abnormal condition during the time of the *séances*. Two of his sons appeared to have, in a less degree, the same power as his daughter, and it was only when one or two of them held the planchette, or pencil, that a sentence was written; and when two persons held the pencil, it did not matter which hand was uppermost, the result was the same, and the one was under the impression that the movement might be made by the other. These facts appeared to him to discredit, if not to disprove, the theory of unconscious cerebration. No one holding the pencil knew what was written; they had even sat in such a position with respect to the writing that it would be difficult for them to write. He had watched the position of the hands and arms, and found that the motion was imparted from the joint hands to the arms, and not from the arms to the hands; but that was very difficult to determine. The writing was often confined to a simple yes or no, in reply to a question asked; sometimes it was a whole sentence, but never more than a single line. Sometimes objects were drawn by the pencil, such as a rude figure of a house that a child might draw, but the drawings were meaningless, and had no reference to the questions asked. All their questions had been put as if addressing an invisible agent, although none of them had any particular faith as to the existence of spirits. No information of the slightest value or interest was given in any of the replies, and no answer had been given which might not have

been given by any one present, except on one occasion, when the age of a visitor was given which they did not know; but that might have been accidental. On several occasions the *séances* had ended with the pencil writing, "No more to-night;" and after that was written the pencil would not move any more. They had asked for raps on several occasions, but they were never obtained. The supposed spirit wrote its name as "Minnie." The whole value of these experiments consisted in his confidence in his own children. There could be no motive with them for deceit. All through the experiments, however, the answers were trivial, and to suppose that such answers would be given from the unseen world appeared to be so stupid that one might be ashamed of investigating, were it not that important biological results might ensue from the investigation.

MR. W. CROOKES ON PSYCHOLOGICAL PHENOMENA.

Mr. Crookes—When I came into this room it was not my intention to say anything on this subject, but one or two things have come to my mind while listening to Mr. Barrett's very excellent paper, that I think it would be as well to mention. The latter part of the paper I have listened to with very great interest and approval, but one or two of his arguments, I think, in the former part, are scarcely correct. Everything that Mr. Barrett has himself seen and investigated he believes thoroughly, and he asks us to believe; but when he reads or is told by other scientific men, or other persons who have investigated, of much more wonderful things, he, I think, is rather inclined to give the explanation that the observer has been in some mysterious manner hypnotised, electro-biologised, or mesmerised, and, instead of seeing the things, he "thinks he sees them." Now that is an argument which, if it is carried out to its legitimate extent, would entirely stop the whole progress of research in any branch of science. A physicist shows an experiment before Section A. Persons might say, "Your audience think they see it; you have very wonderful electro-biologic or mesmeric powers; you throw a kind of glamour over your audience; nothing takes place; but you make them think they see them." That is exactly the kind of reasoning which I have heard and read applied to certain very extraordinary phenomena which I had been investigating for some years, and which I am glad to see Mr. Barrett is just nibbling at the edges of. The explanation that Mr. Barrett has given in connection with Mr. Home, that people fancy they see things, will not stand the test of actual experience at all. In the first place Mr. Home has always refused to have anything to do with darkness. The most wonderful thing of all, the levitation of Mr. Home, has not occurred once or twice in a dim light, but it has occurred over one hundred times under all imaginable conditions—in the open air, in broad sunshine, in a room, in the evening, sometimes in the daytime, and on each occasion it was witnessed by a separate number of persons; I have only seen it once or twice myself, and it was at night; there was a good light in the room, and it occurred very faintly; therefore, I do not wish to give any instance from my own experience, but the evidence in favour of it is stronger than the evidence in favour of almost any natural phenomenon the British Association could investigate. The phenomena that Mr. Barrett has investigated are those of a Dr. Slade, an American so-called medium. One must use the language of the Spiritualists, although I object to it. I was asked to investigate when Dr. Slade first came over, and I mentioned my conditions. I have never investigated except under these conditions. It must be at my own house, and my own selection of friends and spectators, under my own conditions, and I may do whatever I like as regards apparatus. I have always tried, where it has been possible, to make the physical apparatus test the things themselves, and have not trusted more than is possible to my own senses; but when it is necessary to trust to my own senses, I must entirely dissent from Mr. Barrett, when he says a trained physical inquirer is no match for a professional conjuror. I maintain a physical inquirer is more than a match. Of course, if a professional conjuror says, "You must stand at one end of the room; I must have my own platform, with my own machinery, and I will play some tricks in front. You and yours must not investigate;" that is not investigating at all; that is simply seeing some conjuring tricks. A conjuror will never allow himself to go to another person's house, and bring no apparatus at all, and there perform these same things. They do not attempt to do that, and I do not believe any of these wonderful conjurors could stand the close examination of a physical inquirer a minute. I came here more to listen to the discussion which it was hoped would be elicited by Mr. Barrett's paper, than to say anything myself, and, therefore, I should like to give place to others who perhaps will speak on the subject.

Lord Rayleigh—I had no intention to speak on this subject. I think we are much indebted to Professor Barrett for his courage, for it requires some courage to come forward in this matter, and to give us the benefit of his careful experiments. My own interest in the subject dates back two years. I was first attracted to it by reading Mr. Crookes' investigations. Although my opportunities have not been so good as those enjoyed by Professor Barrett, I have seen enough to convince me that those are wrong who wish to prevent investigation by casting ridicule on those who may feel inclined to engage in it. (Hear, hear.) With regard to Mr. Barrett's remark that certain of these phenomena may be capable of explanation by the hypothesis that those who think they witness the phenomena are really subject to a delusion, I would not deny that there may be just a possibility, but I feel quite confident that anyone who will attend a *séance*, if any phenomena occur, will go away satisfied that that is not the explanation. One medium or conjuror (I won't decide that question) has been mentioned, Dr. Slade, with whom phenomena occur with considerable regularity. I will venture to say anybody in this room going to Dr. Slade, and seeing the phenomena, will go away perfectly satisfied that hallucination has nothing to do with it. Some reference has been made to the great value of the evidence of conjurors, and I am inclined to think that although the acquirements of a scientific man will help him much in investigating those matters, still the special accom-

plishments of a conjuror are also of great value. I was anxious to associate myself with a conjuror in the investigation so far as that was possible. I went to Dr. Slade with a professional conjuror, and the phenomena happened with considerable perfection, while the conjuror could not form the remotest idea as to how the effects were produced. That is a fact which may be of some interest to those who think conjurors can see through and explain all the phenomena to which witness has been borne.

PSYCHOLOGICAL EXPERIENCES OF MR. GROOM NAPIER.

Mr. Groom Napier—For twenty-five years I have had experience of Spiritualistic phenomena. When I was a child I used to keep a great many birds. I read in some German work that if I passed my hand over the birds in their cages they would fall off their perches, and I thought I would try the experiment. I observed that it was the case, and that when I passed my hand from right to left over the birds they fell off their perches, and appeared as if dead. They remained in that condition only as long as I kept my hand over them. As soon as I removed it they jumped upon their perches as before. Well, I thought I had discovered something that might be helpful to myself, and in the course of my life I have applied the same system to taming horses and dogs. It was not necessary at all for me to touch them, but by merely keeping my hand over them I could tame them. I believe that to be part of the great Spiritualistic law. Mr. Barrett gave us his experience of reverie, and I can confirm from personal experience the power that some persons have of throwing themselves by an effort of the will into a state of reverie, during which they are open to receive impressions from the unseen world, and to become acquainted with what is passing in distant parts. I have often done that. Since I came to attend this meeting of the British Association I fell into a state of reverie in the reception-room (laughter), and I felt that there was some one in the room that I should like very much to know. I recalled certain names, and I went up and addressed an individual that I knew by name, but whom I had never seen. I identified him and his habits by my own spiritual consciousness, quite unconnected with any other knowledge. I mention that as a fact coming within the line of observation followed by Mr. Barrett. It is a very curious power that I have, though I do not know by what name to call it, and a good many others, no doubt, have it too, for I find with reference to persons with whom I sympathise, that I know what they are doing when they are absent, without any communication whatever. There was a friend of mine with whom I had great psychological sympathy, and I knew when he wanted me to come to him. He merely willed it. He told me he wished me to come to him, and I would come and arrive just at the time he wanted me. That he did four or five times, so that there could be no doubt about it. (A Voice: "How far off was that?") He was three or four miles away, and he wanted me to go with him to a lecture on one occasion, and he did not know where I was, so that he could not send a messenger to me. He willed me, or wished me to come, and I came. I had no certain knowledge of where he was, but I had a feeling that it was a time to go, and that I should meet him. There I met him. I might mention his name. He is a gentleman who has lectured 40 or 50 times on these phenomena and other subjects in London—Dr. Sims, an American medical man. He is a well-known Spiritualist, and has some knowledge of mesmerism and other allied subjects. He first introduced me to the Spiritualistic or mesmeric (I do not exactly know what to call it) method of reading character. I gave him ten handwritings of persons quite unknown to him, in sealed envelopes, so that he could not see them, even if he had been a very clever reader of character by handwriting. The first he read exactly. It was my own handwriting. He said, "This person has an extraordinary sympathy with me—(laughter)—the greatest sympathy that I ever had with any human being." I was very much struck with this, and I did not say anything to him to confirm it, but I asked him to go on. He told my age, habits, and all about me quite as correctly as my mother could have done. (Laughter.) I tested him with ten other cases of a similar kind, and they were all equally correct. His method of using the envelopes was not to look at them at all. He shut his eyes, and put them up against his forehead, and by the influence or sympathy that came through the paper he was enabled to describe the character. (Laughter.) (A voice: "Did he describe the person?") I did not test him so much with reference to the physical characteristics, except with regard to myself, when he told my height and my weight. (Laughter.) With regard to ordinary mesmerism, there is a well known story, I believe, well authenticated. (A voice: "Give us facts.") Well, then, I had a remarkable spiritual phenomenon some two years ago in connection with this same Dr. Sims. I was very anxious to help him in his course of lectures in London. He had not much experience of London life, coming fresh from the United States. I was very much exercised, to use a common expression, about his probable success. I went to bed after having been with him, and I saw just above my head a light on the wall. (Laughter.) This light was somewhat after the style of Rembrandt's picture of the vision that Dr. Faustus saw. (Henceforth laughter.) I saw a hand. This hand wrote. I cannot exactly say the words, but it was a plain intimation of what I was to do for Dr. Sims. Next day I went, and I did all that had been intimated to me on the wall, and the result was that Dr. Sims had a most wonderfully successful course of lectures. That is one case. I had another very remarkable—(confusion and uproar). A young lady with whom I was friendly at one time—a voice: "Shut up," and uproar, during which Mr. Napier resumed his seat.

Rev. Dr. Thompson—I have for the last 35 years been waiting for a good scientific demonstration on this subject, ever since I began to study psychology, mental philosophy, and other kindred sciences. In the first place let me say I am open to conviction. As a proof of that I have gone to these *séances*, and have offered myself as a subject for the purpose of being manipulated upon. I have been an anxious

student of what is called mental or psychological philosophy, and this subject has to deal most with that science. It is not a subject like some of the sciences that are brought forward.

The President—Please do not give us generalisations; give us some fact or statement.

A Voice—Give us facts.

Rev. Dr. Thompson—The fact I have to state is a most important one. Science, to be rightly defined, ought to be certainty of knowledge. We want to obtain from this or that gentleman some certainty. Now, in reading over and hearing what has been read or written, and looking at my own observations in life, and my attendance at lectures, I have never yet found that there has been among my own circle of friends and acquaintances a single individual who was convinced of the truth of the phenomena which have been produced, and have been said to be real.

The President—I must stop you if you go on in that way. I have told you we cannot have mere opinions and statements of disbelief. We must have facts, and if you cannot give us any, I shall rule that you must sit down.

Rev. Dr. Thompson—I am a fact. (Laughter.) Why should those gentlemen who hold opinions on the opposite side be afraid to have their opinions overhauled?

The President—We want facts, not opinions.

Rev. Dr. Thompson—If these things that have been adduced are not opinions, what are they? (A Voice: "Facts.") I am delighted to hear it, and I am going to take a few of them to pieces. (A Voice: "It is not possible.") There is a gentleman who prophesies. He has got in him the spirit of anticipation largely developed. (Laughter.) Will the President kindly keep order for me? I am the first to take what may be called the opposite view with regard to these facts, by giving counter facts, and assailing these facts upon their weak points. It is evidently the desire of those who are the admirers of the system which has been recommended more or less by all the speakers, with a few able exceptions, such as the learned Mr. Crookes gave us when he took one or two points to pieces, to present only one view of the case. I now stand upon the position of giving facts, and these facts are, first, in all my experience I and my friends have never found a fact to be substantiated, proved, or true, or certain knowledge of science. (Laughter.) That is the first thing. I have studied in every university in Scotland—(laughter)—and at one abroad. I have been throughout the whole of Europe, and have had opportunities of studying those facts and those sciences; I have studied them for thirty-five years, and have offered myself as a subject for investigation—(laughter)—and they could not produce any of their phenomena with me. Now that is one fact. (Laughter.) Perhaps it was a fact that that gentleman had his weight told by the spirit with which he was familiar. Let me refer to the arguments that have been adduced, *seriatim*. I will begin with the gentleman who last told you that he had a power to sympathise with parties whom he knew, that he knew what they felt, and so on; in other words, that they did not require the use of telegraphic wires because they could ascertain one another's ideas. He stated as a proof that he went to a meeting, or was anxious to go, that he thought of a gentleman whom he did not know, and going to the meeting to his surprise he found the gentleman there.

The President—Allow me to say a word. I think in order to limit this discussion within a reasonable time it ought to be made a rule that the speakers should reply to the paper, and not to the accidental remarks of other speakers. If they do so we shall have other gentlemen replying to them, and others to them, till we get miles away from the subject with which we commenced. I therefore beg, as chairman of this meeting, to rule that we will have no answers by one speaker to another unless the point refers directly to a matter brought forward by the reader of the paper. (Hear, hear.)

Rev. Dr. Thompson—I am glad I took the precaution of putting down a few notes with regard to the gentleman's paper. I was taking the backward process, and beginning with the last first. Now I will reverse my process, and confine my attention to the gentleman who read the able paper. In the first place he spoke of these things as being proved. Now science demands certainty and demonstration, and if it be certain and demonstrable, why not bring it to the halls of this University and devote the whole of this great room to the proof of it? Then I will believe it. If it can be done, as one speaker said, amongst a few friends, why not bring it before the whole community? Why not demonstrate the truth of the science before this great assembly? Why confine it to a few friends? This matter seems to be founded upon *séances*, and upon the experiences of a few individuals, in rooms, some of them dark, others light, but we have not been told what sort of light it was, whether gas or candle-light, or any other light. They do not come to the test of trying questions like these upon an open platform, and before hundreds and thousands of men. Let these gentlemen tell us when they will come and do that, and I will be one to come amongst them. The fact is, this thing wants the capability of being publicly tested. ("No, no," and confusion.) It cannot be presented properly to the public. (General shuffling of feet.) I am glad you approve of my sentiments. (Much laughter.)

The President—This speaker has now occupied ten minutes; if you wish to have ten minutes or half an hour longer of such conversation I am agreeable, but the meeting must decide. (General cries of "No more.")

The President—Then I beg to say that this gentleman must sit down.

Rev. Dr. Thompson—You won't hear my case because it is too strong.

Mr. Conrad Cooke—I cannot add anything to the paper, except simply to give my evidence as having been at one of the very meetings that have been referred to with Dr. Slade. (Dr. Carpenter made a private communication to the speaker.) Dr. Carpenter reminds me that Dr.

Slade is now only on his trial, and, therefore, it would not be fair to bring in any of his manifestations or tricks, whichever you like to call them, as proofs on this subject; but with regard to those who see such immense difficulty in believing the psychological facts, or whatever they may be, I would ask, is it not more difficult to disbelieve men whom you have known for years, whom you know to be of the highest honour and integrity, men who have the highest reputation for scientific research? This subject is attracting the attention of a very large number of persons who look to scientific men either to prove or to refute these facts, and I think no harm could be done, and probably a great deal of good might be accomplished, if the matter were referred to scientific men to investigate, and there can be no better body of persons to make the investigation than a committee appointed by such an Association as this. If the British Association could see that the matter is at all worth looking at, that it is not beneath their dignity to investigate it, I think it would be well for them to take it up. Certainly no harm could be done by the Association appointing a committee of scientific men, men who are of all opinions, *pro* and *con*, to make a proper investigation and bring forward a report.

DR. CARPENTER ON PSYCHOLOGICAL PHENOMENA.

Dr. Carpenter—I will endeavour to confine myself as strictly as possible to facts. I think the interpretation Mr. Barrett has placed upon some detached passages he has quoted from my writings is hardly justified by the context. For instance, when I say of phenomena, that it is "impossible to believe," I do not mean at all to assert that we know everything; in fact, I repeatedly use the expression, "there are more things in heaven and earth than our philosophy recognises," and I do not think anyone has a right to say I have ever been unwilling to receive new evidence on any scientific fact. I have always expressed myself with regard to there being a "reserve of possibility,"—an expression I have used over and over again. The strong remarks I have felt called upon to make in certain cases have been simply on the credence given upon what I consider very inadequate evidence indeed, and that I have had a number of very remarkable instances, into which, however, I will not go. I will make just my contribution to facts. I quite hold that there is in some persons a very curious power of what is commonly called "thought-reading." The way in which that power is exercised I do not pretend yet to have adequately investigated, but I think we have a clue to it in this. It is quite certain that there are individuals who by long practice and experience, based upon a certain peculiar faculty of their own, which we all have more or less, but which is predominant in some individuals, have the power of judging, by certain minute indications which they could not explain, of what is passing in the minds of other persons. I will give a remarkable instance of this. I believe it is one of the special gifts of a detective policeman. I believe the detective policeman, partly by practice and partly by original gift, has a greater power of what is called "seeing through a millstone" than other people. I believe a first-class detective is almost sure to find out whether an accused person is guilty or not; there are certain little indications which are given unconsciously, which they could not interpret consciously, and yet which lead them to a conviction. A few years ago a bank manager in Leeds lost a key which opened all the safes of the bank. He was in great distress about this. A first-class detective was sent for from London. This man had every person connected with the bank before him, and he came to the manager, after having examined everyone, and said, "Make yourself perfectly easy about this; nobody in the bank knows anything about it. If you will only be assured this is the case, and get a good sleep to-night, the probability is, to-morrow morning you will remember where you put this key." And so it turned out. And in the case of Constance Kent, where the evidence was inadequate, a first-class detective said he was perfectly sure that she was guilty, and she confessed it in a few years. How is this assurance obtained? I believe it is by certain little unconscious revelations, so to speak, which are made in tone, gesture, expression of face, and so on; and that these are interpreted intuitively by the man who has been practising such things without his being able himself to say why and how he interprets them. I received, a few months ago, a paper from America, called "Thought-reading versus muscle-reading," written by a very able physiologist, who had interpreted these phenomena in precisely the same manner. There is a game I dare say many of you have played which is, to my mind, excessively significant. It is that of putting a person out of the room, and hiding away some object. A person comes into the room; two persons, one on each side, walk him round the room, with a finger in each of his hands, and the person so walking will very soon come to find where the object is hidden. A friend of mine at Leeds experimented a good deal upon this, and he found that it was distinctly owing to the slight pressure made by one or the other, unconsciously, upon the shoulder, like the slightest twitch of the rein of a horse, directly to the finger at one side or the other. He varied this experiment again and again, tried it on himself and on other persons, and misled them by intentionally varying slightly the pressure. Now we none of us know the degree to which we are constantly indicating, by these little involuntary signs, that which is passing in our own minds. I have continually been told myself things that I have shown in my countenance. Those who are the best subjects for the thought-readers are those who are demonstrative in some way or other, whether in facial expression or in any other way, and I believe that will be a clue to a great deal of what is commonly called "thought-reading." I may mention one case in which I am quite certain the clue was given by myself by some action I could not discover. It was in the case of Mr. Foster, a celebrated American medium, when I asked the date of the death of a valued friend of my early life, Dr. John Read. The year was correctly given. I was told to take the pencil, and go through the alphabet, and I went on as rhythmically as I possibly could. He stopped me at "j," and then at "u." It was clear it was either June or July. I went on again as far as "l, m, n." He seemed hesitating, and we

tried back two or three times, "I, m, n;" at last he said, "I cannot tell; it is either June or July, I am not sure which, but it is one of those two." Of course, that naturally followed, but he could not tell, simply for the reason that I could not tell. He had with marvellous apprehensiveness seen some little sign, some wink of my eye or some little play of my face, that indicated to him what I expected. I tested that on another occasion, and while the medium was spelling out a word most regularly—the name of an aunt of Mrs. Carpenter's, who had died not long before—I had a music book suddenly put up, so that he could not see either the alphabet or the tip of my pencil, and he stopped directly. These are the grounds on which I believe that a large part of what is called thought-reading is due to this, that it comes through an intensification, in certain individuals, of the power of discerning through our corporeal organism that which is passing in our own minds. I think it is more likely that that is the case than that there is any direct communication between one nervous system and another, although I would not by any means deny that. I merely say that one seems to me the more probable explanation than the other. Then, with regard to another great series of phenomena, I must simply say one has to make a very large allowance for the extraordinary tendency to deception that none but medical men know, and especially, I am sorry to say, among women. (Laughter.) Medical men are perfectly familiar with the fact that there is this curious tendency to deceive for the mere enjoyment of deceiving. (Renewed laughter.) There have been no end of stories of that kind. Every medical practitioner is perfectly familiar with young ladies who manufacture illnesses, and continue ill days, weeks, months, or years, simply because they like to be the objects of sympathy. (Laughter.) That is a fact on which the large experience of the medical profession has a right to be heard. Then again, there is a tendency in the professionals who are gaining their living to impose upon others, and we must always guard against this. I do not at all say that this is everything, but I simply say that this is one thing. And with regard to the case mentioned just now, I would venture to say exactly what my position is, because it will be made the subject of public comment, and I think it will show that we are not at all unwilling to investigate, if only the things are presented to us in a way which will enable us to investigate. (Applause.) I have been asked over and over again to take part in *dack séances*, and things of that kind. I was asked to be one of the committee to investigate the performance of the Davenport Brothers, and I said, "If we are simply to be shut in a dark room, and to take each other's hands, and exclude the use of those instruments which scientific men use for the purposes of scientific investigation, I must decline to take part in an investigation of that kind." A gentleman with whom I have had some correspondence, some months ago wrote to me and told me Dr. Slade was come to London, and that these manifestations were given in open daylight, that he challenged investigation, and that the presence of sceptics did not prevent them. Now, the great difficulty in my investigations has been that I have been told over and over again, "Oh, your atmosphere of incredulity prevents these manifestations—(laughter)—and therefore nothing comes." It is unfortunate that this "atmosphere of incredulity" does seem to prevail when a philosophic sceptic like myself—one who does not deny the possibility of there being a great many things that our philosophy does not explain—seeks to pursue his inquiries. However, I went to Dr. Slade, and I do not hesitate to say that I saw things that very much astonished me; and I will further say, I told Dr. Slade at the end of our meeting, "If you will come to my house, I shall be extremely glad to go into this matter further." (Hear, hear.) As I wrote to the gentleman who brought me into communication with Dr. Slade, I will spare neither time nor money to get to the bottom of this, and that, I think, will show you I, for one, am by no means indisposed to try to get to the bottom of it. If Dr. Slade can do in my house, with my chairs, with my tables, with my slates, without any previous preparation, what he showed to me in his own room, I will then honestly say this is a case for thorough investigation. (Hear, hear.) But if Dr. Slade comes to me and nothing happens; if the chairs do not jump up again; if the table does not jump up under my hands; and if the writing is not made upon my own slates which I saw upon his, why then I think we may fairly say that there is no place for scientific investigation. (Applause.)

MISS BECKER'S MEDIUMSHIP.

Miss Becker—I think the section is to be congratulated on having a paper brought before it such as has been read on this occasion. Whether these things are real or not, they occupy such large attention that they ought to be investigated in a scientific spirit, and I hope that a committee of this Association will be appointed for the purpose. I rise to bear testimony to a few facts in a purely scientific spirit, because—I hope the President will forgive me—I am an unbeliever in spiritual agency—at least in the agency of disembodied spirits. When I was a young child I had a companion who was in a peculiar nervous condition. She would lie down on a sofa, and go into a kind of trance, and while in that state she would instantly reply to any questions which were put to her. When she awakened out of this condition she had not the slightest recollection of any question having been put to her, and scolded us for playing on her nerves. She was in the house of an eminent surgeon in Manchester, sleeping with his daughter, and while there, violent knockings and rappings were heard along the room. Spiritualism was not known then, and the whole family were very much puzzled to account for these knockings. At last they began to call the knocking "Nebuchadnezzar," and when they called "Nebuchadnezzar" he would answer by a knock. This continued for some months, and when the girl left, the knockings ceased to visit the house. No explanation was ever given of them. The surgeon would not be convinced it was not the girl, until he held both her hands and discovered that there was something in the case beyond hallucination or imposture. I have myself occasionally used the planchette, and the moment I put my hands

on it, the thing moved itself without my influence. On one occasion the planchette began to write, and when I read what was written, it was the name of a person who was not the least in my thoughts. I did not know what had been written until I had taken up the paper and read it. Whenever I take up the planchette it instantly goes on in that way. It would be impossible to convey to any one who looked at it the impression that I was not moving it myself, and if any one else had their hands on it I could not disabuse my own mind of the impression that they were writing. But I cannot admit the conclusion that the spirit of a dead person did me the honour of haunting my planchette, and I can only say, here is something which to my mind is undoubtedly real, and of which I have no intelligible explanation. Now I think we are entitled to ask about some things, what they lead to. I do not think that anything of this kind can be put down by ridicule. But when I read in the *Spiritualistic Medium* that a spirit poured out tea at a party, took two cups of tea, and eat her two rounds of buttered toast—(laughter)—I must say such experiences are very difficult to investigate, even by a committee of the British Association. (Laughter.) But last week's *Medium* contained something more surprising still. It told of a Christmas party, in which one of the spirits called for a bottle of gin and hot water. (Laughter.) If we are seriously called upon to believe that disembodied spirits visit this earth, I think we may say that we do not need spirits to come from the other world to teach men to mix spirits and water. (Laughter.) The subject is one that should not be treated with ridicule. It is a grave and serious one, especially if it should lead to a very morbid and unhealthy development of mind; still, the way to check this on the part of those who should be the leaders of scientific thought, is carefully and seriously to encourage such research as seems likely to do good, and to discourage idle and unscientific investigations, which only do mischief to those who conduct them. (Applause.)

Mr. Park Harrison—As personal experiences have been asked, I may mention that there have been two occasions in which I have seen abnormal appearances, both happening when my brain was rather over-wrought with hard work, and was in an abnormal state, especially as I have a tendency to brain fever. There is a great amount of heat in the case of the brain under these circumstances, and a thermometer placed upon the head will show greater heat in some lobes than in others. Dr. Carpenter has mentioned one or two explanations which might be given of Dr. Slade's experiments, and there is the third explanation, viz., that they may possibly be due to sleight of hand. There is one case which I think is very pertinent to the present discussion; it is the experience of Dr. Owen, of Philadelphia. It was this—I have taken it from the *Atlantic Monthly* for January, 1875—

The Chairman—We really must not have quotations from newspapers in America of which we know nothing.

Mr. Harrison—This is an account Mr. Owen gave himself.

The Chairman—We must have personal knowledge.

Mr. Harrison—This is the personal knowledge of Mr. Owen. We have had a great many speakers on the other side, and very few on my side—kindly bear with me a short time. (Cries of "Question.") Forty memorable sittings were held, and every precaution was taken, but instead of a failure, all the phenomena came out in greater perfection than before. (Interruption.) After that was done, and after they had been forty times and for nearly a year going on, unable to detect any deception, it was found out that a Mrs. White had been employed for five dollars a night to act the part of Katie King. (Confusion, cheers, and counter cheers.)

The Chairman—The history concludes in this way. Soon after Mrs. White confessed that she had been acting the part of Katie King for a fee of five dollars a night, I happen to know, from subsequent information, that this confession was proved to be false, and it was proved that she was forty miles away at the time she said she had been acting the part of Katie King. (Applause.) So much for newspaper information.

Rev. Dr. McIlwaine: I rise without any circumlocution, under circumstances of very great difficulty. I thank the excellent Dr. Carpenter for having brought this discussion within its proper limits. I have studied this and cognate subjects for thirty-five years. I come from Ireland, which is invaded with a great many manifestations of a variety of sorts—among the rest, some religious ones; and as those remain out of the question, I shall only say I have studied these phenomena in seasons of intense religious excitement, and I know a good deal about them. In any question of fact the matter of the first importance is the credibility of the witnesses, and I am here to impeach the credibility of Professor Barrett's witnesses. It happens by a rather unfortunate coincidence that I know most of them, and amongst them is a connection of my own. (Laughter.) It gives me great pain to tell you I believe he is a thoroughly unreliable witness. (Laughter.) I do not for one moment dispute his honesty of intention, but I say he is not fit to give evidence on this occasion. A question of evidence requires examination. A man should be thoroughly unprejudiced. I am afraid my friend does not come up to that standard. (Laughter.) Some years ago I was a witness of some of these performances. I knew one of the media, and it so happens everyone of these persons referred to have been females. (Laughter.) I say that these young girls—Professor Barrett's young girls—my friend's young girls—and these other young girls—I say they are not proper persons on whom to base great superstructures such as these. (Laughter and hisses.) May I mention another thing? Did anyone ever investigate hysteria—I speak to fathers and mothers, brothers and sisters. (Laughter.) I may say, as another fact, I am the parent of fourteen children—roars of laughter—and I say it is a most dangerous thing to bring these mesmeric experiences into a region like that, and I had to guard with great jealousy and great care my own daughters, or they would have been media. I say that these facts are not reliable. I say a person fit to examine may very well begin with Christianity. Anyone that rejects the great facts of Bible history—interruptions, and cries of "Order!"

The Chairman—I cannot allow theology to be introduced into this discussion. (Applause.)

Rev. Dr. Mellwaine—As the Association is coming to Dublin in 1878, they will be able to investigate the facts there, and to see the amount of their credibility. Now another fact. This Association was in Belfast in 1856, and we had a *source* there. One lady proposed to give a *source*, which was given in semi-darkness.

The Chairman—Were you present?

Rev. Dr. Mellwaine—I give it on the evidence of—

The Chairman—We cannot have it. (Applause.)

Rev. Dr. Mellwaine—I will give you the name of the gentleman.

The Chairman—That won't prove that he is trustworthy. You have accused one of your own friends of being untrustworthy: how do we know that these people are trustworthy? (Applause.)

Rev. Dr. Mellwaine—I will give you another fact. (Laughter.) An American Professor came to our town, and did all these things.

The Chairman—The name?

Rev. Dr. Mellwaine—Really I forget. (Laughter.)

The Chairman—You must not allude to people without giving the name.

Rev. Dr. Mellwaine—The influence he exercised upon some of my family was very deleterious. I met him, accompanied by Dr. Redfern, and the exposure of the man's ignorance and charlatanism was such that he vanished very rapidly. That is a fact. I have done everything I could within the region of possibility to investigate honestly and fairly, and I come to this conclusion, that a great deal is to be attributed—first, to feminine excitability; next, to credulity, and, thirdly, and not the least, to imposture. (Applause.)

Professor Barrett—I rise to make a personal explanation. I have been extremely anxious to avoid anything like personal feeling in the paper I read, and I am exceedingly sorry my good friend, Dr. Mellwaine, has introduced any personal questions at all. Let me just say the relative of Dr. Mellwaine, to whom he has alluded, is not the person to whom I alluded in my paper. (Applause.) It so happens that that person is an Englishman, of not the remotest connection with Dr. Mellwaine, and whose name Dr. Mellwaine does not even know. As regards the mesmeric phenomena, it is true that they occurred in the house of a brother-in-law of his at Westmeath; but the reason for Dr. Mellwaine's rejection of these phenomena is not because he has disapproved them, but because he has had no communication with that family on account of their having different religious opinions to himself. But Dr. Mellwaine, I am quite sure, cannot impeach their honesty, and moreover I did not trust his testimony. It was the testimony of my own eyes, and those of my own friends—not in his house only, but in my own house—not in Ireland only, but in London—not with girls, but with young lads taken at random from a British school in London. Moreover, the facts of mesmerism I have mentioned, I am quite sure Dr. Carpenter does not really deny, and therefore I think that reference to personal matters was quite needless. (Applause.)

Mr. Walter Weldon—I am not going to occupy the attention of this meeting more than half a minute, but it occurred to me I might perhaps usefully contribute to the discussion of this subject one little occurrence, within my own experience, which seems to me to have a pertinent bearing upon the theory entertained even by Professor Barrett. I am sorry to hear that when persons believe that they see Mr. Home, for example, float to the ceiling, Mr. Home really does not float to the ceiling, but he exercises some sort of influence over the minds of the observers, which leads them to suppose that they see him float when they do not. When I first began to investigate in my own family the phenomena of so-called Spiritualism, my wife and I began by sitting to a small table. After a time it began to move, but for reasons I had then I became desirous that a large oak dining-room table, $3\frac{1}{2}$ cwt., should be got to move, if possible. We sat to it some time, but we never got it to move; and as I learned that there lived in the East-end of London a powerful physical medium, I asked him to come and sit at my house. He came one Saturday, and sat down to the end of this heavy oblong dining table. He placed his fingers very loosely upon it, and began to sing a hymn. My wife and I believed that the table beat time to the music, and beat time to it very distinctly and very heavily. The question is whether that was a delusion. What I want to say with respect to that point is, the next morning, when the housemaid came to call my wife, the first thing she said was, "Oh! if you please, mum, the spirits made such holes in the dining-room carpet last night." We found fully a dozen large holes in the carpet, and below these holes the wood of the floor was very severely bruised. We preserved the carpet for some years, and I think it would be difficult to make out that we were deluded in that case. I will add one other thing. Colonel Fox said that with him the planchette rarely or never moves. Some years ago my friend William Howitt told me of the planchette, and urged me to go home and try if the planchette would not move under my fingers. I sat with that planchette at a table to which I was not accustomed to sit, for twenty minutes and half an hour a day for a fortnight, and the planchette never moved. At the end of the fortnight I was going to return the planchette to Mr. Howitt, who had lent it to me, when I remembered that in my study there was a book he had lent me, and which he was desirous I should return. I went into my study, and, while searching for the book on my shelves, I put the planchette down on a desk at which I had been in the habit of writing some fifteen years. When I found the book, and put it in my pocket, I put my hand upon the planchette to carry it away again, and I found it almost impossible to move my hand from the planchette; it was as if we were glued to it, and was in very violent motion. I found afterwards, whenever I placed the planchette upon the desk, it would write, but when I placed it on the table at which I had not been in the habit of sitting it made no movements.

Mr. Hyde Clarke—I trust that I misunderstood the meaning of the words which you have applied to several of the speakers. You said you must have facts and not statements of disbelief.

The Chairman—Merely.

Mr. Hyde Clarke—Such I think is not the issue at the present moment. We have had in the usual course statements brought before us by the author of this paper, and I think it is for us to canvass those statements of facts and the mode in which they are given, and not for us to bring forward facts either in their support or otherwise, or to be deluged from the means of canvassing that evidence. To my mind no new fact has presented itself in the paper. No new circumstances have brought the issue before us in another shape from the way it has been chronicled hitherto in the history of this department of investigation. It is the old story that we have had over and over again, I may say for 100 years, certainly within the memory of those who are living. We have had, it is true, the evidence of men of as high standing as yourselves, but it does not place the matter in a better position than at a former period when we had the same phenomena presented to us, and we had the testimony of a man so able, so honest, as Dr. Elliotson. Neither this nor any other question of science is to be determined by authority; it is one of which the issue is that we should have the phenomena presented to us in such a way that all men of sense should be able to produce them for themselves. This is identically the same question as that of biogenesis, that subject which has occupied the attention and the discussion of the scientific world, and which should be treated in the same way. To my mind it appears as if Professor Barrett did not present this case so clearly, or so free from bias as we could have desired. (Applause.) The way in which he referred to the testimony of Dr. Carpenter, has been well met by Dr. Carpenter himself. If I were to answer the challenge of the President to bring forward facts, I could bring forward many like those mentioned by Dr. Carpenter, having been engaged in the same course of investigation of unconscious cerebration, and having as chairman of the Psychological Committee of the Anthropological Institute, been called upon to direct my attention to those matters. And there I join issue with Professor Barrett. As I understood him a great change of opinion has taken place among medical men, and he particularly referred to Dr. Carpenter. So far as we have it on record, nobody for a hundred years has doubted that these phenomena of mesmerism have been produced, but the question remains, how are they produced? And the issue does not lie with us to make an investigation. There is no wish on the part of scientific men to prevent investigation, but there is a disinclination to take the labour of investigation on themselves, after this matter has remained so long before the public, and certainly there can be no man of science who would not be interested by the fact that yourself, sir, and your friends take a deep interest in this matter; those names are sufficient to give weight to any cause, and I put it to this meeting whether men of science are to be regarded simply as prejudiced because they will not accept the expressions of their friends; whether rather they would not be prejudiced to listen to and adopt the opinions of you and your friends, rather than to oppose them. It is not by the number of names that a cause of this kind will be decided, it must be by the result of facts; therefore, as on one side we do not seek to do more than make a simple protest with regard to the attempt that has been made to transfer the burden from your shoulders to those of the body of your colleagues at large, so on the other hand we still await with anxiety the practical result from the course of investigation which has been carried on during such a long period, and which is now in such able and worthy hands.

Dr. Heaton (of Leeds)—As a medical man I think it would be unfortunate if this discussion led to experiments, especially upon girls. As to the result of spiritual performances, I know in my own experience very serious results have come from it. A medical friend of my own at an evening party proposed to make some passes, and one young lady became insensible and remained so for three days. Her family and the gentleman concerned were, of course, very anxious during that time, and such results, more or less marked, will occur if the experiments are indifferently practised upon a promiscuous assembly. Mention has been made of the movement of a heavy table. That reminds me of what I was told by a member of the Bench of Bishops, that he was staying at the house of a friend, where a young girl was said to have a remarkable power in effecting movement of heavy bodies, and he saw her put her hand on a heavy dining-room table, and it moved away from her with a force which her own ordinary physical exertion would have been quite incapable of giving to it. An eminent astronomer, well-known to many here present, told me he was in a friend's house where experiments of this kind were tried, and where chairs, ranged round the back room, came from their places, and slid across the floor, until they came into the front room.

The Chairman—Will you give me the name of your informant?

Dr. Heaton—Dr. Huggins.

The Chairman—One of the most eminent scientific men of the present day.

Dr. Heaton—Mr. Crookes said that these phenomena were as amply proved by evidence as any of the phenomena in Section A. I do not know whether that is so, but what is proved by experiment in Section A is believed by the whole of the community, and it is a fact that only a small proportion believe in these facts of levitation. There must be some difference in the circumstances of one case and the other. It cannot be merely that it is not within our own experience, as in the case of the frozen water, because we are all in the same circumstances, and have had the same experience, in the same country, to the present time, and yet these performances are not believed always to be real. I suppose the fact is, it is something so entirely opposed to our experience that we do not know how to give them our belief. My own mind is in a state of uncertainty in these matters at the present time, and it is only the result of some investigations by a scientific body of examiners which will lead us to more certain conclusions.

Dr. Carpenter—We scientific men accept Mr. Crookes' statements

upon the radiometer and upon the whole series of beautiful researches by which he has brought that instrument to its present position. Why do we accept them? Because these can be reproduced at any time, and by any person. (Applause.) If Mr. Crookes could show us the phenomena which he has described, or if you or Dr. Huggins could show us the phenomena at any time which have been described in your writings, we could give them exactly the same attention. (Applause.)

PSYCHOLOGICAL EXPERIMENTS BY PROFESSOR WALLACE.

The Chairman—As I have myself been more or less acquainted with the whole series of phenomena which have been referred to, for about thirty years, I should like to give a few things I have myself met with, which will serve to answer some of the theories propounded to account for them. With regard to the phenomena of mesmerism, I found myself able to produce them thirty years ago, almost in the same form as they occur at the hands of public exhibitors, and two or three curious little instances convinced me that they could not be accounted for by any unconscious action or any preconceived ideas. To take one very slight case, which made a very great impression upon me, showing that there was a real action upon the muscles, and not a preconceived idea that there ought to be, or must be, such an action. Once I was in a school, and had a great number of little boys under my charge, and among these I used to experiment. One day I had one of these boys in my room. I had been making him rigid in the usual way, when the bell rang for dinner. I immediately made the contrary passes, to bring his arm back to the normal state. We both thought it was all right, and came down stairs to dinner. After a little while I saw him trying to catch my eye, and found he was sitting with his knife in one hand, and the other hand down at his side, and unable to bring up his fork to his mouth. I had to get up, and make two or three passes and relieve him, so that he could eat his dinner. There was a clear case, in which there was no deception on his part. I used also to perform the experiment of drawing a chalk-line on the floor, and making a pass across it. The result was, the boy would walk up to it, and there stick, and generally become rigid. This was done in the presence of all his schoolfellows, and they said—"Take a run at it, and then, of course, you will go over it." "Oh, yes," he said; and so he ran at it, and the result was the moment his feet got on to the mark they stuck so firmly that he fell perfectly flat on the floor. There was a case in which he evidently believed he could get across the mark. I saw another curious example in South America, for, when two thousand miles in the interior, my brother, who felt a great interest in this subject, used to call little Indian boys out of the street, who certainly had never heard or known anything about it, and he found that at least half of them were acted upon in exactly the same way as the boys in England. He could send them into this extraordinary state, and produce rigidity and anything of that kind. Still more extraordinary, one day he and I were going to take a walk into the forest, and we stayed at a hut. He saw a man sitting in the hut, and asked him to let him try to send him to sleep. He made a few passes over him, and found he could immediately make him rigid. He told the man to lie down on the floor, made a pass over him, and said, "Stop there till we come back." The man tried to move, but could not, and when we came back in about an hour, there he was lying on the floor, exactly in the same condition in which we left him, perfectly awake, and begging earnestly to be allowed to get up; we sent a pass across him, and he rose. Another curious instance I had myself was the inducing what I used to call community of taste and feeling. One of the patients I had in the school was very easily acted upon in this manner. When he was sent into a mesmeric trance we used to make a chain of all the persons present, connected by hands with me. Then I would secretly take something out of my pocket to put it into my mouth. If it was sugar he would immediately begin working his mouth, and saying, "How nice it is!" If it was salt he would say, "What have you put salt in my mouth for?" If anybody came behind me and pricked me in any part of the body, he would immediately put his hand to the same part and say he was pricked. That happened so repeatedly that I am perfectly certain there was no possible hint by which he could have obtained this detailed information of what was going on; his sensations, in fact, reproduced my sensations. That is a phenomenon I have not seen explained anywhere. Again, with regard to clairvoyance, I have never seen a perfect case of clairvoyance myself, but I must recall to your recollection that a former professor of chemistry, Professor Gregory, devoted many years to the investigation of this subject, and has published a large volume in which he collected together a host of facts, and shows that in numerous cases the true clairvoyance, that is, the knowledge of writing which could not possibly be present in the mind of any one of the spectators, was acquired by these patients. One of the most striking cases was to buy some nuts containing mottoes. These, of course, could not possibly be known to any individual present. One was picked up at random and put into the hand of the clairvoyant, who held it up and read the motto; the nut was broken open, and found word for word as it was read. That was done scores of times in his presence, and in one case, which he mentions particularly, the motto consisted of 36 words, the whole of which was given correctly. I thought that was a very curious suggestion of Mr. Hyde Clarke's, that we must bring these things over and over again. There are certain phenomena you cannot bring before you; they must be sought for, and a case very much in point is that of the meteorolites, the fall of which was for many centuries disbelieved by scientific men, and it was only after a considerable number had been actually recorded that they accepted it as a fact. According to the general system of unbelief, we ought to disbelieve it even now, because the scientific men cannot prognosticate when a meteorolite is going to fall, and we cannot go and see them fall. Professor Barrett himself thinks that many of these phenomena, when they were so extraordinary and beyond his own knowledge, were to be accounted for by simultaneous delusion of the spectators, and he particularly alluded to the case of Mr. Home. Mr.

S. C. Hall was present at a private party, at which Mrs. Hall and another lady of my acquaintance were also present, and Mr. Hall told me this fact, which he has also published himself. After Mr. Home had taken some hot coals from the fire, he placed one on the top of Mr. Hall's bare head, drawing up the white, thin hair around it till the coal glowed in the middle of his head. Mr. Hall declares he felt no sensation of pain or burning, and his hair was not singed; but several other persons touched the coal while it was on his head and got their fingers burnt. A little bit of confirmatory evidence I want to adduce to you, to show that this was not a coincident hallucination of all the persons present, is this, that the next morning, when Mr. Hall brushed his hair, some particles of cinders were brushed out, and I think that is a considerable proof that the coal was really put upon his head. I will now call upon Professor Barrett to reply.

PROFESSOR BARRETT'S REPLY.

Professor Barrett—I will detain the section a very few minutes. It certainly shows the immense advance that this subject has made within the last few years, that a paper on the once laughed-at phenomena of so-called Spiritualism should have been admitted into the British Association, and should have been permitted to receive the full discussion it has had to-day. I am extremely glad that this discussion has occurred, and has occurred in so very friendly and pleasant a manner; and if I do not reply to all my critics, remember that throughout my paper I have carefully confined myself to facts witnessed by myself, and I wish to reiterate my emphatic assertion that I have formed no opinion as to their cause. Indeed the Spiritualistic explanation is a leap in the dark, which I myself am not yet prepared to take. Looking at the phenomena of nature now recognised by scientific men, we find outside our own personality, but penetrating all space, there is a subtle unseen form of matter, which has no place amongst the elements with which physical science deals; that is the so-called ether. Then secondly, scientific men at the present day recognise an unseen existence, which we call our consciousness, or being, and it seems highly probable from the facts I have stated in my paper that there is an unseen and unconscious influence of energy, or a sphere of personality, around that conscious being. We may also add that there may exist in some persons, and at some times, an unlocalised sixth sense, generally latent, but which sometimes can be called into existence. These are all the conclusions to which I have been able to come, but that does not show that my conclusions are correct. Those who, like our President and Mr. Crookes, have had far more opportunities than myself, and have been far longer engaged in this inquiry, and whose opinion is entitled to far greater weight than my own, ought to be listened to, not with contempt, but at any rate with a wish for further inquiry. I regret if I have given any wrong impression of Dr. Carpenter's excellent work on mental physiology, but the wrong impression, if I have given any, has been in the direction rather opposite to that which every one would expect. Dr. Carpenter, in fact, is willing to go further than I gave him credit for, for he says about thought-reading at the present day, that the muscular sense is a clue, no doubt, to a great deal of the phenomena, but he does not say to all, and the phenomena that I have detailed to-day show the entire exclusion of the muscular sense; still there exists presumptive evidence that thought-reading can take place. Now Dr. Carpenter says the same thing with reference to these Spiritualistic phenomena, that electro-biology, as it is barbarously called, or fraud, can, and no doubt does, account for a great many of the phenomena; but I would ask Dr. Carpenter to get up and say that it accounts for all the phenomena. I venture to say he would not say this, and I would ask him if he is prepared to say that every one of the phenomena of Spiritualism can be explained away by these two common arguments that are used. Mr. Hyde Clarke says there is no change of opinion at the present day. Dr. Elliotson was ridiculed by his professional brethren, yet his facts are now admitted by Dr. Carpenter and Dr. Maudsley, and other very eminent psychologists. Yet Mr. Hyde Clarke says there is no change of opinion at the present day. Spiritualism was laughed at as a diluted insanity, yet now Dr. Carpenter joins me in the wish for further inquiry into this matter. Yet Mr. Hyde Clarke says there is no change of opinion at the present day, and the phenomena are exactly where they were 100 years ago—long ago refuted, and therefore only fit to be kicked out of sight. I quite admit that there is great reason for caution in conducting these experiments. I am well aware that there is very great danger to the subject in conducting them, and therefore I would not encourage those who had heard my paper to-day to go home and repeat those experiments, else they will most certainly produce injury to the subjects they operate upon. It was only in the presence of a medical man that I ventured to make the experiments. There is still more danger in pandering to that morbid state of mind which is so likely to be produced by witnessing the phenomena of Spiritualism, and therefore I say that, looking at the danger of leaving these facts to half-educated people, and excitable men and women—looking at all the weight of evidence that has been adduced by Lord Rayleigh, Mr. Crookes, Dr. Huggins, Mr. Cooke, our president, and other eminent men whose names I am not at liberty to mention, though some of them have been past presidents of this Association—I say that it is incumbent upon every one who has witnessed these phenomena to come forward, and, be the consequences what they may, to have the courage to state those facts in public, and take the blame, if blame attaches to it. I would also say that, in view of what we have heard to-day, I think this section should not break up without coming to some practical resolution, and, therefore, I beg to ask that the following resolution be referred to the committee of this section. (Cries of "Order, Order.") I am out of order in asking the section to pass the resolution, but I think I am not out of order in asking that the resolution be referred to the committee of the section.

Dr. Carpenter—You may send to the committee my proposal you like. Prof. Barrett—Then I will take Dr. Carpenter's suggestion and send

the following resolution to the committee of recommendations for the approval or not of the Council of the British Association—"That in view of the facts recorded in the paper of Prof. Barrett, and the discussion thereon, it is desirable that a committee composed of scientific men should be appointed to inquire into the so-called phenomena of mesmerism and Spiritualism, so as to remove the matter from the present uncertainty of opinion which prevails on this subject."

Dr. Carpenter—Prof. Barrett says I have characterised belief in Spiritualism as a diluted insanity. I have used that phrase, but to the best of my recollection only as applying to cases where a belief is taken up on extremely inadequate grounds. I do not think that I ought to be stated to have given that extremely strong expression beyond what I myself applied it to.

Prof. Barrett—I am only too glad to be corrected on this point by Dr. Carpenter, for it is a further confirmation of the facts in my paper with regard to the gradual change of opinion. I quoted from page 653 of his last edition of *Mental Physiology*—"Every one who accepts as facts, merely on the evidence of his own senses, or on the testimony of others, what common sense tells him to be much more probably the fiction of his imagination, even though confirmed by the testimony of hundreds affected by the same epidemic delusion, must be regarded as the subject of a diluted insanity."

Dr. Carpenter—I think I am justified in saying, what I mean is that he has not strictly inquired into the evidence. A gentleman wrote to me, a medical man, and asked me if it was true that I had somewhere expressed myself that every believer in Spiritualism was affected with diluted insanity; and then he went on to tell me that he had a garret in his house in which a number of things were put away. This garret was kept locked. He went into it one day, and found that these things were all brought together on the bed. He put them away in the place where they were before, and locked the door again. A fortnight afterwards he took a friend into this room. He found the door locked, after which he took a friend into this room. He found the door locked, and piled up in the form of a cross were a number of these articles. He asked, "How am I to account for this except by Spiritual agency?" My reply was, "My dear sir, everybody knows there are people who find a delight in mystifying others, and I recommend you to look among the members of your own household for some one or other who has got access to the room, although the door is locked. Put a seal on the door; try some other method of finding out whether the door has been used in your absence, and if you cannot find it out, get a good detective policeman to investigate the case, and see what he can do. I say, if upon that very slender evidence you give your mind to the belief that spirits came into your house and piled the things on your bed, you are affected by a diluted insanity." (Applause.) Mr. Barrett asked me if I pretended to say that all the facts of Spiritualism can be accounted for in the manner I have expressed. The question is, what are the facts of Spiritualism? If, for instance, I visit Dr. Slade, and the chair jumps up and then falls back again, is that a fact of Spiritualism? How do I know that it is a fact of Spiritualism till I have carefully investigated that chair, till I have found whether there are concealed springs and mechanism to make that chair jump up; till I have found whether Dr. Slade can make my own chair jump up? I have found that to every other case. These things must be carefully investigated, and I do not think a better answer can be given to the testimony that you quoted of Doctor Gregory than this simple fact. My friend, Sir James Simpson, who was a wealthy man at that time, receiving a very large professional income, placed a £500 note in a case, sealed up in a box. This was placed in the hands of a neutral person. It has been said, "Oh, this gift of clairvoyance cannot be exercised except under very favourable circumstances." Dr. Gregory admitted that there was nothing that should prevent his clairvoyants from applying their powers to finding out the question Sir James Simpson put:—"If any one of Dr. Gregory's clairvoyants will tell me the number of the £500 note, he shall have it." That note remained for many months in the possession of this neutral person, and Dr. Gregory was obliged to confess that none of these clairvoyants who could read these long mottoes of seventy words, could read what was of infinitely more value to them, the number of the note. (Applause.) I do not think that was a disproof; I only say that it threw doubt upon all those other cases.

The President—As Dr. Carpenter has made some fresh observations on a point to some extent personal, I should like to make a slight correction with regard to this statement of his about the diluted insanity. He has introduced a subsequent case, and informed us that it is applicable to that; but the statement was not applied to that, but to the investigations of Mr. Varley, the eminent electrician, who narrated facts that occurred in his own house, in his own presence, repeatedly, under varying conditions, and by Mr. Crookes, who, as he has told you to-day, has also observed in his own house, with the most rigid accuracy, phenomena of this kind. It was to their experiments that Dr. Carpenter applied the expression that, if they believed the evidence of their own senses, they were to be considered only as in a state of diluted insanity. It is not right to put it on a new scent altogether. With regard to the £500 note one negative will never disprove established facts, and even if the number of this £500 note was not read, that does not disprove the cases in which the mottoes were read. You cannot disprove an affirmative by a negative. Again, why should we be asked to believe that there ever was a £500 note? They disbelieve our facts: Why should we believe theirs? They do not believe the statements of Spiritualists to be true; how do we know that this was not a dream, that it was not a piece of blank paper? We are asked to take these things on hearsay, and when we state facts we are told, "Oh, it is mere hearsay." (Applause.) We have been told by Professor Tyndall that he went to see himself, and played tricks all the time.

Dr. Carpenter—I think the imputation on Sir James Simpson is altogether unwarranted. (Hear, hear.) As to what I stated, it was a

matter of public notoriety at the time, but the Chairman was absent from the country on his professional explorations. To the best of my remembrance Professor Gregory was shown the note, or at all events he and all the members of the profession in Edinburgh were perfectly cognizant of the fact to which I have referred. (Applause.) I will not stand here and allow the character of Sir James Simpson to be called in question. (Renewed applause.)

The Chairman—I call no man's character in question. (Cries of "You did.")

Dr. Carpenter—You did. You said, how did you know that it was a genuine note. (Hear, hear.)

The Chairman—I say again how do we know; we have no documentary evidence—merely recollection. I think we have no right to receive any statements of that kind unless they are authenticated. (Applause.)

Professor Barrett—I do not think we are called upon to believe or disbelieve this statement. Don't let us break up in anger. (Hear, hear.) There has at least been sufficient evidence given to show that full inquiry ought to be made.

A gentleman in the body of the hall essayed to continue the discussion, but the audience became very impatient; and amidst cries of "Pass to the next paper," the subject dropped, no reference being made to the resolution suggested by Professor Barrett.

DR. SLADE'S MEDIUMSHIP.

The following are extracts from two of the letters read by Professor Barrett to the British Association at Glasgow. The first is from a well-known man of science:—

The sitting was a short one, but quite satisfactory that the writing is not done by Slade himself.

We had a long philosophical communication on Spiritualism, which filled the whole of one side of the slate. It was much more neatly written than any previous attempt I had seen. It took, I should think, five or six minutes to write. During that time Slade spoke freely, and I purposely asked him various desultory questions, which he answered and explained quite readily and fully, while the writing was still audibly proceeding. He seemed much struck with the rhapsody, recognised it as like his wife's flowery style, and kept it to have it copied. The most remarkable point of the proceedings was when I got the slate in my left hand (it was a cracked slate, and well cleaned), and held it firm against the under surface of the table, while both Slade's hands were at a distance on the middle of the table, in contact with my right hand, and his feet away out at a distance from me. In this position the slate was absolutely free from contact with anybody but myself and the table. Yet I had a distinctly-written sentence, and felt the grating of the pencil while the sound of writing was going on.

Slade said he saw the blue light on my right arm, and a white hand on the back of my chair! I did not see either light or hand, but my chair was certainly pulled or pushed at the time a few inches back from the table.

I am still unconvinced about spirits. I cannot for the life of me suggest any conceivable explanation of what we have seen. All I am prepared to swear is, that the effects really do take place, and that no visible machinery of any kind is employed.

I shall be glad to know, when you can find time to write, what further illustrations you have had of this man's wonderful powers.

The following is extracted from a letter to Professor Barrett, written by an M.A. of Cambridge:—

I went alone, and found Slade would give me a sitting at once: time four o'clock; full light, and same table as before. The writing commenced at once, but it did not go on long.

The only long message written was with the slate above the table, and Slade's hand on top; in this case the slate was completely covered with writing. In only one instance, and that a short sentence, was the scrap of slate pencil left at the end of the last word. The writing occurred when one edge of the slate was visible below the table, and I could see that it was pressed up against the table at Slade's end, and not more than half an inch from the table at the other end, it oscillated in time to the writing. This would be important but for the far better experiment of laying the slate on the top of the table, which we saw together, and which I saw repeated in an exactly similar way.

Writing also took place when Slade was holding the slate on my head, again oscillating in time to the scraping of the pencil, the varying pressure very distinct. I wish there had been another witness of this; as, of course, I could not see the position of Slade's hand.

The chair was thrown up as before, except that it rose less violently, and I saw it rising before it struck the underside of the table; it was as if pushed, not thrown up.

Slade's feet were not both in sight at the time he did this, but his position was such that it was impossible for him to have reached it with his feet. The table also rose about five or six inches off the ground, our hands all resting on it, my right foot was on Slade's left foot under the table, his right leg was visible to me nearly to the knee, and the position of his knee would be about four inches below the cross-rail of the table; I don't see how he could lift it with his legs under these circumstances. My right knee was twice touched by something, quite softly. I was sitting at Slade's right, and the knee was touched on the right side, so that it was touched from the opposite side to Slade, and was the part of my body farthest away from him. I cannot think he could have done this with his toe without being immediately detected.

Any questions you want to ask I shall be glad to answer.